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Submissions
Electricity Authority
PO Box 10041
WELLINGTON 6143

Dear Sir/ Madam

Re: Proposed Code Amendment – Regulatory Framework for the Transmission Pricing Methodology

This is Transpower New Zealand Limited's submission on the Electricity Authority's 16 February 2011 consultation document *Proposed Code Amendment – Regulatory Framework for the Transmission Pricing Methodology*.

We congratulate the Authority for agreeing to review the transmission pricing principles. The interpretation and application of the current pricing principles have caused substantial unnecessary additional costs and administrative problems in the past. However, it is the internal inconsistency of the current principles and the fact that they are not realistic with respect to what transmission pricing can reasonably achieve that has been the source of the problems, not the presence of separate pricing principles *per se*.

During the 2004-07 transmission pricing review, inconsistent regulatory directives were provided that created considerable problems and added at least \$200,000 to compliance costs at the time (probably more). This situation was made possible by the form of the current pricing principles and their mutual inconsistency. Although this experience is well known, it is briefly reviewed in the Appendix to this submission, as it is directly relevant to the current consultation.

Because of this experience, we strongly recommend that Option 2 (confirm existing pricing principles) not be adopted. The choice therefore becomes one between Option 1 (remove the pricing principles from the Code) and Option 3 (revised simplified pricing principles). Transpower supports Option 3 for reasons set out in detail in this submission.

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Objectives of the proposal

We agree with the consultation paper's objectives for the Code amendment proposal, as far as they go, but recommend that the following objective be added:

- (e) Promote greater regulatory certainty and stability with respect to transmission pricing.

Although this concept is referred to in the Authority's analysis of the options, it is important enough to be included in the objectives themselves. It is also critical to our own analysis that concludes that Option 3 should be preferred.

Transpower's preference – Option 3

We recommend that the Authority implement Option 3 (revised simplified pricing principles). Our principal reason for supporting Option 3 is that, while both options require the Authority's formal interpretation of its statutory objective to be applied to transmission pricing, with Option 3 this task has already been done, and the outcome is satisfactory and able to be crystallised in the Code. However, with Option 1, this exercise is yet to be done, and exactly how the formal interpretation of the statutory objective would be applied is far from clear, particularly in relation to the third leg of the Authority's formal interpretation of its statutory objective. Option 1 would also allow the Authority greater scope to amend its application of its formal interpretation of its statutory objective to pricing in the future. Consequently, Option 1 provides less regulatory certainty and stability than Option 3 and this could have negative consequences for investment incentives.

The detailed content of Option 3 is analysed further below and contrasted and compared with Option 1, which would require the application of the Authority's formal interpretation of its statutory objective to pricing.

Option 3

The proposed revised pricing principles are:

(a) Ensure full recovery of Transpower's economic costs in providing transmission services.

This is an excellent principle which provides regulatory certainty for Transpower's business.

(b) Promote competition by allocating costs of transmission services in a way that facilitates or encourages competition in the markets for electricity and electricity-related services taking into account long-term opportunities and incentives for efficient entry, exit, investment and innovation in those markets.

This is just a re-statement of the Authority's formal interpretation of the competition limb of its statutory objective, i.e. the Authority would apply effectively the same test if Option 1 were adopted.

Cf. the Authority's formal interpretation of the competition limb of its statutory objective:

The Authority interprets the phrase *promoting competition in the electricity industry for the long-term benefit of consumers* to mean:

“Exercising all of its powers and functions in ways that increase competitive pressure in the markets for electricity and electricity-related services without compromising long-term opportunities and incentives for efficient entry, exit, investment and innovation in those markets.”

(c) Promote reliability by allocating costs of transmission services in a way that encourages market participants to efficiently develop and operate the electricity system to manage security and reliability in ways that minimise total cost whilst being robust to adverse events.

Similarly, this is just a re-statement of the Authority's formal interpretation of the reliability limb of its statutory objective. The Authority would apply effectively the same test if Option 1 were adopted.

Cf. the EA's formal interpretation of the reliability limb of its statutory objective:

The Authority interprets the phrase *promoting reliable supply by the electricity industry for the long-term benefit of consumers* to mean:

“Exercising all of its powers and functions in ways that encourage market participants to develop and operate the electricity system to manage security and reliability in ways that minimise total costs whilst being robust to adverse events.”

(d) Promote efficient operation which includes:

(i) where practicable charging the costs of connection to the connecting party (connection charges); and

This is a sound objective consistent with current practice.

(ii) where practicable providing locational signalling of long run transmission investment costs, to the extent that these are not already signalled by nodal prices, the regulatory investment test and connection charges;

This is a satisfactory objective. The Authority has now almost reached the point where it could reasonably conclude that none of the alternative options for signalling long run transmission costs that it has considered is “practicable”. The augmented nodal pricing concept has already been discarded for this reason. Flow tracing does not actually signal the long run marginal costs of new investment, so is inconsistent with this principle. The tilted postage stamp approach was found not to provide any significant net benefits and the Transmission Pricing Technical Group agreed (unanimously) that the “general” bespoke option proposed for reliability investments is no different to the tilted postage stamp. The “but for” concept was considered as part of the 2004-07 pricing review and the conclusion then was that it was impracticable on the interconnected grid in the New Zealand context. Capacity rights for the HVDC would impose substantial transaction costs for little obvious benefit.

We would recommend a minor amendment to this proposed principle to specify “long run marginal costs” rather than just “long run costs” to avoid any possible ambiguity.

or

(iii) where such locational signals are inefficient or only partially recover the balance of Transpower’s economic costs not recovered by connection charges, these residual costs should be recovered in the least distortionary manner.

This is a sound objective consistent with current practice.

(e) Be transparent and enduring in a way that is broadly acceptable to stakeholders.

This is an excellent objective consistent with the promotion of greater regulatory certainty and stability. This principle might help to break the cycle of almost continuous reviews of the transmission pricing methodology, which began in 2004.

Contrast and comparison with Option 1

The alternative of Option 1 would mean the Authority applying its interpretation of its statutory objective to transmission pricing. The Authority’s formal interpretation of its statutory objective is:

“This Authority interprets its statutory objective as requiring the Authority to:

Exercise all of its powers and functions in ways that:

- Increase competitive pressure in the markets for electricity and electricity-related services without compromising long-term opportunities and incentives for efficient entry, exit, investment and innovation in those markets;
- Encourage market participants to develop and operate the electricity system to manage security and reliability in ways that minimise total costs whilst being robust to adverse events; and
- Increase the efficiency of the electricity industry, with particular care to ensure efficiency gains in non-competitive markets are shared with consumers whilst preserving efficient incentives for investment and innovation.”

The first two bullet points are essentially the same as (b) and (c) of Option 3, but how the last bullet point might be applied in practice is problematic and a potential source of regulatory uncertainty. This uncertainty is compounded by the risk that the Authority might, at some stage in the future, amend the way it applies its formal interpretation of its statutory objective to transmission pricing. This additional uncertainty could potentially discourage efficient investment.

Description of Option 1

Section 4.1.2 of the consultation paper states that removing the pricing principles:

“should provide greater clarity in the evaluation criteria for developing the guidelines and the TPM”.

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However, it is difficult to see why this should be the case. If the pricing principles were removed completely, the Authority would need to go through the process of explaining how its formal interpretation of its statutory objective applied to transmission pricing. With Option 3, this action would already be effectively completed and the outcome clearly set out as the new simplified pricing principles. This would necessarily seem to mean that the evaluation criteria to be applied would be clearer with Option 3 than with Option 1.

Assessment of the costs and benefits of the options

Both the qualitative and quantitative cost/ benefit analyses presented in the consultation paper are highly questionable in our view, as we discuss further below. However, our greatest concern is that the quantitative cost/ benefit analysis focuses solely on administrative costs and fails to recognise as a benefit the creation of greater regulatory stability and certainty.

If one or other option were to provide greater regulatory stability and certainty and this resulted in a better investment climate which led to, say, a 0.001% per annum increase in GDP, this benefit would dwarf any administrative costs (significant as they may be). A 0.001% per annum increase in GDP would be worth approximately \$18.7million p.a. (with an NPV of approximately \$267million using a 7% per annum discount rate). In our view, Option 3 would produce greater stability and certainty than Option 1, and this benefit, even if it were an order of magnitude less than \$18.7million p.a., would overwhelm any additional administrative costs associated with Option 3, should there be any additional costs overall.

Comment on the qualitative cost/ benefit analysis

Consistency with reliable supply limb (statutory objective)

The Authority considers that Option 3 provides less regulatory certainty than Option 1 and is therefore less consistent with the reliable supply limb of the statutory objective. However, in our view, because Option 3 clearly sets out how the Authority interprets the reliability of supply limb of its statutory objective, as it applies to pricing, this provides greater regulatory certainty than Option 1, where the way the interpretation will be done is still uncertain. Hence, Option 3 should rate higher than Option 1 under “consistency with reliable supply limb”. We would give Option 3 two ticks and Option 1 one tick.

Mitigates regulatory failure

It is not clear why Option 3 rates more poorly than Option 1 in terms of “mitigates regulatory failure”. Option 2 clearly warrants its cross because it has demonstrated regulatory failure. However, if the proposed principles in Option 3 are clear and not confusing they should rate just as well as Option 1 in terms of mitigating regulatory failure. In our view, the rating of Option 3 in this category should be based on how well drafted and reflective of the key components of the Authority’s statutory objective the proposed principles are. In our view, the proposed principles are sufficiently well drafted (with one small suggested amendment) and sufficiently accurately reflect the Authority’s statutory objective to warrant two ticks.

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Simplifies the decision framework for developing the guidelines and the TPM

In our view, Option 3 simplifies the decision framework to a greater degree than Option 1, because Option 3 has already completed the task of interpreting how the Authority's formal interpretation of its statutory objective should be applied to transmission pricing. Option 1 leaves this as a still to be completed task with ample scope for further complexity and debate over how the Authority's formal interpretation of its statutory objective should be further interpreted and applied to transmission pricing. Hence, on this criterion, Option 1 should be accorded one tick and Option 3 two ticks.

Reduces transaction costs for the Authority and interested parties in formulating the guidelines and the TPM

Both Option 1 and Option 3 require the Authority to explain how it will apply its formal interpretation of its statutory objective to transmission pricing, but it could be argued that, under Option 3, this has already been done in the form of the simplified principles, so the future transaction costs should be higher for Option 1.

The two crosses for Option 3 in the Authority's analysis seem to derive from the Authority's view that "inevitably the Authority would also need to demonstrate how past decisions with respect to the application of the pricing principles remain valid or need to be altered given the new pricing principles". It is not clear to us that this is something that the Authority is "inevitably" required to do. It may be a useful task to perform, and, if Option 1 were adopted, it may also be useful for the Authority to explain how its application of its formal interpretation of its statutory objective to transmission pricing differs or remains consistent with its past interpretation of the application of the pricing principles. However, it is not essential or something that the Authority is required to do. On this basis, both Option 1 and Option 3 should be accorded at least one tick, and it could be argued, based on the point made in the previous paragraph, that Option 3 should be accorded two ticks.

Removes superfluous regulation and simplifies the Code

We agree that the current pricing principles represent superfluous (and confusing) regulation, so both Option 1 and Option 3 score on this basis for removing the current principles. However, it could be argued that, if the pricing principles proposed by Option 3 are clear, well drafted and consistent with the Authority's statutory objective, they are not superfluous regulation, but rather appropriate regulation. Hence, on this basis, we would suggest that both Option 1 and Option 3 warrant one tick.

Conclusion

The overall conclusion of the review above is that Option 3 should score two more ticks than Option 1.

Comment on the quantitative cost/ benefit analysis

The Authority's quantitative cost/ benefit analysis is limited to the estimated administrative costs of the different options (either incurred or avoided). While these costs are significant and need to be considered, the principal benefits of a sound regulatory framework for the transmission pricing methodology are the development

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of an efficient allocation methodology for transmission revenue and greater regulatory stability and certainty. The Authority's analysis has not considered these benefits.

In our view, while principles (b) and (c) of the proposed revised pricing principles in Option 3 are essentially restatements of the Authority's formal interpretation of the competition and reliability limbs of its statutory objective, principle (d) specifies what the efficient operation limb of the Authority's statutory objective means with respect to transmission pricing in a way that promotes greater certainty and regulatory stability than would the direct application of the Authority's formal interpretation of the efficient operation limb, viz.:

“Increase the efficiency of the electricity industry, with particular care to ensure efficiency gains in non-competitive markets are shared with consumers whilst preserving efficient incentives for investment and innovation.”

We also believe that proposed pricing principle (e) of Option 3, viz.:

“Be transparent and enduring in a way that is broadly acceptable to stakeholders”

is a valuable principle to incorporate into the Code. The presence of this principle could help to convince participants in the electricity industry and potential investors that the cycle of reviews of transmission pricing, which has now continued for seven years, could reasonably be expected to come to an end. This would foster increased certainty and regulatory stability and help to remove an existing barrier to efficient investment. Anecdotal information suggests that some potential investors are delaying final decisions until it becomes clear that a stable transmission pricing environment has been established.

It is difficult to place a precise value on stability and regulatory certainty, but the benefit of even a very small incremental improvement to investment efficiency would dwarf the administrative costs of implementing the best regulatory option. (As noted above, a 0.001% per annum increase in GDP would be worth approximately \$18.7million p.a. and the NPV of a sustained benefit of this amount would be approximately \$267million using a 7% per annum discount rate).

In our view, Option 3 would achieve greater stability and regulatory certainty and this benefit would be sufficient to justify its adoption even if it were an order of magnitude smaller than \$18.7million p.a.

We comment further below on specific aspects of the Authority's quantitative analysis:

Reduced risk of judicial review

The Authority values the cost of a judicial review of its decision making process at \$600,000 and states that the probability of a judicial review would be 25% for Option 2 and Option 3, but nought for Option 1. This assumption transfers to the quantitative analysis as a benefit of \$150,000 for Option 1 and 0 for Option 2 and Option 3. No further information is provided to support the 25% probability figure.

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The legality of how a decision is reached, which is what judicial review looks at, focuses on the following: illegality, irrationality/unreasonableness and/or procedural improprieties/failure to take into account mandatory or relevant considerations and the taking into account of irrelevant considerations. As such, judicial review is possible for any of the proposed options, but the focus may differ depending on which option is adopted. Whereas for Option 3 the focus might be on procedural improprieties and/or failure to take account of relevant considerations, for Option 2 it might be on unreasonableness of the decision, and for Option 1 it could be on any of the available grounds.

There appears to be no good reason to assume that one or other of the proposed options would be more or less likely to attract a judicial review or that the risk should be any particular percentage. Hence, in our view, it is not correct to assign a benefit to Option 1 based on the assumption that it is less likely to be subject to judicial review than the other options. The relative value of this purported benefit should therefore be zero for each option.

Transaction costs

The additional transaction costs claimed for Option 3 relate, first, to the need for the Authority to provide a new interpretation of the revised pricing principles, alongside and consistent with its interpretation of its statutory objective. However, the principles specified by Option 3 should be the Authority's interpretation of how its statutory objective applies to transmission pricing. If Option 1 were adopted the Authority would also have to explain how its formal interpretation of its statutory objective should be applied to transmission pricing. Hence, these two options should be at least equivalent in terms of the cost of this task and it could even be argued that the cost should be lower for Option 3, as part of this task has already been completed.

Second, because both the current and revised pricing principles address concepts of economic efficiency, the Authority claims that it would "inevitably" need to demonstrate how past decisions with respect to the application of the pricing principles remain valid or need to be altered given the new pricing principles. As noted under the comment on the qualitative cost/ benefit analysis above, although such analysis may be useful, we do not believe it is required or "inevitable". If Option 1 were adopted, it would also be useful for the Authority to explain how its application of its formal interpretation of its statutory objective to transmission pricing differs or remains consistent with its past interpretation of the application of the pricing principles. However, again, this would not be essential or something that the Authority would be required to do. Hence, we do not accept that the costs of such explanatory exercises should be counted as costs to Option 3 or benefits to Option 1.

Cost of Code change

We accept that the administrative costs of amending the principles would be slightly higher than the administrative costs of deleting them, which, in turn, would be slightly higher than the administrative cost of retaining the status quo, but these costs are miniscule compared to the benefits of achieving a more efficient, stable and certain regulatory framework for transmission pricing.

Sensitivity analysis

The Authority's sensitivity analyses appear to be arithmetically incorrect for Option 3 in both cases and incorrect for Option 1 and Option 3 in the case of Sensitivity 2, viz.:

Sensitivity 1

The probability of a judicial review is 10%

Cost of Code change is 25% higher

Transaction costs are 50% lower

This should produce the following outcome:

	Option 1 (\$000s)	Option 2 (\$000s)	Option 3 (\$000s)
Reduced risk of judicial review	60	0	0
Reduced transaction costs	48	0	0
Cost of Code change	(70)	0	(140)
Increased transaction costs	0	0	(53)
Net benefit	38	0	(193)

The consultation paper incorrectly states that the comparative net benefit for Option 3, applying the Sensitivity 1 assumptions, is (409).

Sensitivity 2

No judicial review

Cost of Code change is 50% lower

Transaction costs are 100% higher

This should produce the following outcome:

	Option 1 (\$000s)	Option 2 (\$000s)	Option 3 (\$000s)
Reduced risk of judicial review	0	0	0
Reduced transaction costs	196	0	0
Cost of Code change	(28)	0	(56)
Increased transaction costs	0	0	(212)
Net benefit	168	0	(268)

The consultation paper incorrectly states that the comparative net benefit for Option 3, applying the Sensitivity 2 assumptions, is (652) and the comparative net benefit for Option 1 is 62.

Consultation questions

Question	Response
Q.1 Do you agree there is sufficient reason to review the regulatory framework? If not, why not?	Yes. For further discussion see p.1 of the body of this submission and the Appendix.
Q.2 Do you agree with the objectives? If not, why not? Are there other objectives that should be included in the assessment?	We agree with the proposed objectives, but recommend that the following objective be added: (e) Promote greater regulatory certainty and stability with respect to transmission pricing.

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<p>Q.3 Do you agree with the assessment of option 1? If not, why not?</p>	<p>No. Our reasons are discussed in detail in the body of this submission.</p>
<p>Q.4 Do you agree with the assessment of option 2? If not, why not?</p>	<p>Yes, with the exception of the following statements:</p> <ul style="list-style-type: none"> • removing the pricing principles may strengthen investor confidence; and • the pricing principles create additional criteria to assess any proposed changes to the guidelines and TPM against. Complexity of decision making is increased without corresponding efficiency gains. <p>We believe that substituting improved, simplified pricing principles would achieve the objective of strengthening investor confidence more effectively.</p> <p>Provided the pricing principles are designed to be fully consistent with the Authority's statutory objective, they should not create additional criteria against which to assess proposed changes to the guidelines and the TPM and should achieve incremental efficiency gains by increasing regulatory certainty and stability.</p>
<p>Q.5 Do you agree with the assessment of option 3? If not, why not? (e.g. if there are more appropriate principles)</p>	<p>No. Our reasons are discussed in detail in the body of this submission. Please note that, in addition to our alternative analysis of Option 3 (which supports its adoption) we recommend that proposed pricing principle (d)(ii) specify long run <u>marginal</u> transmission investment costs.</p>
<p>Q.6 Do you agree that option 1 has a [greater] net benefit than the two alternatives? If not, why not?</p>	<p>No. The Authority's quantitative cost/ benefit analysis is limited to the estimated administrative costs of the different options (either incurred or avoided). While these costs are significant and need to be considered, the principal benefits of a sound regulatory framework for the transmission pricing methodology are the development of an efficient allocation methodology for transmission revenue and greater regulatory stability and certainty. The Authority's quantitative cost/ benefit analysis has not included these benefits.</p> <p>We believe that well designed, simplified pricing principles would promote regulatory stability and certainty, and consequently a regulatory environment more conducive to efficient investment, more effectively than reliance on the Authority's application to transmission pricing of its formal interpretation of its statutory objective.</p> <p>It is difficult to place a precise value on improved stability and regulatory certainty, but the benefit of even a very small consequential incremental improvement to investment efficiency would dwarf the administrative costs of implementing the best regulatory option. A 0.001% per annum increase in GDP would be worth approximately \$18.7million p.a. and the NPV of a sustained benefit of this amount would be approximately \$267million using a 7% per annum discount rate). We believe that well designed simplified pricing principles could achieve a relative stability and certainty benefit within an order of magnitude of this figure, which would justify the adoption of Option 3. See the body of this submission for more discussion in support of this view.</p>

Yours sincerely



Dr Richard Fletcher
Regulatory Strategy Manager

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APPENDIX – EXPERIENCE OF THE APPLICATION OF THE CURRENT PRICING PRINCIPLES DURING THE 2004-07 TRANSMISSION PRICING REVIEW

The September 2004 issues paper *Proposed Guidelines for Transpower's Pricing Methodology* gave primacy to pricing principle (d) ("non distortionary sunk cost recovery") and, consistent with the analysis in the issues paper, the Transmission Pricing Guidelines published in December 2004 specified that the interconnection charge must be "postage stamp" in nature. However, the Electricity Commission's February 2005 document *The Commission's Statement of Reasons in relation to the Proposed Guidelines for Transpower's Pricing Methodology* required that principles (a), (b) and (d) be applied to all grid assets, but that (a) ("user pays") should be interpreted to mean "causer pays" and should be ranked ahead of (b) ("beneficiary pays"), and (b) should be ranked ahead of (d) ("non distortionary sunk cost recovery"). This inconsistency between the issues paper, the pricing principles and the *Statement of Reasons* resulted in a degree of confusion, and practical implementation problems, which are estimated to have added at least \$200,000 to the cost of developing the TPM (probably more), as well as producing a good deal of frustration on the part of those assigned this task.