



MAJOR ELECTRICITY USERS' GROUP

24 February 2012

John Rampton
General Manager Market Design
Electricity Authority

By email to submissions@ea.govt.nz

Dear John

Consultation Paper—Decision-making and economic framework for transmission pricing methodology review

1. This is a submission on the Electricity Authority consultation paper titled above published 26th January 2012¹. Members of MEUG have been consulted on this submission. Some MEUG members are also making submissions. This submission is not confidential.
2. The approach by the Authority to step back from the detail and work of TPAG and consider decision-making and economic frameworks is sensible.
3. MEUG has commissioned NZIER to assist review and provide advice on the questions in the consultation paper. A report to that effect is attached; refer NZIER, "TPM Framework Review – An assessment of the Electricity Authority Consultation Paper on a 'Decision-making and economic framework for transmission pricing methodology review", 24th February 2012. The NZIER report should be read as part of submissions by MEUG.
4. We look forward to the Authority considering this submission. After the cross-submission phase we would welcome an opportunity to discuss this submission with the Authority.

Yours sincerely

Ralph Matthes
Executive Director

¹ <http://www.ea.govt.nz/our-work/consultations/transmission/tpm-economic-framework/>

TPM Framework Review

An assessment of the Electricity Authority
Consultation Paper on a “Decision-making and
economic framework for transmission pricing
methodology review”

NZIER report to MEUG

24 February 2012

About NZIER

NZIER is a specialist consulting firm that uses applied economic research and analysis to provide a wide range of strategic advice to clients in the public and private sectors, throughout New Zealand and Australia, and further afield.

NZIER is also known for its long-established Quarterly Survey of Business Opinion and Quarterly Predictions.

Our aim is to be the premier centre of applied economic research in New Zealand. We pride ourselves on our reputation for independence and delivering quality analysis in the right form, and at the right time, for our clients. We ensure quality through teamwork on individual projects, critical review at internal seminars, and by peer review at various stages through a project by a senior staff member otherwise not involved in the project.

Each year NZIER devotes resources to undertake and make freely available economic research and thinking aimed at promoting a better understanding of New Zealand's important economic challenges.

NZIER was established in 1958.

Authorship

This paper was prepared at NZIER by John Stephenson and David de Boer.

It was quality approved by Peter Clough.

The assistance of Jean-Pierre de Raad and John Ballingall is gratefully acknowledged.

nzier.org.nz

8 Halswell St, Thorndon | PO Box 3479, Wellington
Tel +64 4 472 1880 | Fax +64 4 472 1211 | econ@nzier.org.nz

© NZ Institute of Economic Research (Inc) 2011

Cover image © Dreamstime.com

NZIER's standard terms of engagement for contract research can be found at www.nzier.org.nz.

While NZIER will use all reasonable endeavours in undertaking contract research and producing reports to ensure the information is as accurate as practicable, the Institute, its contributors, employees, and Board shall not be liable (whether in contract, tort (including negligence), equity or on any other basis) for any loss or damage sustained by any person relying on such work whatever the cause of such loss or damage.

Executive summary

The decision-making and economic framework for transmission pricing proposed by the Authority is logical and reasonable and well connected to the Authority's statutory objective.

The general thrust around needing to charge people based on willingness to pay (whether they want to capture a benefit or avoid a cost) for transmission services is absolutely the right one and should hopefully focus debate on the more fundamental practical question of how you identify or reveal willingness to pay e.g. via interaction between buyers and sellers or by some kind of administrative solution.

The Authority should stay clear of too much detail until a decision making framework has been agreed upon, however, the proposed framework would be made more robust by:

- **Changing the ranking of administrative pricing options.** The Authority should rethink the ranking of "exacerbator pays" over "beneficiary pays". There is no in-principle economic reason to prefer one over the other and a hybrid approach may be in order.
- **More discussion of supply side incentives.** The status of some users as "beneficiaries" or "exacerbators" is contingent on, for example, the actions of Transpower. The Consultation paper thus needs more discussion about incentives facing Transpower, existing regulatory arrangements and the extent to which these might interact with different pricing approaches.
- **Explaining how perverse incentives can be resolved.** The Consultation paper appeals to mechanisms for dealing with perverse incentives such as incentives to free-ride by e.g. referring to a 2003 Transport Working Group proposal. This reference is appropriate, however we think that such mechanisms should be an explicit part of the decision-making framework, rather than a reference.
- **Strengthening links to existing principles and objectives.** It would be useful if the Authority had provided its views on how the various options align with or promote other code amendment principles and with the Authority's statutory objective.
- **Explaining possible implications of the framework.** This would not have to be a definitive assessment. However, some more high level or in-principle examples from the Authority would help to clarify what the framework might mean in practice.

Contents

- 1. Our assessment 1
 - 1.1 A logical and useful framework..... 1
 - 1.2 Details should come later 3
- 2. Suggested improvements 4
 - 2.1 Rethink the ranking of beneficiary pays..... 4
 - 2.2 More information on the supply side 5
 - 2.3 Explain how perverse incentives will be resolved 6
 - 2.4 Strengthen links to existing principles and objectives..... 6
 - 2.5 Explain possible implications of the framework..... 8
- 3. Responses to questions 11

Tables

- Table 1-Pricing approaches and pre-existing objectives and principles 7
- Table 2 Questions and answers 11

1. Our assessment

This report provides our assessment of the decision-making and economic framework proposed by the Electricity Authority as part of its on-going transmission pricing methodologies review.¹

The rest of this section summarises our positive overall assessment of the framework. We have also identified improvements we think are necessary. Those are discussed in section 2.

Our responses to specific questions posed by the Authority are provided in section 3.

1.1 A logical and useful framework

The framework provided by the Authority is a logical and useful one. The general thrust around needing to charge people based on willingness to pay (whether they want to capture a benefit or avoid a cost) for transmission services is absolutely the right one and should hopefully focus debate on the more fundamental practical question of how you identify or reveal willingness to pay e.g. via interaction between buyers and sellers or by some kind of administrative solution.

The logic of the framework may not be immediately apparent because it is presented from the outset as an ordered set of preferences.

Rather than focussing on the Authority's up front preferences, the framework is best considered by inverting the order of the elements in the Authority's decision tree.

An inverted framework starts with the status quo. It is taken as given that the status quo is problematic. The Authority implicitly raises the question of whether minimal, apparently "do no harm" or non-distortionary, adjustments to the existing administrative system should be pursued. These might be a useful approach if a simple (low transaction cost) approach is desirable.

This then raises the question of how administrative approaches should be amended to ensure they promote efficiency and long term benefits to consumers. Here the Authority has appealed to Treasury *Guidelines* which suggest charging exacerbators for costs they create or beneficiaries for the benefits they enjoy.

The appeal to Treasury *Guidelines* is useful provenance, although not entirely necessary. The economic logic for such an approach should be apparent to all:

- people should pay for what they want (a beneficiary pays approach)
- people should not pay for things they don't want or costs over which they have no control (exacerbators pays).

There is no good economic argument we can think of in this context that justifies a charge to someone other than a beneficiary or exacerbator.² Any pricing system which deviates from these principles could always be improved upon, in principle. Consequently these principles are the right starting point for an economic framework aimed at ensuring efficient decision making and promoting the long term benefit of consumers i.e. making

¹ Electricity Authority (2012) "Decision-making and economic framework for transmission pricing methodology review", 26 January 2012.

² Broad based taxes without regard to identifying exacerbators or beneficiaries can be efficient in the presence of extremely high transaction costs or public good provision but these considerations are not relevant in this context.

sure that people are responsive to the costs of the services they receive and investment matches demand as closely as possible over time.

We see no strong economic rationale for the Authority's prioritisation of exacerbators over beneficiaries. We discuss this further in section 2.1. It is not, however, a major issue in terms of the overall logic of the framework

Agreement over these basic principles then leads one to wonder what the implications are. How will we recognise beneficiaries or exacerbators? Can we accurately and cost effectively determine the prices they should pay?

One option for identifying beneficiaries and exacerbators and appropriate prices is via some form of technocratic analysis. This has some obvious economic downsides, including that:

- administrative judgements would perpetuate the kinds of destabilising debate and lobbying which have characterised transmission pricing in New Zealand
- it engenders stark definitions of who is and is not a beneficiary or a cost exacerbator when the differences between a beneficiary and exacerbators are not clear and change over time
- the rigidity of technocratic or administrative approaches constrains the dynamic efficiency of transmission pricing.

One step better than a technocratic solution is to use a market-based process where the interaction of buyers and sellers results in price discovery and reveals willingness to pay.

A market based approach already works well in the context of contracting for connection assets. This raises the question of whether a similar contracting arrangement could be introduced to charge for new assets (i.e. the hybrid proposal put forward by the TWG in 2003). Of course, this would only address future transmission costs and not the problem of how to charge for sunk costs.

In principle, a more complete market could be established, one that could apply to both upgrades and existing assets through contracts and trading of contracts in secondary markets. If this could be done cost-effectively users and consumers could choose what they want to pay for based on their own assessment of their own costs and benefits. This would provide signals for the expansion of existing assets and be the best way to ensure efficient investment. For the most part, administrative guesses will no longer be necessary.

Ultimately, one ends up at the top of the decision hierarchy put forward by the Authority – an assessment of whether a market-based approach could work in practice. Thus, the preferences expressed by the Authority follow logically from the conclusion reached when considering how to improve on the status quo. The Authority has thus set out an economic framework which works down from the best generalised economic approach to transmission pricing suggesting a series of criteria to gauge which approach will end up working best.

The criteria which will be used to assess the usefulness of the various pricing approaches are, appropriately, those which are already in place for guiding Code amendments:

- First phase: problem identification and cost-benefit analysis of possible solutions
 - lawfulness
 - clearly identified efficiency gains or market or regulatory failure

- quantitative assessment of options to resolve identified problems (CBA)
- Tie-breaker principles for choosing possible solutions if there is no clear best solution
 - preference for small scale trial and error
 - preference for greater competition
 - preference for market solutions
 - preference for flexibility to allow innovation
 - preference for non-prescriptive options
- Final tie breaker where small scale flexible solutions are not available:
 - Risk reporting to determine what the risks are from not making an amendment and alternative, non-Code, options for resolving the identified problem.

Ultimately these principles and any final decision made will need to promote the Authority's statutory objective and, in particular, dynamic efficiency which will be the key driver of long term benefits to consumers.

1.2 Details should come later

We believe a framework such as this should be supported on the basis of its general thrust and the extent to which it can help to clarify debate and expedite the amendment of existing transmission pricing methodologies.

The Authority's framework cannot and should not be precise about which pricing options will pass relevant Code amendment tests. The best it can do is to provide clues about likely outcomes and clarity of decision-making process. That being so, all options remain on the table at this stage.

We do wonder if the Consultation paper has a few too many distracting points of detail. There is not much to be gained, in the context of a framework paper, from discussing the merits of whether administrative charges should be based on "but-for" incremental costs or estimates of long run marginal costs. While we appreciate that this grounds the discussion in the wider pricing debate which has been going on for some time we also think that this sort of discussion may distract from the bigger "in-principle" issues at stake and solicits responses that amount to "tilting at windmills".

This assessment is, however, based on the assumption that the decision making framework provides principles around which transmission pricing options can be further assessed – a first hurdle or short list. We assume that the application of this framework will be subject to cost benefit analysis and is not a substitute for evidence and consultation.

2. Suggested improvements

2.1 Rethink the ranking of beneficiary pays

The Authority has expressed a preference for “exacerbator pays” over “beneficiary pays”, but it is not clear that one should be preferred over the other. There is no strong economic rationale to do this.³

In fact a hybrid of “beneficiary pays” and “exacerbator pays” may be appropriate in some circumstances. It would be better to consider the two options together or at most express a weak preference for one over the other.

The Treasury, whose *Guidelines* are referred to by the Authority, notes that neither beneficiary pays nor exacerbator pays are necessarily efficient as charging rules. In an administrative system the optimal charging rule will depend on the specifics of the situation, including making trade-offs between different objectives.⁴

Under the beneficiary pays model it is important for efficiency that a beneficiary pays no more than the benefit received (taking into account alternatives). Under an exacerbator pays model it is important that the exacerbator can both change their behaviour in face of costs and has (efficient) incentives to do so, thus ensuring the exacerbator also pays no more than it benefits.

It is possible for the value of an investment to exceed the individual benefits (ie willingness to pay) accruing to exacerbators or beneficiaries while the combined benefit exceeds the cost of the investment. In these situations, assigning all the cost to either an exacerbator or a beneficiary would result in no investment, which would be inefficient, from an overall consumer benefit perspective. A sharing of costs would then be appropriate, possibly arrived at by unbundling aggregate benefits.

We acknowledge the potential practical constraint of identifying beneficiaries given that they will be more numerous and diffuse than exacerbators. This could make “exacerbator pays” a potentially more attractive option. However, the only way we could be convinced that this is the right order is with some compelling examples.

In some cases it will be clear, a priori, that beneficiary pays is the better framework e.g. charging for existing AC interconnection assets where identifying exacerbators here and now would be extremely difficult for little gain over and above beneficiary pays.

³ E.g. exacerbator pays is useful if transaction costs of identifying and charging exacerbators are low and it creates incentive to exacerbate less and reduce waste; beneficiary pays is useful if transaction costs are low for identifying both the beneficiaries and their willingness to pay for the services provided; where neither has clear advantage, fall back on best practicable option not entailing excessive cost, which may be postage stamp pricing or something else. It could be that on close inspection and detailed evaluation the Authority's ranking turns out to be the right one but it is not evident that one of these methods should be preferred over the other, *a priori*.

⁴ The December 2002 Treasury Guidelines for Setting Charges in the Public Sector notes on p4 that the Guidelines do not deal with "services produced in competitive or contestable markets (which is the case for nearly all state-owned enterprises)". However, this does not mean that the principles in the Guidelines are not appropriate if the Electricity Authority were to prefer an administrative approach to transmission pricing. The Guidelines' objectives are consistent with those of the Electricity Authority. The Guidelines' objectives cover efficient allocation, keeping transaction costs low, and providing for dynamic efficiency.

Alternatively, new assets should probably have exacerbator pays placed above beneficiary pays.

The counterfactual matters and the timing of assessment matters. The Consultation paper describes an example of Southland road use as being instructive in this regard.⁵ If Southland Council knew before the fact that new demand was going to come on the network then it could have charged tankers and logging trucks as the sole beneficiaries of any expansion. In that case the local residents were not beneficiaries. They only become beneficiaries as a result of past decisions which it might be costly and not in their interests to reverse.

The most important issue is that an “exacerbator pays” approach suffers from the problem that in dealing with fixed or lumpy infrastructure exacerbator pays means charging the “last cab off the rank”. This is not necessarily efficient to the extent that a new user’s willingness to pay may be lower than the full cost of asset expansion but much higher than an existing user’s willingness to pay.⁶

This is less an issue with “exacerbators pays” as it is an issue with administrative approaches in general. A market based approach could resolve this problem by giving transmission investors an opportunity to differentiate between users based on willingness to pay or at least leave open the option for negotiation of contract rates or secondary market trades to deal with this sort of approach. In that respect we think administrative approaches broadly fail the test of flexibility and long run benefits to consumers.

2.2 More information on the supply side

The Consultation paper would benefit from more discussion about the situation and incentives facing Transpower and the existing TPM and regulatory arrangements.

A change in the TPM is in effect a shift in the goal posts for Transpower who have invested in the existing transmission network on the basis of the previous regulatory frameworks and pricing arrangements. Their risk profile and revenue requirements are formed by the existing regime and are inherent in the existing administrative transmission pricing arrangements. Further, existing patterns of use and past actions by Transpower have in part determined who the beneficiaries of existing assets are as well as how much they currently pay. In regard to sunk assets the status of some users as “beneficiaries” or “exacerbators” is contingent on the actions of Transpower.

We are also conscious that, while a “market-based” pricing approach will in principle result in efficient investment signalling, new transmission investment on a market basis will need to be managed – through revised regulatory arrangements –and the transmission owner(s) will be a key player in that process.

⁵ We are not convinced that the Southland road example is a very good metaphor for describing transmission pricing issues. The metaphor is also somewhat mishandled by e.g. ignoring the fact that heavy vehicle users already pay per kilometre charges based on estimated average road damage. Still, we have chosen to refer to this example so there is a common basis for discussion rather than introducing our own examples. In doing so, we use the example as described by the Authority.

⁶ The Southland example is also instructive here. Private vehicles don’t face the marginal social costs of using the network so they tend to over-use it. One can conceive of a case where, if everyone was charged their marginal cost of use then private users might drive less and milk tankers drive more. We recognise that congestion pricing is already a feature of the market for electricity, however, transmission investment comes with the additional problem that the higher valued user can be excluded from accessing the system altogether if existing capacity cannot withstand additional load and the new user is not willing to pay the full incremental cost of new investment.

That being so, it would not be out of place to reflect, for example, upon the nature of revenues for which “full recovery” is efficient and thus reflect on the Commerce Commission’s role in all of this.⁷

2.3 Explain how perverse incentives will be resolved

A core part of any economic framework for transmission pricing methodologies should be the market imperfections related to networked assets and perverse incentives that arise, such as free-riding and other strategic behaviour (e.g. hold-out).

These issues will have a bearing on the efficiency of any TPM framework.

Standard economic frameworks that establish incentives to limit this type of behaviour are thus an important element of the TPM assessment framework.

The Consultation paper appeals to mechanisms for dealing with perverse incentives by referring to the 2003 TWG proposal. This reference is appropriate, however we think that such mechanisms should be an explicit part of the decision-making framework, rather than a reference.

2.4 Strengthen links to existing principles and objectives

The consultation paper was silent on how the proposed framework relates to existing code amendment principles. The Consultation paper reads as though it may be setting the framework for making decisions in the context of Code Amendment principles 4-8 (the “tie-breakers”). Yet those principles aren’t discussed directly despite them offering useful guidance for thinking about which kinds of pricing methodologies would help to promote the EA’s statutory objective.

The relationship of the proposed TPM framework is confused by the statement that any TPM option will be contingent on the Authority being confident that resulting charges will “comply with the Authority’s Code amendment principles, including those elements relating to cost-benefit analysis.” This almost suggests that the framework is a way of shortlisting prior to full CBA of short listed options.

In some cases this lack of clarity is reasonable: cost benefit analyses for example cannot be accurately assessed *a priori* and in any event there are established methods for conducting such analyses so explication may not be necessary.

In any event, it would useful if the Authority had provided its views on how the various options align with or promote other code amendment principles and with the Authority’s statutory objective.

By way of example, we have assessed the high level pricing approaches discussed in the consultation paper in terms of their alignment with or support of code amendment principles. We also assessed the extent to which the approaches promote dynamic efficiency, which is central to the Authority’s statutory objective. Long term gains to consumers can only come from new investment, minimising the cost of meeting

⁷ We understand that the Commerce Commission’s determinations of allowable revenues are independent of the Electricity Authority however we are also mindful that Authority also acts independently of the Commission and that decisions the Authority makes can effect Commerce Commission determinations (certainly over the long term). The efficiency of Code amendments could also be effected by Commission determinations.

expanding demand, and competitive pressure from new players in the market or the threat of market entry; all of which are matters of dynamic rather than short term or static efficiency.

This assessment is, in large part, a matter of qualitative judgement of incentive structures rather than detailed analysis. Our assessment is in Table 1 (the thinking behind which is elucidated in section 2.5 below).

Table 1-Pricing approaches and pre-existing objectives and principles

▲ = likely to promote, ➤ = may promote, ✘ = unlikely to promote, ▼ = will not promote

Existing principles and objectives	Possible pricing approaches				
	Market approaches		Administrative approaches		
	Pure market	Hybrid market	Exacerbator pays	Beneficiary pays	Other
Dynamic efficiency (statutory objective)	▲	▲	➤	➤	✘
Trial and error/small scale	✘	➤	➤	➤	▲
Competition	➤	➤	✘	✘	▼
Market solution	▲	▲	✘	✘	▼
Flexibility for innovation	▲	▲	➤	➤	▼
Non-prescriptive	▲	▲	✘	✘	✘

Notes: Not a full or final analysis
Source: NZIER

2.5 Explain possible implications of the framework

A natural extension of linking the decision making framework to existing principles and objectives would be to give an example of how the decision making criteria might be actually applied and the kinds of pricing approaches that are likely to find favour under the Authority's framework in combination with its existing Code Amendment Principles and statutory objective.

Market based approaches and capacity rights

NZIER have previously argued that the most efficient outcomes for transmission pricing will come from the use of a market based TPM. We have proposed the use of both voluntary long term contracts and capacity rights as mechanisms in this regard and we endorse the use of a market approach as the preferred option for the TPM. We make the following comments in response to the Paper's considerations.

While we do not see our response to this principles paper as the place to put forward details regarding implementation of the capacity rights case we believe that a detailed assessment of their suitability as a component of the TPM should be made at the appropriate time in this process. In 2009 we proposed the use of capacity rights as a means of identifying willingness to pay for use of the HVDC link and we have previously provided an outline of how capacity rights could be implemented for both the existing HVDC link and for additional investments that would be made. We remain firm in the view that tradable capacity rights of the HVDC link would result in significant long term dynamic benefits for consumers that would outweigh the relatively small short term transaction costs of implementing the scheme. The TPAG reconsidered our approach in 2011 and while they recognised the potential for significant long term benefits they remained cautious regarding the perceived short term implementation complexities.

The other significant advantage of capacity rights is that it resolves the argument that has existed for years and makes transparent who benefits from the HVDC link and the level that the beneficiaries are willing to pay for its use. This method also contributes to dynamic efficiency by allowing the ownership of capacity rights to locate with parties who value them most as supply and demand conditions change over time. We believe that capacity rights offer a pricing regime that is more durable and should be explored in detail through this process.

This would not have to be a definitive assessment and we recognise that, by and large, the full Code Amendment process cannot be fulfilled without more in depth analysis. However, some high level or in-principle examples from the Authority would help to clarify what the framework might mean in practice. Otherwise the framework itself might be seen as somewhat esoteric when it is not.

A preliminary application of the principles would also help underscore the extent to which different kinds of assets or pricing-related issues might need to be addressed using different approaches, rather than with a one-size-fits-all approach. Finally, it would elucidate any in-principle problems with the framework.

Given our assessment of how the options relate to the CAPs and the statutory objective we can provide our view on a likely outcome from applying the principles as read. The framework is suggestive of a mixed pricing model with elements of each of the possible approaches:

- **A pure market regime to pay for the HVDC**
 - none of the administrative solutions discussed will resolve the ongoing and fundamental problem of identifying who benefits from and is willing to pay for the HVDC.
 - a hybrid market based on long term contracting will not resolve existing disputes over who should bear the costs of the existing asset(s), another high impact issue
 - the stakes are extremely high and we believe warrant the effort required to implement a purely market-based solution for this service
 - transaction costs will be much lower than for applying pure market solutions in other parts of the transmission system
 - this is an essential part of ensuring long term benefit to consumers because pricing signals put in place now will affect the efficiency of a wide range of investments and, in due time, the efficiency of major maintenance or upgrade decisions which, as we have seen lately, are very costly.
- **Long term contracting for non-HVDC asset upgrades**
 - this would uncover the willingness to pay of both exacerbators and beneficiaries for grid upgrades and, if combined with decision making procedures to overcome hold-out, would remove the need for uncertain and debatable methods for identifying beneficiaries and exacerbators and their respective costs and benefits
 - this is also a step towards a system in which contracts for service can be traded in a secondary market which would overcome dynamic inefficiencies inherent in administrative pricing approaches which do not promote competition and incentivise the highest valued use of sunk assets
 - this is a reasonably small scale “trial and error” approach which could be re-evaluated and reversed at minimal cost and it would provide an opportunity for innovation and learning amongst market participants (especially to the extent that a secondary market for contracts could also emerge on a small scale over time)

- **Continuation of administrative approach to interconnection prices**
 - the current approach amounts to a beneficiary-pays regime of sorts and significant changes may be unwise, not least because a commitment to existing pricing principles would promote regulatory durability and stability while leaving open the possibility for alternative pricing methods emerging through long-term contracting for upgraded assets
 - significant alteration to the status quo at this point in time is no small matter given the large sums which will become part of interconnection charges in the next few years
 - while the reasonableness of prices paid for interconnection services by particular beneficiaries under the status quo might be open to challenge, which would be difficult to defend in the face of proven inefficiency, major changes would be unwise unless there is a clear better alternative
 - the possibility of efficiency gains from amending the details of current pricing methods cannot be discounted (e.g. extending charges to all beneficiaries of interconnection assets, including generators) but the existence and magnitude of such gains is a matter for empirical cost-benefit analysis.

It seems to us that the benefits of market-based approaches are strong but that there remain question marks over the transaction costs associated with some of these approaches; capacity rights in particular.

Further, there will be some uncertainty around the magnitude of benefits from the different market approaches and whether these will offset potential transaction costs. That being so, we see that a major consideration will be the extent to which transmission pricing options are “small-scale, and flexible, scalable and relatively easily reversible with relatively low value transfers associated with doing so”.⁸

At the same time the importance of dynamic efficiency will mitigate against the most incremental and small scale of the pricing approaches in the decision making framework i.e. very incremental changes to existing administrative methodologies are unlikely to pass the efficiency muster in most cases.

Adaptation of existing methodologies is also likely to attenuate problems with structural incentives which drive lobbying and lead to an unpredictable regulatory environment with potentially negative effects on investment.

If a pure market based approach proves to be a bridge too far, despite potential dynamic efficiency gains, then an incremental or trial and error approach should be seen as an opportunity for learning and for incremental improvement in transmission pricing and investment – on the road towards a market based solution.

A premium needs to be placed on options which are not too prescriptive and give market participants enough flexibility that they can begin to explore or test innovative ways to avoid costs and improve efficiency.

⁸ Electricity Authority “Consultation Charter” p.5.

3. Responses to questions

Table 2 Questions and answers

No.	Question	Response
Q1	Do you agree with the Authority's interpretation of its statutory objective with respect to transmission pricing? If you agree, please explain why. If you do not agree, please explain how you consider the statutory objective should be interpreted with respect to transmission pricing and the reasons for your interpretation.	Cannot disagree in principle – dynamic and static efficiency are essential for driving long term consumer benefits but it's how the statutory objective is applied to the TPM that matters. Section 3.4 does not make mention of the fact that transmission investment past and future is required to meet peak demand and that the efficient level of demand is that which consumers willingly pay for over time.
Q2	Do you agree with the above application of the three limbs of the statutory objective to transmission pricing? If not, why not, and are there other examples of how transmission pricing can influence competition, reliability and efficiency?	It doesn't make much sense to agree or disagree as many examples regarding the application of the statutory objective to transmission pricing could be identified. We would have thought that the table 1 should have examples to show how "promote competition" could be applied to transmission pricing to drive benefits for consumers – like how pricing frameworks that reveal willingness to pay in a dynamic way result in the best outcome for consumers.
Q3	Do you agree that a market-based TPM would tend to promote efficiency in grid use and in investment in the grid, generation, demand management and the electricity industry? If so, what are your reasons? If you disagree, what are your grounds for disagreeing?	While in most instances a suitably specified market based TPM would result in efficient outcomes there are certain circumstances where a full market based arrangement would not be efficient. Open access to the shared and "sunk" transmission assets would encourage free riding and/or refusal to pay for use of the assets. These situations would leave investment below optimal levels, increasing the potential for congestion though both can be overcome through regulatory intervention.
Q4	Do you agree that a market-based TPM is likely to be more durable and stable than approaches involving administered charges? If so, what are your reasons? If you disagree, what are your grounds for disagreeing?	Yes we agree. Having suitably specified market based mechanisms like capacity rights on the HVDC link as part of the TPM will allow ownership to go to those parties that value them the most as circumstances change over time. A transmission pricing regime that is durable and unchanged in its fundamentals, and that accommodates change, will reduce uncertainty in investment decision making by generators and major load. In contrast administered charges will require constant review to avoid increasing inefficiencies as circumstances change, resulting in higher costs and a sub-optimal network investment.
Q5	Do you agree the Authority's first preference should be to adopt market-based approaches to TPM charges wherever it is confident such charges will be efficient and their implementation will be practicable and that any Code changes needed to do so comply with the Authority's Code amendment principles? If so, what are your reasons? If you disagree, what are your grounds for disagreeing?	Yes we agree. A market based approach is not likely to be assessed in an absolute manner but the decision to adopt such an approach should be made relative to alternative approaches against criteria that reflect the requirements in the statutory objectives. A suitable specified market based approach is likely to be way more efficient than administered charges over the long term life of the assets that are used for transmission services. We have previously recorded our view that the short term costs associated with the practicalities of market based approaches are secondary and not significant issues.
Q6	In light of TPAG's views, do you consider there would be any merit in the Authority devoting further effort to developing market-based TPM charges for interconnection and/or HVDC link assets? If so, what are your reasons and how do you think this would be best progressed? If not, what are your reasons?	Yes we agree. We have described our earlier views regarding market based pricing for connection and HVDC and remain strong in the view that enhanced efficiencies will result from the dynamic nature of the mechanisms that we proposed.

No.	Question	Response
Q7	Do you agree the Authority's second, third and fourth ranked preferences should be to adopt the administrative approaches to TPM charges of exacerbators pay, beneficiaries pay and other charging options wherever it is confident such charges will be efficient, implementation will be practicable, and that any Code amendments needed comply with the Authority's Code amendment principles? If so, what are your reasons? If you disagree, what are your grounds for disagreeing?	<p>Yes, though the order of preference and the criteria for determining the alternatives needs to be reviewed. The priority of whether the beneficiary or the cost causer pays ahead of the other is a nuance on what is essentially the same thing – its cost allocation via different causal drivers.</p> <p>We acknowledge the potential practical constraint of identifying beneficiaries given that they will be more numerous and diffuse than exacerbators.</p> <p>This could make “exacerbators pays” a potentially more attractive option. The only way we could be convinced that this is the right order is with some compelling examples.</p> <p>In some cases it will be clear, a priori, that beneficiaries pays is the better framework e.g. charging for existing AC interconnection assets where identifying exacerbators here and now would be extremely difficult for little gain over and above “beneficiary pays”. Alternatively, new assets should probably have “exacerbator pays” placed above beneficiary pays.</p> <p>However, the “exacerbator pays” approach suffers from the problem that exacerbators means last cab off the rank. That is not necessarily dynamically efficient to the extent that a new user's willingness to pay may be lower than the full cost of the expansion but much higher than an existing user's willingness to pay.</p> <p>The Southland example is instructive here. Private vehicles don't face the marginal social costs of using the network so they tend to over-use it. One can conceive of a case where, if everyone was charged their marginal cost of use then private users might drive less and milk tankers drive more.</p>
Q8	Do you agree these actions can exacerbate investment? Are there other actions and, if so, what are they?	Yes. No, we have no further actions or inactions to suggest.
Q9	Do you agree that exacerbators should be identified by determining which party or parties have the ability to act differently, thereby avoiding the need to augment the network? Is there an alternative approach? If so, please provide details.	Yes, but that does not diminish the in-principle problems we have in regard to this approach.
Q10	Do you agree with the assessment of the price that should apply to exacerbators? Do you agree with the assessment of how exacerbators pay should apply in practice? Do you agree with the proposed approach for identifying the preferred option or options for applying exacerbators pay? Please provide explanations in support of your answers.	<p>We agree with the conclusions on pricing principles.</p> <p>In the context of exacerbators pays the price to be paid should be the incremental cost caused by the exacerbator – irrespective of how that increment is to be measured.</p> <p>The best method for measuring and pricing incremental costs remains an open question and the paper accurately identifies that in an administrative setting it is not self-evident which of the pricing approaches will deliver the largest long term benefit to consumers.</p> <p>Any assessment of pricing options should focus on promoting industry efficiency to the long term benefit of consumers.</p> <p>However, these pricing options could also be explicitly measured against some of the code amendment principles e.g. charges based on estimates of LRMC are more prescriptive than other options and potentially more open to challenge on differences of interpretation for which some participants will have strong incentives to skew the playing field.</p>
Q11	Do you agree these considerations should be taken into account under an exacerbators pay approach? Please provide an explanation in support of your view.	<p>In principle all of these issues should be taken into account. However some of the issues raised are important while others are trivial.</p> <p>It is, for example, important to consider whether mechanisms such as the PDP are necessary to avoid inefficient outcomes. A PDP-style mechanism could attenuate the issues we raised in response to Q7 regarding inefficient outcomes from exacerbators pays.</p> <p>The other issues raised – transaction costs, multiple small exacerbators and efficient pass-through – seem somewhat trivial. In principle they need to be considered but it seems obvious to us that costs will be passed through in an efficient manner, or at least we cannot conceive of an example where that would not be the case.</p>

No.	Question	Response
Q12	Do you agree that these ways can be used to identify beneficiaries? Are there others? If so, please provide details.	Yes. Note that contracting is a way of identifying beneficiaries and in that regard these are not necessarily administrative criteria.
Q13	Do you agree with the assessment of the price that should apply to beneficiaries? Do you agree with the assessment of how beneficiaries pay should apply in practice? Please provide an explanation in support of your answer.	<p>We partially agree.</p> <p>Yes, beneficiaries should pay based on ex ante assessment where possible and on assessments of willingness to pay.</p> <p>We do not entirely agree with the assertion that pricing should be “incentive free”. While we do agree that charges based on usage can cause inefficient demand response (under-utilisation of existing capacity) it may be dynamically efficient if demand response facilitates alternative and higher valued use.</p> <p>This issue illustrates the inherent conflict between short term efficiency and dynamically efficient price signals. This conflict is unlikely to be resolved with any form of administrative pricing. Dynamically efficient pricing will necessitate tradable rights of some kind.</p>
Q14	Do you agree that prima facie the increase in transmission costs in the next few years may provide incentives for some direct connect customers to disconnect from the grid? Please provide any evidence and an explanation in support of your answer.	The Authority’s calculations and arguments are prima facie evidence of an issue that deserves more investigation than it has to date.
Q15	Are there other alternative pricing options? Do you agree with the assessments of how incentive free and postage stamp pricing should be applied in practice? Please provide reasoning in support of your answer.	The pricing alternatives suggested are a good guide to the kinds of approaches that could be taken to recovering the cost of sunk assets in a “non-distortionary” way. Further, limiting distortions is the right approach to take when using an otherwise inefficient pricing methodology and there are a number of other mechanisms that should be considered in due course.