Summary of submissions

Transmission Pricing Methodology: Sunk costs

Contents

1 Introduction

1.1 The Electricity Authority (Authority) is reviewing the Transmission Pricing Methodology (TPM), which specifies the method for Transpower New Zealand Limited (Transpower) to recover the costs of providing transmission services. The TPM is contained in Schedule 12.4 of the Electricity Industry Participation Code 2010 (Code).

1.2 The Authority considers that the current TPM can be improved so as to better meet the Authority's statutory objective to promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers. The Authority's consultation paper 'Transmission Pricing Methodology: issues and proposal' was released in October 2012 (October 2012 issues paper), to obtain feedback on a package of charging approaches (the TPM proposal).

1.3 Extensive feedback on the TPM proposal was received through submissions and cross submissions on the TPM proposal, and from verbal and written feedback during and following the TPM conference held in May 2013. Stakeholders raised concerns about, and made suggestions on, the Authority's TPM proposal. As a result of this feedback, the Authority decided to issue a second issues paper.

1.4 Prior to developing a second issues paper, the Authority has decided to prepare a series of working papers to analyse the issues raised by submitters. Feedback on the working papers will form a key input into the second issues paper.

1.5 In this regard, on 8 October 2013, the Authority published a working paper titled "Transmission pricing methodology: Sunk costs" (the working paper).[1] The working paper:

(a) outlines the views of submitters on the nature of sunk costs;

(b) reviews the definitions of sunk cost in economic theory;

(c) considers the relevance of sunk costs to production decisions, and for pricing decisions at the margin and for infra-marginal pricing; and

(d) briefly outlines the transmission regulatory regime administered by the Commerce Commission, and considers whether this regime is relevant to understanding the effects of sunk costs.

1.6 The working paper sought views on these matters.

1.7 This paper provides a summary of the submissions received on the working paper.

[1] The first working paper 'Transmission Pricing Methodology: CBA' was published on 3 September 2013.

2 Overview of submitters

2.1 Fourteen submissions were received from submitters covering a range of topics in the working paper. Table 1 lists the submitters.

Retailer/Generators	Distributors	Consumers	Others
Mighty River Power (MRP)	Orion	Major Electricity Users Group (MEUG)[2]	Transpower
Meridian Energy (Meridian)	Vector	Pacific Aluminium	Competition Economics Group (CEG) (commissioned by Transpower)
Contact Energy (Contact)	Powerco		New Zealand Institute of Economic Research (NZIER) (commissioned by MEUG)
Genesis Energy (Genesis)	PwC[3]		Castalia (commissioned by Contact Energy, Genesis Energy, Mighty River Power, and Trust Power)
Trustpower	Electricity Networks Association (ENA)[4]		
Ringa Matau Limited (Ringa Matau)			

1. Note: ENA submission is expressly endorsed or supported by Orion and PwC for 20 EDBs.

2 MEUG has 19 members and advised that it had consulted with its members in the preparation of its submission.

3 PwC's submission was on behalf of the following 20 distributors: Alpine Energy Limited, Aurora Energy Limited, Buller Electricity Limited, Eastland Network Limited, Electra Limited, EA Networks Limited, Electricity Invercargill Limited, Horizon Energy Distribution Limited, MainPower New Zealand Limited, Marlborough Lines Limited, Nelson Electricity Limited, Network Tasman Limited, Network Waitaki Limited, Northpower Limited, OtagoNet Joint Venture, The Lines Company Limited, The Power Company Limited, Top Energy Limited, Waipa Networks Limited, and Westpower Limited.

4 ENA's submission was made with the explicit support of its 29 members: Alpine Energy Ltd, Aurora Energy Ltd, Buller Electricity Ltd, Centralines Ltd, Counties Power Ltd, Eastland Network Ltd, Electra Ltd, E A Networks Ltd, Electricity Invercargill Ltd, Horizon Energy Distribution Ltd, MainPower NZ Ltd, Marlborough Lines Ltd, Nelson Electricity Ltd, Network Tasman Ltd, Network Waitaki Ltd, Northpower Ltd, Orion New Zealand Ltd, OtagoNet Joint Venture, Powerco Ltd, Scanpower Ltd, The Lines Company Ltd, The Power Company Ltd, Top Energy Ltd, Unison Networks Ltd, Vector Ltd, Waipa Networks Ltd, WEL Networks Ltd, Wellington Electricity Lines Ltd, and Westpower Ltd. Orion, Powerco and Vector also made separate submissions. Orion and Powerco expressly endorsed ENA's submission.

3 Form of summary

3.1 The summary has been grouped into two parts: comments on legal and process issues (table items 1-84), and comments about matters raised in the working paper (table items 85-266).

3.2 This paper is a summary only and does not contain an exhaustive list of submissions made on each subject. For more information please refer to the submissions themselves, which can be found on http://www.ea.govt.nz/development/work-programme/transmission-distribution/transmission-pricing-review/consultations/.

4 Summary of submissions

PART 1: COMMENTS ON LEGAL AND PROCESS ISSUES

Issue	Submitter(s)	Submission	Submission reference	Item number
Comments on problem definition				
The Authority should have a problem definition	MEUG, NZIER for MEUG	Without an appropriately defined and agreed problem definition that is assessed through a fit-for-purpose CBA, disagreements about the efficiency of the proposed TPM and the potential for unintended outcomes will remain, regardless of the clarity that is gained around these principles.	MEUG para 3, NZIER para 8	1
	Transpower	If the Authority establishes that there has been a material change in circumstances then the Authority should articulate any specific problems that it identifies with the current TPM, identify options for a potential change, and assess each option on its merits.	Page 2	2
	Vector	The difficulty in quantifying dynamic efficiency impacts in a meaningful way heightens the importance of a robust qualitative assessment and underlying problem definition.	Para 33	3
What is the real issue?	Castalia for Contact, Genesis, MRP and Trustpower	The core disagreement between the Authority and submitters throughout the TPM review process is whether there can be material dynamic efficiency gains from changes in behaviour by reallocating transmission costs, and whether those gains would outweigh any material static inefficiencies.	Page 2	4

Issue	Submitter(s)	Submission	Submission reference	Item number
	ENA	In the case of transmission pricing, the debate is largely around the recovery of fixed costs under a breakeven constraint, and needs to focus on how best to recover fixed costs in a manner that minimises distortions to efficient use and investment.	Para 33	5
	ENA	The Authority has not asked the right question in response to issues raised in submissions. The more pertinent questions are "what are the pricing implications of having large fixed costs in the supply of the transmission service?" and "what is the most efficient (or least distorting) way of recovering these large fixed costs?".	Para 34	6
	Genesis	The issue is the degree to which dynamic and static efficiency effects arise from allocating the costs of Transpower's assets.	Page 2	7
	Meridian	It is accepted that under the current regulatory regime Transpower should recover its sunk costs, and the issue is how to do this while minimising distortions to decision-making.	Page 1	8
	Meridian	The real question is how to recover the sum of fixed and variable costs in the most efficient way, regardless of whether the fixed costs are sunk.	Page 2	9
	NZIER for MEUG	The debate should focus attention on identifying the most efficient mechanism for cost recovery. This is where the Authority is coming from with the TPM.	Para 7	10
	Orion	The question that needs answering is: how would an alternative TPM improve infra-marginal decisions?	Para 15	11
	Ringa Matau	The working paper does not and was not addressing the real debate around the proposed changes to the TPM.	Page 3	12

Issue	Submitter(s)	Submission	Submission reference	Item number
	CEG for Transpower	The key question is how best to recover those costs (fixed/sunk) via transmission prices.	Page 2	13
Burden/standard of proof	Orion	The burden of proof, or at least the responsibility to clearly set out the line of argument, lies with the proponents of alternatives.	Para 12	14
	Ringa Matau	Expects the Authority to respect existing property rights unless a suitably high burden of proof is met. Any change must clearly and significantly meets its statutory objective and have net public benefit.	Page 1	15
	Ringa Matau	Given the potential implications for many investors and participants from the Authority's proposed changes, the burden of proof for the Authority for a change should not be an expectation that the change will promote an outcome, but that it will achieve an outcome.	Page 2	16
	Ringa Matau	There is an expectation that change will only occur with good reason and with a high burden of proof on the proposer to demonstrate almost with absolute certainty that the assumed benefits will occur.	Page 3	17
Comments on statutory objective				
The Authority should take into account its statutory objective	Ringa Matau	The Authority is seeking to promote overall efficiency of the electricity industry, but is silent on the primary outcome, being the long-term benefit of consumers.	Page 2	18
	Transpower	It should not be controversial that any policy proposal should be explicitly assessed against the three limbs of the statutory objective for its impacts on *competition in, reliable supply by* and *efficient operation of* the electricity industry.	Page 2	19

Issue	Submitter(s)	Submission	Submission reference	Item number
The Authority's treatment of submitters' views				
The Authority has misrepresented/not correctly understood/responded to the views of submitters	ENA	The working paper discussion surrounding marginal and infra-marginal pricing does not address the key concerns raised in submissions regarding the inefficiency of recovering large fixed costs in marginal prices (ie, an SPD charge).	Para 31	20
	Genesis	Genesis does not consider that the paper addresses the fundamental concerns in submissions to the October 2012 TPM proposal and at the TPM conference about the likely efficiency impacts of changes in the TPM. In particular: • The paper does not acknowledge the Commerce Commission's regulatory framework. It risks generating confusion and inconsistency between the Commission's application of the investment test in the input methodology, how Transpower's total revenues are determined, and how transmission costs are recovered by the TPM The paper should consider how transmission pricing might deliver different benefits over different stages of the asset's life.	Pages 1-2	21
	Genesis	The paper does not address the fundamental issues raised by submitters at the TPM conference as well as in their submissions.	Page 2	22
	MRP	The Authority has wrongly characterised several submitters (including MRP) as holding the view that: • No dynamic efficiency benefits would result from adjusting prices to account for assets with sunk costs • Converting sunk costs to variable charges would give rise to pricing signals that would result in the inefficient allocation of resources.	Page 1	23

Issue	Submitter(s)	Submission	Submission reference	Item number
	MRP	MRP's submission to the Authority's original TPM proposal raised the same concerns in terms of the impacts for retail competition from a shift to variable transmission pricing.	Page 5	24
	MRP	MRP has not argued that sunk costs cannot be recovered via variable charges.	Page 2	25
	MRP	MRP has not argued that there can never be dynamic efficiency benefits from the reallocation of sunk costs.	Page 3	26
	MRP	MRP has not argued that static efficiency will always be compromised where sunk costs are recovered via variable charges.	Page 4	27
	Orion	The paper fundamentally misses a point that most submitters have been making, which is simply that, once built, long-lived transmission assets have very little value in any alternative use.	Para 4	28
	Orion	Submitters have not argued that sunk costs count against changing the TPM *per se*.	Para 8	29
	Orion	The working paper counters a point that has not been made, namely that advocates of marginal cost pricing do not think it appropriate for providers to recover the "full economic cost of the service".	Para 14	30
	PwC for 20 EDBs	The Authority has misunderstood submissions on the previous TPM proposal that related to the proposed SPD charge's use of half hour trading periods and whether an RCPI charge or MWh charge was preferred in relation to the residual charge. Those issues were quite specific to the original proposal and not a generic discussion as to whether variable charges can be used to price fixed costs.	Para 15	31

Issue	Submitter(s)	Submission	Submission reference	Item number
	Trustpower	Trustpower does not entirely agree with the Authority's restatement of a number of submissions.	Paras 2.1.1-2.1.2	32
	Trustpower	Trustpower's position was not that changing the charging regime for existing assets cannot have efficiency gains at all. Trustpower claimed that charging for existing assets via beneficiaries pay cannot have any positive efficiency gains.	Paras 2.1.2-2.1.3	33
	Vector	The working paper misrepresents the views of some submitters, including Vector, and appears to use this misrepresentation as a basis for dismissing their arguments against the 2012 TPM proposal.	Page 5	34
	Vector	Vector is not aware of any submitter that has the view that prices should not reflect sunk costs.	Page 5	35
	Vector	The majority of submissions focused on how the Authority's specific proposal would distort both static and dynamic efficiency. This does not mean, as the Authority effectively asserts, that submitters do not believe that there are options for changing the way sunk costs are charged that would promote dynamic efficiency.	Page 6	36
	Vector	Vector did not and has not said it is necessarily inefficient to convert fixed and/or sunk costs into variable charges *per se*. What Vector said in its submissions and at the TPM conference was that the way the Authority was proposing to convert fixed or sunk costs into variable charges would distort both dynamic and static efficiency.	Page 6	37

Issue	Submitter(s)	Submission	Submission reference	Item number
	Vector	The Authority needs to be mindful that just because a particular submission may criticise the TPM proposal on the basis that it undermines static efficiency, or undermines both static and dynamic efficiency, it does not follow that the submitter does not recognise that transmission pricing, and recovery of fixed and/or sunk costs, can be used to promote dynamic efficiency.	Page 7	38
	Vector	The working paper asserts that submitters treated fixed and sunk costs as synonymous terms. This is at least partially based on a misunderstanding of some parties' submissions.	Page 7	39
TPM review process				
	NZIER for MEUG	Any potential impact will remain unclear until there is visibility around how the Authority will bring its views on sunk costs, and other aspects of its TPM consultation, into the yet to be released final TPM proposal.	Para 4	40
	Ringa Matau	The Authority's objective requires that it consider any consequential effect; that is, the Authority should not consider each component of the TPM in isolation.	Page 2	41
Utility/relevance/clarity of working paper				
Was useful	Meridian	The working paper usefully clarifies some key concepts in the discussion of sunk costs and efficient transmission pricing.	Page 1	42
	Pacific Aluminium	The paper is a very useful discussion on the consideration that should be given to sunk costs, and that these are just more broadly a subset of fixed costs.	Para 3	43
Was not useful/relevant/clear	Castalia for Contact, Genesis, MRP and Trustpower	The paper appears to conclude that transmission costs are fixed, and not sunk. However, the relevance of this characterisation for transmission pricing is unclear.	Page 1	44

Issue	Submitter(s)	Submission	Submission reference	Item number
	Castalia for Contact, Genesis, MRP and Trustpower	The debate on transmission pricing is not really about whether transmission assets can be defined as either sunk or fixed.	Page 2	45
	ENA	It is not clear what implications the Authority intends to draw from the conclusions in this working paper for developing the TPM.	Para 1	46
	ENA	Given the conclusion that the debate in economics literature is how to best recover fixed costs, the reason for and implications of the focus in the working paper on distinguishing sunk costs from other fixed costs is not apparent.	Para 2	47
	ENA	The debate in the working paper distinguishing sunk costs from other fixed costs does not appear to have any pricing policy implication.	Para 3	48
	ENA	It is not clear why the working paper labours the distinction between marginal and infra-marginal prices.	Para 7	49
	ENA	The discussion in the working paper on sunk costs does not appear to have any practical implications for the design of the TPM.	Para 18	50
	ENA	For the purposes of developing the TPM the distinction becomes academic between whether the costs to supply transmission services are fixed, or fixed and sunk.	Para 20	51
	ENA	The Authority considers that the SPD charges in the proposed TPM would be efficiency enhancing because they are marginal price signals (not infra-marginal), so it is difficult to see how the infra-marginal discussion in the working paper contributes much to the discussion on the proposed SPD charge component of the proposed TPM.	Para 35	52

Issue	Submitter(s)	Submission	Submission reference	Item number
	Genesis	The working paper does not take the debate any further than the discussion in the TPM conference.	Page 2	53
	Meridian	For the present purposes the question of whether a cost is sunk is not relevant to the pricing decisions.	Page 1	54
	MRP	The Authority appears to be concerned that many submitters failed to appreciate the difference between sunk and fixed costs.	Page 2	55
	NZIER for MEUG	The debate around the definition of whether the "approved costs" are fixed or sunk is somewhat irrelevant.	Para 7	56
	Orion	The paper fundamentally misses the point most submitters have been making, which is that, once built, long-lived transmission assets have very little value in any alternative use.	Para 4	57
	Orion	The distinction in the paper between production decisions and pricing decisions in the context of sunk or fixed costs is unhelpful.	Para 7	58
	Orion	The working paper is unhelpful in its statement that Transpower's regulatory environment would seem to ensure that expenditure by Transpower on long-lived assets take the economic characteristics of fixed costs rather than sunk costs. This is because: • "would seem" is rather equivocal • the regulatory environment does not change the economic characteristics of the investments at all • arguing that the regulatory environment can make sunk costs into fixed costs from Transpower's financial perspective acknowledges, if accidentally, that	Para 9	59

Issue	Submitter(s)	Submission	Submission reference	Item number
		fundamentally, and economically, there is indeed a difference between fixed costs and sunk costs, and that transmission costs are indeed sunk costs.		
	Orion	One aspect of the paper that appears to introduce new material is the discussion of infra-marginal decisions. However, Orion is unsure what the relevance of this material is, partly because it conflates concepts of "cost", "price" and "decision" in ways that Orion does not understand.	Para 11	60
	Orion	In our view the discussion on price discrimination is unhelpful.	Para 16	61
	Powerco	With respect to transmission pricing, the discussion about whether particular costs are genuinely sunk, or merely fixed and not sunk, seems rather sterile.	Page 1	62
	Powerco	Powerco agrees with the Authority's view that the debate in the economics literature is about how best to recover fixed costs, and not whether a distinction is required between sunk and other costs for efficient pricing.	Page 1	63
	Powerco	It appears that the Authority has identified a relatively innocuous looseness of expression by some submitters.	Page 2	64
	Powerco	It is not clear how the discussion in the paper advances the development of the Authority's transmission pricing methodology proposal.	Page 2	65
	PwC for 20 EDBs	It is not clear what implications or criteria the Authority intends to draw from its observations and conclusions on sunk costs for developing its TPM proposal.	Para 7	66
	PwC for 20 EDBs	It is not clear why the working paper focuses so heavily on distinguishing sunk and fixed costs, given the conclusion that the important distinction is between fixed and variable costs.	Para 7	67

Issue	Submitter(s)	Submission	Submission reference	Item number
	Ringa Matau	The paper is perhaps too academic and not sufficiently cognisant of the Authority's role as the industry regulator.	Page 1	68
	Ringa Matau	The working paper does not and was not addressing the real debate around the proposed changes to the TPM.	Page 3	69
	Transpower	At a general level it was not entirely clear what the purpose of the sunk costs working paper was in the context of the current TPM investigation.	Page 1	70
	Transpower	The discussion in the working paper about the delineation between fixed and sunk costs is moot.	Page 1	71
	Transpower	Nothing in this working paper triggered a rethink of the views that Transpower or CEG have expressed previously.	Page 1	72
	CEG for Transpower	Nothing in the working paper causes CEG to change its views.	Page 1	73
	Trustpower	The working paper is not particularly careful about making the distinction between marginal and infra-marginal behaviour, or describing who or what the infra-marginal payers are in this context, and how their incentives could be affected.	Para3.1.2	74
	Trustpower	The relevance of the characterisation between sunk and fixed costs for transmission pricing is unclear.	Para 3.1.3(a)	75
	Vector	It is less than clear what implications the Authority believes should be drawn from its distinction between fixed and sunk costs in the working paper.	Para 9	76
	Vector	The distinction between marginal and infra-marginal pricing is simply not relevant as the Authority's proposed TPM, and SPD method in particular, is based on a set	Para 20	77

Issue	Submitter(s)	Submission	Submission reference	Item number
		of charges for transmission that are not designed to be infra-marginal.		
	Vector	The working paper fails to establish that the absence of explicit distinction between fixed and sunk costs actually invalidates submitters' arguments in any material way, or that there is a significant enough difference between sunk and fixed costs to make the distinction relevant.	Para 36	78
Other				
	NZIER for MEUG	The Authority appears to be attending to material matters of principle ahead of releasing the final TPM proposal, with the aim of separating issues of principle from issues of application. NZIER remain concerned that without an appropriately defined and agreed problem definition that is assessed through a fit for purpose CBA, disagreements about the efficiency of the proposed TPM and the potential for unintended outcomes will remain, regardless of the clarity that is gained around these principles.	Page 2	79
	MRP	The Authority is ignoring legitimate static inefficiency impacts through a partial analysis of economic theory. This could lead to a predetermined outcome in favour of the Authority's preferred approach without a robust assessment of the likely costs and benefits or alternatives.	Page 5	80
	Ringa Matau	When Ringa Matau made its investment, it was valid for it to consider the potential for new costs to be imposed to be relatively low. Had Ringa Matau known that new costs would be proposed, it would have made a different decision.	Page 4	81
	Ringa Matau	The Authority is ignoring that Ringa Matau has committed capital in response to incentives provided by successive governments and regulators.	Page 4	82

Issue	Submitter(s)	Submission	Submission reference	Item number
	Ringa Matau	Just because the Authority can change the TPM does not mean that the Authority should.	Page 1	83
	Transpower	The Authority must first establish that there has been a material change in circumstances.	Page 2	84

PART 2: COMMENTS ABOUT MATTERS RAISED IN THE WORKING PAPER

Issue	Submitter(s)	Submission	Submission reference	Item number
What are sunk costs?				
	PwC for 20 EDBs	The parties represented by the PwC submission agree with the position that: • costs are sunk where they are irrevocably committed with no alternative use • the key feature of a fixed cost is that it does not vary by unit of production • sunk costs are a fixed cost that has no economically viable alternative use.	Para 8	85
	PwC for 20 EDBs	Sunk costs are likely to arise where the cost of transferring assets to their alternative use is prohibitively high.	Para 10	86
	PwC for 20 EDBs	The focus of the discussion on sunk costs should be on transmission assets, not equity within the company that owns those assets.	Para 12	87
	PwC for 20 EDBs	Disagrees that because of Transpower's regulatory right to recover the cost of assets that those assets should be considered fixed costs rather than sunk costs. Costs are sunk when opportunity cost is forgone. A regulatory right to recover those costs does not mean that transmission assets have an alternative use.	Para 14	88
	Vector	Whether an asset is sunk or not does not hinge on whether it could be sold or has a market value.	Para 12	89
Are Transpower's assets sunk costs?				
Preferred designation	ENA	The ENA expects the Authority would find that Transpower's assets are largely sunk with respect to the supply of electricity transmission services and to the location to which they are committed.	Paras 6, 26	90
	MRP	For all practical purposes transmission assets are sunk, even though it may be technically possible to reallocate a very small proportion.	Page 2	91

Issue	Submitter(s)	Submission	Submission reference	Item number
	Orion	The cost of long-lived transmission assets are largely sunk.	Para 4	92
	Powerco	It is the physical assets that comprise the grid that are largely sunk, insofar as they would have limited value in any alternative use.	Page 2	93
	PwC for 20 EDBs	Significant components of grid costs are likely to be both fixed and sunk because: • The cost of using the existing grid assets does vary by unit of capacity used (at least in the short term) • Transpower has irrevocably committed to this expenditure • There is no economically viable alternative use for the grid assets other than in providing transmission services.	Para 9	94
	PwC for 20 EDBs	Certain components of a transmission circuit may have alternative uses in a distribution or generation business. However, the costs associated with redeploying them exceed the cost of installing the equipment.	Para 10	95
	PwC for 20 EDBs	Transpower's assets could be sold by the Crown, so PwC agrees that an opportunity costs exists for investment in Transpower.	Para 11	96
	Ringa Matau	Ringa Matau wants to reinforce that most of the electric power system and the market faces the threat of sunk costs.	Page 2	97
	Transpower	Transpower remains of the view that most transmission assets are, for all practical purposes, sunk.	Page 2	98
	CEG for Transpower	The costs of Transpower's assets are "sunk for all practical purposes".	Page 1	99
Preferred approach	ENA	The distinction of sunk costs relative to other fixed costs is ultimately an empirical issue and should be tested accordingly.	Para 4	100

Issue	Submitter(s)	Submission	Submission reference	Item number
	ENA	The distinction of sunk costs relative to other fixed costs could be tested by assessing the value to Transpower, or to others, of transmission assets in an alternative use to transmission services, or at an alternative location, relative to their values used to derive Transpower's pricing under the TPM. If the values in alternative use or in alternative locations are close to zero, they are "sunk", as their use in providing the transmission service does not represent an opportunity cost to society. If these values are close to those used in the TPM pricing formula then their use in providing transmission services does not represent an opportunity cost to society and the costs of such assets should be considered fixed, but not sunk.	Paras 5, 25	101
	ENA	If the Authority places reliance on the sunk asset distinction, then it should first test this distinction empirically.	Paras 6, 22, 26	102
	ENA	The view that Transpower's assets are not sunk, as the regulated business has value, provides no insight as to whether the assets in the regulated asset base are "sunk" or otherwise with respect to delivering the transmission service.	Paras 23-24	103
	PwC for 20 EDBs	There is little empirical evidence in the working paper to test whether Transpower's costs are sunk or not apart from with reference to high level theory.	Para 7	104
	Vector	If the Authority considers there is a useful distinction to be made between fixed and sunk costs then the Authority should empirically measure and define the extent to which Transpower's assets can be categorised as fixed or sunk and implications of this for the achievement of dynamic and static efficiency.	Para 11	105
Which assets should be included in the calculation of beneficiaries-pay?				
Submitters made a distinction between HVAC and HVDC assets	MRP	MRP believes that the sunk costs of the HVDC should be reallocated to resolve the current dynamic and static impacts.	Page 1	106
	MRP	MRP does not consider a compelling case has been established for the reallocation of other sunk cost assets proposed by the Authority (HVAC).	Pages 1-2	107

Issue	Submitter(s)	Submission	Submission reference	Item number
	MRP	The current treatment of the HVDC sunk costs leads to dynamic inefficiency by reducing incentives to invest in future generation in the South Island.	Page 3	108
	Vector	It is not sufficient to determine that current HVDC pricing would result in higher (North Island) generation investment, compared to (South Island) generation than would occur absent the HVDC charges. This reflects a static efficiency perspective where transmission is treated as sunk so they can be ignored.	Para 17	109
	Vector	Vector considers that the removal of current HVDC charges could (conceivably) result in lower (short term) cost (South Island) generation plant being built, but at the (longer term) cost of higher transmission costs. A dynamically efficient approach would seek to minimise generation plus transmission costs in the long run.	Para 17	110
Comments on the Authority's approach to efficiency analysis				
General comments on efficiency	Castalia for Contact, Genesis, MRP and Trustpower	The major concern that has been raised is that moving from the status quo to a variable transmission charge that incorporates a beneficiaries-pay component would risk incurring static efficiency losses for an uncertain dynamic efficiency gain.	Page 1	111
	Castalia for Contact, Genesis, MRP and Trustpower	A TPM like the 2012 proposal could influence Transpower's behaviour in proposing future investments, or the Commerce Commission's decisions to approve those investments. This might change the need or timing of a particular investment. However, increased scrutiny alone is unlikely to alter transmission investment decisions and the prospect of new information being provided is unclear.	Pages 1-2	112
	Castalia for Contact, Genesis, MRP and Trustpower	A TPM like the 2012 proposal could influence the way grid users utilise transmission assets that have been commissioned. The TPM risks decreasing efficiency by failing to explicitly link prices to the demand characteristics of different users.	Page 2	113

Issue	Submitter(s)	Submission	Submission reference	Item number
	Castalia for Contact, Genesis, MRP and Trustpower	To promote efficiency, beneficiaries-pay transmission charges would need to have a clear link to the willingness to pay of grid users that are asked to pay those charges. Otherwise, the parties identified as beneficiaries would be charged more, but may choose to reduce their use of the grid rather than pay higher transmission prices.	Page 2	114
	Castalia for Contact, Genesis, MRP and Trustpower	One of the major concerns expressed about the 2012 proposal was that it could change the use of transmission assets in ways that reduce efficiency for two reasons. They are: • Once a transmission asset is commissioned, making use of that asset clearly increases efficiency. • Efficiency can also be reduced if charges are redirected towards users that respond by lowering their use of the transmission grid.	Pages 7-8	115
	Castalia for Contact, Genesis, MRP and Trustpower	Castalia's view is that the TPM is more likely to have an influence on transmission utilisation ex post (ie, after an investment). This is because users will take action to reduce electricity demand and consumption because they now have a material financial incentive to do so. Paradoxically, despite the good intentions of the beneficiaries-pay approach, this leads to the worst of both worlds. Transpower will commit the capital and construct and commission the project. Those users that see higher prices in proportion to their benefit now have financial incentive to reduce their electricity consumption and demand.	Page 6	116
	Genesis	Dynamic efficiency benefits are less likely to be realised from assets that have been commissioned or constructed, and any such benefits are likely to be outweighed by losses in static efficiency.	Page 3	117

Issue	Submitter(s)	Submission	Submission reference	Item number
	Meridian	Meridian has highlighted the high degree of consensus that the single change of dropping the HVDC charge and recovering the costs of HVDC assets through the interconnection charge will significantly improve the efficiency of transmission pricing.	Page 4	118
	NZIER for MEUG	From a pricing point of view, variable charges can be more efficient than flat tax-type charges.	Para 3	119
	MRP	Shifting to variable pricing can only negatively impact on the efficiency of current arrangements.	Page 2	120
	MRP	The proposal in the paper for differential pricing for marginal and infra-marginal grid users risks inefficient reductions in demand as it presents no clear linkage to the actual willingness to pay.	Page 4	121
	PwC for 20 EDBs	Proposed changes to the TPM may promote efficiency gains. However, the quantum of these efficiency gains is likely to be low for Transpower, in part because of the presence of sunk costs.	Para 19	122
	Powerco	The Authority's proposed SPD-based charge does not appear to comply with any of the efficiency objectives.	Page 1	123
	PwC for 20 EDBs	It is unrealistic to conclude that the SPD charge necessarily promotes the overall efficiency of the sector.	Para 30	124
	PwC for 20 EDBs	A variable charge may introduce revenue uncertainty, when used to recover fixed costs, but it can also promote dynamic efficiency by signalling the long-run incremental cost of future investments in traditional network. These two competing objectives need to be balanced in pricing decisions.	Para 16	125

Issue	Submitter(s)	Submission	Submission reference	Item number
	PwC for 20 EDBs	Changes to the TPM will have little impact upon the efficiency of past grid investments as these are largely sunk.	Para 20	126
	CEG for Transpower	The Authority's beneficiaries-pay approach is highly unlikely to promote static or dynamic efficiency.	Page 2	127
	CEG for Transpower	Any static inefficiency costs stemming from changes to the TPM might *in principle* be outweighed by long-term dynamic efficiency benefits. However, such outcomes are highly unlikely in practice in this instance because: • the beneficiaries-pay charges have no obvious role in the establishment of efficient transmission prices • the benefit of deferring future investments through transmission pricing is likely to be small at present • it has not been suggested that the Commission's investment framework is incapable of delivering the right investment outcomes.	Pages 2-3	128
	CEG for Transpower	Any benefits would almost certainly be outweighed by the static and dynamic efficiency costs that would inevitably be associated with such change.	Page 3	129
	Trustpower	Implementing the proposal in the October 2012 issues paper for existing assets would likely be detrimental to both static and dynamic efficiency.	Para 2.1.4	130
	Trustpower	To promote efficiency, beneficiaries-pay transmission charges need to have a clear link to the willingness to pay of grid users that are asked to pay those charges.	Para 3.1.3(d)	131
	Vector	The Authority appears to be suggesting that a TPM proposal could be overall efficient even if it harms static efficiency, as long as there are countervailing	Para 13	132

Issue	Submitter(s)	Submission	Submission reference	Item number
		dynamic efficiency benefits.		
	Vector	The 2012 TPM proposal would be harmful to both static and dynamic efficiency because it would: • have the same impact as "pay as bid" on dispatch • result in subsidisation of users of the network during peak periods by users with smoother usage profiles • distort use of pre-and post-2004 assets.	Para 29	133
The Authority's approach to static efficiency	MRP	The concerns raised by industry participants about potential static efficiency losses remain valid.	Page 2	134
	MRP	The move toward variable pricing under the Authority's original TPM proposal would reduce the high levels of static efficiency delivered under the current arrangements.	Page 4	135
	MRP	Static efficiency would be compromised by a move to variable pricing on the basis that remote generators will either increase their bids to reflect "costs that were once fixed but are now marginal, resulting in higher spot prices at the load centre" or else will face stranding of their generation assets as well as potentially transmission.	Page 4	136
	MRP	MRP rejects the Authority's contention that a TPM could result in material increases in productive efficiency by altering transmission prices to favour within region over remote generation, thus lowering aggregated delivered costs.	Page 4	137
	Powerco	Agrees with the statement in the working paper that static efficiency requires the price for the marginal unit to equate to the willingness to pay of the marginal	Page 1	138

Issue	Submitter(s)	Submission	Submission reference	Item number
		consumer with the marginal cost of producing the marginal unit.		
	PwC for 20 EDBs	While the presence of high fixed costs do not rule out productive efficiency gains, they will reduce the potential productive efficiency gains that can be achieved. Allocative efficiency gains are also likely to be limited by the large proportion of fixed costs and an in-elastic demand curve for electricity.	Paras 28-29	139
	CEG for Transpower	There is clear potential for static inefficiency to arise if changes distort the use of existing assets and the recovery of past costs.	Page 2	140
	CEG for Transpower	There is little scope for changes to the TPM to deliver incremental static efficiency benefits.	Page 2	141
	Trustpower	Charging for existing assets via beneficiaries pay cannot, of itself, improve the efficiency of the decisions to invest in those assets.	Para 2.1.2	142
	Trustpower	The concerns raised by industry participants about potential static efficiency losses remain valid, whether transmission assets are fixed or sunk.	Para 3.1.3(c)	143
	Vector	Static efficiency does not necessarily require that fixed or sunk costs are recovered through fixed charges.	Para 30	144
The Authority's approach to dynamic efficiency	Castalia for Contact, Genesis, MRP and Trustpower	The introduction of a beneficiaries-pay pricing mechanism that is applied to future transmission projects might improve investment test outcomes. It could do this by: • increased scrutiny by potential beneficiaries including revelation of better information on future electricity demand and consumption; or • actions by beneficiaries to reduce the impact of increased transmission charges.	Page 4	145

Issue	Submitter(s)	Submission	Submission reference	Item number
		However, it is not clear that simply more scrutiny alone will result in any different outcome. This is because such actions would only result in different outcomes if there were flaws and weaknesses in the current process, or a lack of sufficient scrutiny. Castalia fails to see how simply having more users interested and making submissions is likely to change the outcomes of the investment test process, and therefore generate any change in the efficiency of transmission investment.		
	Castalia for Contact, Genesis, MRP and Trustpower	The investment decisions of transmission users are unlikely to be strongly influenced by transmission charges. This is because other factors are more likely to determine supply or demand-side asset characteristics. Any locational transmission prices are around an order of magnitude less than the locational signals that arise from the fully nodal priced wholesale energy market. This also suggests that this small additional locational signalling through transmission charges is unlikely to have any impact on the investment decisions of transmission users.	Page 7	146
	Castalia for Contact, Genesis, MRP and Trustpower	Users could reveal additional private information that might change the project, its timing, or even lead to the cancellation of a project. While this is theoretically possible, this seems unlikely for at least three reasons: • It is unlikely that a single user or small group of users would be able to reduce their demand or consumption sufficiently • If there is a large group of users, it is likely that the users will hold off revealing information and implementing demand management projects • Transpower has an obligation to adopt a least cost solution and consider non-	Page 5	147

Issue	Submitter(s)	Submission	Submission reference	Item number
		• network alternatives under the investment test. Why would potential material demand management options have been overlooked? It is possible that generators may come forward with proposed expansion plans that reduce the need or alter the timing of the project. Castalia can see no reason why generators would withhold that information, particularly because generators that can show that their actions defer the need for the investment would be entitled to ACOT revenue.		
	Genesis	The Authority must recognise that generating dynamic efficiency benefits under the TPM requires some inherent failure in the investment test.	Page 3	148
	Genesis	Agrees with the general proposition that dynamic efficiency benefits can be generated by changing how the costs of the assets are allocated by the TPM.	Page 3	149
	Genesis	Overall, dynamic efficiency benefits will be much easier to realise for future or proposed assets, this is because beneficiaries have a clear incentive to engage in the approval process.	Page 4	150
	Meridian	Meridian agrees with the statement in the paper that economic theory does not support the claim in submissions that "there can be no dynamic efficiency benefits" from adjusting prices to incorporate the cost of sunk assets.	Page 2	151
	Orion	The paper's description of Transpower's regulatory arrangements helps explain why changes to the TPM will not, of themselves, deliver any improvement in investment decision-making and therefore dynamic efficiency.	Para 10	152
	Powerco	The SPD-based charge does not aim to or actually reflect the long-run marginal cost of new investment, so the price signal it provides would not promote dynamic efficiency.	Page 2	153

Issue	Submitter(s)	Submission	Submission reference	Item number
	PwC for 20 EDBs	Dynamic efficiency gains arising from TPM change are likely to be limited to future investment decisions and short-run variable costs.	Para 20	154
	PwC for 20 EDBs	Dynamic efficiency benefits from TPM changes are likely to be limited for the following reasons: • The current charges already promote dynamic efficiency and are effective at signalling future investment costs. This pricing structure has proven reasonably effective. Any dynamic efficiency benefits arising from change to the TPM are therefore likely to be incremental, perhaps resulting from more targeted pricing structures • The impact of a revised TPM on investment decisions will take some time to work through, given the long life of transmission and associated investments • The efficiency benefits relating to future investments are likely to be negligible given that all major investments are able to be recovered through Transpower's regulated price cap. There is no ex-post penalty on Transpower for making poor investment decisions.	Para 22	155
	PwC for 20 EDBs	TPM changes that focus on improving future investment decisions are likely to be more effective at promoting dynamic efficiency.	Para 22	156
	CEG for Transpower	There are likely to be few, if any, dynamic efficiency benefits to be obtained through TPM reform, particularly through the proposed beneficiaries-pay charge.	Page 3	157
	Trustpower	Charging beneficiaries for new transmission assets should, in theory, have a positive impact on dynamic efficiency.	Para 2.1.2	158

Issue	Submitter(s)	Submission	Submission reference	Item number
	Trustpower	It is not clear that simply more scrutiny alone will result in any different outcomes to new transmission investment decisions.	Para 3.1.3(b)	159
How the Authority should approach its efficiency analysis				
General comments on efficiency	Castalia for Contact, Genesis, MRP and Trustpower	The Authority needs to fully explore and clearly articulate all of the ways that efficiency can be gained or lost through transmission pricing, and explain how those changes in efficiency will be investigated through the TPM review.	Page 2	160
	Pacific Aluminium, Meridian	The Authority may change the methodology, irrespective of the existence of sunk costs, if changing the methodology promotes overall efficiency in the electricity industry.	Pacific Aluminium para 4, Meridian page 2	161
	ENA	The total economic efficiency effects of a particular pricing proposal should be considered.	Paras 8-9	162
	Genesis	The Authority must evaluate whether efficiency gains outweigh any potential efficiency losses likely to arise from a change to the TPM.	Page 2	163
	Genesis	All efficiency benefits will depend on changing the behaviours, or choices, made by Transpower and grid users: • Dynamic efficiency benefits result from better decisions being made about transmission investments. Once approved it will be more difficult to obtain dynamic efficiency benefits from pricing that asset in a different way. • There are still opportunities to improve dynamic efficiency after a transmission project has been approved, as long as the asset has not yet been built.	Page 4	164

Issue	Submitter(s)	Submission	Submission reference	Item number
		Changing user behaviour on the utilisation of existing assets may have some efficiency benefits. However, these are likely to be relatively minor and the productive efficiency gains will not likely outweigh the allocative efficiency losses.		
	Genesis	TPM should achieve both static and dynamic efficiency benefits when compared with the current TPM.	Page 5	165
	MRP	The efficiency impacts of moving toward variable transmission pricing require careful and robust consideration.	Page 5	166
	Orion	Does not disagree that the Authority may change the methodology, irrespective of the existence of sunk costs, if changing the methodology promotes overall efficiency in the electricity industry.	Para 8	167
	Orion	If an alternative approach changes the despatch, then by definition the alternative cannot be a lower cost despatch and is likely to higher: an unambiguous economic efficiency loss.	Para 6	168
	Orion	The question is, will the alternative pricing arrangement be more efficient than the status quo?	Para 12	169
	PwC for 20 EDBs	In principle, PwC does not disagree with the Authority's statement that the Authority may change the TPM to promote overall efficiency in the electricity industry, irrespective of the existence of sunk costs.	Paras 31-33	170
	Trustpower	There are many beneficiaries-pay methodologies for new transmission assets that should, in theory, lead to improvements in dynamic efficiency, without necessarily having to impact static efficiency. The Authority should be focussing its attention on such methods.	Para 2.1.5	171

Issue	Submitter(s)	Submission	Submission reference	Item number
	Vector	The Authority may change the methodology, irrespective of the existence of sunk costs, if changing the methodology promotes overall efficiency in electricity industry (subject to recognition that wealth transfers can impact on long-term benefit of consumers).	Para 4	172
	Vector	When considering overall efficiency the Authority needs to make sure it takes into account both the static and dynamic efficiency impacts of any transmission pricing methodology option.	Para 5	173
How the Authority should approach static efficiency	Genesis	The Authority needs to focus on avoiding static efficiency losses for existing transmission assets.	Page 6	174
	MRP	The static inefficiencies of imposing a variable transmission charge could be reduced by levying charges on the generation sector across all generators in equal proportion. However, consumers may still be worse off as they would face interconnection charges being levied via higher variable energy prices rather than through fixed charges.	Page 4	175
	Powerco	To promote static efficiency the charges that recover the fixed costs of providing the service should aim to modify consumption behaviour as little as possible.	Pages 1-2	176
	Powerco	For static efficiency to be achieved the marginal price should equal the marginal cost of supplying the good or service and the fixed costs should be recovered via charges that distort consumption behaviour as little as possible.	Page 1	177
	PwC for 20 EDBs	Productive efficiency is promoted where prices are set with reference to marginal costs.	Para 24	178

Issue	Submitter(s)	Submission	Submission reference	Item number
	Vector	Static efficiency requires any shortfall from short run marginal cost pricing to be recovered in a way that minimises the distortion to marginal cost pricing.	Para 30	179
How the Authority should approach dynamic efficiency	Powerco	Dynamic efficiency is promoted when charges correctly reflect the long run marginal cost of new investment.	Page 1	180
	Vector	For the recovery of costs to promote dynamic efficiency the TPM needs to minimise the future cost of delivered energy. This suggests a TPM based on the long run marginal cost of transmission.	Para 7	181
	Vector	As a general rule, Vector believes greater weight should be given to dynamic efficiency than static efficiency.	Para 33	182
Comments on the status quo				
	MRP	The current pricing mechanisms in the market are likely to achieve a high degree of static efficiency in recovering sunk or fixed costs.	Page 2	183
	MRP	The current treatment of the HVDC sunk costs leads to dynamic inefficiency by reducing incentives to invest in future generation in the South Island.	Page 3	184
	MRP	It is generally accepted that the existing nodal pricing framework, along with recovery of the fixed costs via the current TPM is consistent with Ramsey pricing principles. This results in very high levels of static efficiency.	Page 4	185
	Orion	It is reasonable to presume that the current TPM is reasonably efficient.	Para 12	186

Issue	Submitter(s)	Submission	Submission reference	Item number
Comments on future analysis and decision-making				
Approach to pricing decisions	ENA	ENA agrees with the Authority's conclusion that the debate in the economics literature is about how best to recover fixed costs (and sunk costs are fixed costs), and not whether a distinction is required between sunk and other costs for efficient pricing.	Paras 2, 18-19	187
	ENA	The importance of infra-marginal, as well as marginal decisions, means the total economic efficiency effects of a particular pricing proposal should be considered, and not just one aspect or one set of prices. A pricing methodology needs to be assessed on its merits.	Paras 8-9, 36-37	188
	ENA	The proposed charges are not designed to be infra-marginal. Thus, the efficiency properties of these proposed charges need to be assessed with respect to marginal pricing criteria, not infra-marginal pricing criteria. The working paper unfortunately does not make a link between marginal pricing criteria, infra-marginal pricing criteria and how best to assess the efficiency properties of the various pricing components of the proposed TPM, including the proposed SPD charges.	Para 7	189
	ENA	ENA understands the proposed SPD charge would be levied on the level of transmission capacity used by market participants in each half hour. Thus, these charges are designed to be marginal prices and not infra-marginal prices. Therefore, the proposed SPD charge should be assessed against marginal cost principles rather than infra-marginal principles.	Para 30	190
	ENA	ENA considers that infra-marginal pricing has most relevance in the context of the TPM to the design of multi-part tariffs (where the marginal price is separated from the fixed component).	Para 33	191

Issue	Submitter(s)	Submission	Submission reference	Item number
	ENA	The proposed design of this charge would not comply with the widely held view in regulatory economics that the level of marginal prices should, where feasible, approximate marginal costs.	Para 14	192
	Meridian	The degree to which fixed cost should be recovered by variable infra-marginal prices can only be determined by considering the total economic efficiency effects of a particular pricing proposal in its fact-specific context. There is no universal economic rule.	Page 1	193
	Meridian	In relation to the marginal price, it is the distinction between fixed and variable costs that is relevant, not the question of whether a cost is sunk or not.	Page 1	194
	Meridian	Meridian agrees with the conclusions in the working paper that, for this transmission pricing process: • categorising costs as sunk or otherwise has few if any implications for efficient pricing • the static efficiency requirement does not mean that every unit of the good or service be sold at marginal cost • economics does not provide the same definitive test for pricing of infra-marginal decisions as it does for pricing marginal units.	Page 2	195
	NZIER for MEUG	The paper very accurately describes the differences between the relevance of sunk costs in production versus pricing decisions.	Para 2	196
	NZIER for MEUG	From a pricing viewpoint transmission costs are not sunk to consumers and variable charges can be more efficient than flat tax-type charges.	Para 3	197

Issue	Submitter(s)	Submission	Submission reference	Item number
	Orion	Para 9.5 of the paper seems to imply riding the aggregate demand curve down and pricing each unit at just below the willingness to pay, but above marginal cost, until the last unit is priced at marginal cost. In principle, that would lead to the same economic outcome as the same amount would be consumed and produced: as efficient but with a different distribution of wealth. However, even if such an approach was technically possible, Orion cannot see that the proposed TPM includes any process for such price differentiation. Rather, if the price diverges from the marginal cost it will do so at all levels of demand, with attendant adverse efficiency effects, or, at best, no gains.	Para 13	198
	Pacific Aluminium	Agrees with the statement in the working paper that economic theory does not support the view that prices should not reflect sunk costs, or that fixed costs should not be recovered by variable charges when setting infra-marginal prices.	Para 2	199
	Powerco	Transmission charges in total must recover the full economic cost of providing a service and infra-marginal charges can exceed marginal costs and still be efficient.	Page 1	200
	PwC for 20 EDBs	The working paper does not make a link between marginal pricing criteria, infra-marginal pricing criteria, and how best to assess the efficiency properties of the various pricing components of the proposed TPM.	Para 7	201
Impacts of the Authority's approach	Genesis	The nature of the assets is a factor that will influence efficiency. But it is only relevant when considered in the context of the overall regulatory framework applied to Transpower.	Page 2	202
	Meridian	A strong reason for applying a beneficiaries-pay charge to major assets in the current grid is that it improves the credibility of the pricing methodology with stakeholders and therefore its durability.	Page 3	203

Issue	Submitter(s)	Submission	Submission reference	Item number
	MRP	The Authority's original proposal would have had material impacts for retail competition by significantly increasing working capital requirements for existing and new entrant retailers.	Page 2	204
	MRP	Variable transmission prices create volatility which create uncertainty which in turn creates risk. This can have material impacts for retail competition by introducing cash flow risks for electricity retailers.	Pages 4-5	205
	MRP	Independent economic analysis provided to MRP by Reunion estimated the working capital requirements to the entire industry from increased volatility at $90 million.	Page 5	206
	MRP	The Authority's proposal to reallocate the sunk costs of all transmission assets post 2004 and over $2 million has not been justified to the same level of rigour as the proposal to reallocate the sunk costs of the HVDC link.	Page 3	207
	PwC for 20 EDBs	The Authority should be cautious about extending the economic theory of efficient pricing of one product to target efficiencies in other parts of the value chain.	Para 30	208
	PwC for 20 EDBs	The TPM can potentially influence the efficiency and timing of short-run variable costs associated with existing assets through marginal cost pricing. However, many of these costs are likely to be irrevocably committed to alongside the initial sunk investment. This reduces the potential benefits that could be gained through more efficient management of variable costs.	Para 21	209
	CEG for Transpower	The primary effect of the Authority's approach to changing the TPM would be to impose substantial additional costs such as increased cost of disputes, and reduced retail competition.	Page 3	210

Issue	Submitter(s)	Submission	Submission reference	Item number
The Authority should consider the distribution pricing principles in future analysis and decisions	ENA	In relation to assessing the proposed SPD charge, the most relevant pricing principles are (a) and (b). Principle (a) implies that price signals for capacity should broadly reflect the marginal cost of providing that capacity. Principle (b) aims to guide the manner in which fixed costs are recovered. The proposed SPD method would not result in prices consistent with principle (a) or (b). Another relevant pricing principle is (d). Economic theory and regulatory practice argue, for economic efficiency reasons, to align as far as practical pricing structures with the cost structure of a regulated supplier. The proposed SPD would not result in prices consistent with (d). Another relevant pricing principle is (e). The proposed SPD charge would give rise to very high transaction costs, in contrary to principle (e).	Paras 41-48	211
	ENA	ENA recommends that the Authority uses its pricing principles to assess the efficiency properties of its proposed TPM (including the design of the proposed SPD charges) and also of other possible approaches to transmission pricing. In particular, it considers pricing principles (a), (b), (d), and (e) to be of particular relevance.	Paras 9-10	212
	ENA	It is not clear why the Authority does not also use its pricing principles to assess the efficiency of its proposed TPM.	Para 40	213
	Powerco	To help it with its analysis, the Authority, might wish to refer to principles (a), (b) and (d) of the Pricing Principles it has adopted for assessing the efficiency of electricity distribution pricing.	Pages 2-3	214

Issue	Submitter(s)	Submission	Submission reference	Item number
The Authority should consider participant behaviour in future analysis and decisions	Castalia for Contact, Genesis, MRP and Trustpower	At a conceptual level, transmission prices could change the behaviour of Transpower on new investments, and could also change the way that transmission users make use of the grid. It is these changes in behaviour from the status quo to an alternative charging regime that might change economic efficiency, either positively or negatively.	Page 1	215
	Castalia for Contact, Genesis, MRP and Trustpower	Castalia urges the Authority to focus its approach on investigating how changes in behaviour might lead to different efficiency outcomes – which Castalia sees as the only way to answer the question of whether the dynamic efficiency gains from any change in transmission pricing would outweigh static efficiency losses.	Page 11	216
	Genesis	The recovery of costs should be achieved with only small changes in behaviour.	Page 5	217
	Genesis	The Authority needs to focus on minimising volatility. It is critical that any variable charge is proportional to the behavioural change that is being sought.	Page 6	218
	PwC for 20 EDBs	In practice, the productive efficiency gains arising from moving to more efficient pricing methodologies, such as Ramsey pricing, are likely to be negligible for Transpower. This is because Transpower's inputs and outputs of production are relatively fixed.	Para 27	219
The Authority should consider good regulatory practice in future analysis and decisions	Ringa Matau	Good regulatory practice should not treat wealth effects as trivial.	Page 1	220
	Ringa Matau	The Authority as regulator should consider items such as: • the market/investor consequences of the Authority contemplating or implementing regulatory change • the impact on existing investors and participants who have relied on prior	Page 2	221

Issue	Submitter(s)	Submission	Submission reference	Item number
		• regulatory structures/decisions • the impact on implied or actual property rights • the investment horizon/return period required for the majority of electricity infrastructure investments • the careful utilisation of the guidance economic theory can provide in decision-making and the practicalities of implementation and measurement of benefits/costs etc.		
	Ringa Matau	The market should not be subject to the imposition by the regulator of unavoidable costs that do not meet the highest standards of good regulatory practice.	Page 3	222
The Authority needs to conduct a CBA or test its conclusions	Genesis	The Authority needs to clearly establish the nature of the benefits that it expects to realise from any change to the TPM.	Pages 2, 5	223
	MRP	The efficiency impacts of shifting towards variable and differentiated pricing must be tested empirically.	Page 5	224
	MRP	The Authority's claim that variable transmission charging would result in superior static efficiency outcomes relative to the status quo needs to be tested empirically, rather than assumed. The working paper does not advance this analysis, nor does the theory provide sufficient guidance to dismiss such concerns.	Page 4	225
	PwC for 20 EDBs	PwC stresses the importance of a robust CBA which can provide support for any efficiency gain argument.	Page 19	226
	Vector	It is important that the static and dynamic efficiency impacts of any proposal are robustly and rigorously analysed. This includes in both qualitative and quantitative terms.	Para 33	227

Issue	Submitter(s)	Submission	Submission reference	Item number
How the Authority should approach future analysis and decisions	Genesis	The TPM must be sufficiently flexible to avoid creating net efficiency losses for particular assets while also generating efficiency gains overall.	Page 5	228
	Genesis	The Authority needs to focus on ensuring that costs and benefits are clearly quantified, in particular, that costs are examined on an asset stage basis to establish where benefits can be maximised.	Page 6	229
	Genesis	The paper should consider how transmission pricing might deliver different benefits over the different stages of an asset's life.	Pages 1-2	230
	Genesis	A beneficiaries-pay approach can be part of the solution.	Page 5	231
	Meridian	The degree to which fixed costs should be recovered by variable infra-marginal prices can only be determined by considering the total economic efficiency effects of a particular pricing proposal in its fact-specific context. There is no universal economic rule.	Page 1	232
	Powerco	Authority needs to demonstrate to what degree the SPD-based charge will: • set marginal prices that approximate the marginal cost of providing transmission services • recover fixed costs in a way that distorts consumption as little as possible • reflect the long run marginal cost of new grid investment.	Page 2	233
	PwC for 20 EDBs	Individual welfare effects on different stakeholders needs to be estimated and ideally mitigated to avoid one-off wealth transfers.	Para 33	234
	PwC for 20 EDBs	The TPM should primarily seek efficiency gains in transmission. It should not be used as a tool to achieve policy objectives in other parts of the value chain.	Para 33	235

Issue	Submitter(s)	Submission	Submission reference	Item number
	PwC for 20 EDBs	Sharing of efficiency gains in non-competitive markets needs to be balanced with preserving incentives for investment and innovation.	Para 33	236
	Transpower	Assessment should also take into account practical considerations, transaction costs and the desirability of consistency and certainty; as well as the existence of sunk investments and the impact that wealth-shifting rule-changes can have on investment confidence if they are not well justified.	Page 2	237
Other				
Interaction between the TPM and the Commerce Commission's decision-making process/investment test	Castalia for Contact, Genesis, MRP and Trustpower	For the TPM to improve efficiency, the outcome of the Commerce Commission's decision to approve the investments would need to change.	Page 3	238
	Genesis	It is unclear whether the TPM could modify the position that all of Transpower's approved assets costs are recoverable through revenues. Any changes in this assumption will clearly have a direct impact on the Commission's future consideration of asset approvals and allowable revenue recovery.	Page 3	239
	Genesis	To achieve the outcomes of the memorandum of understanding between the Authority and the Commission the definition of a sunk or fixed asset for the purposes of the TPM should be consistent with how those assets are treated under the investment test. Genesis considers that the working paper misses this key regulatory context.	Pages 2-3	240
	Genesis	Because Transpower's approved asset costs are recoverable, the costs associated with any potential underutilisation of existing assets will be faced entirely by participants. It is unclear whether the TPM could modify this position. Any	Page 3	241

Issue	Submitter(s)	Submission	Submission reference	Item number
		changes to this assumption will clearly have a direct impact on the Commission's future consideration of asset approvals and allowable revenue recovery.		
	Genesis	The Authority must recognise that generating dynamic efficiency benefits under the TPM requires some inherent failure in the investment test. This has not yet been shown. The definitions of sunk and fixed assets should be consistent with how these assets are treated under the Investment Test.	Page 3	242
	Orion	The new investment decision-making process is central to efficient investment in the transmission system. This is why it is important that this process is changed if in fact poor decisions have been and are being made.	Para 4	243
	Trustpower	The dynamic efficiency benefits of beneficiaries-pay charging should be demonstrated by showing some material failure in the investment test process.	Para 3.1.3(e)	244
Comments on the Authority's statement that it can change the TPM irrespective of sunk costs	Orion	Does not disagree with the statement that if changing the TPM promotes overall efficiency the Authority may change it irrespective of the existence of sunk costs.	Para 8	245
	Transpower	The existence of sunk costs does not and should not, of itself, preclude change to the TPM.	Page 2	246
	Vector	Vector agrees with the Authority, subject to recognition that wealth transfers can impact on long-term benefit of consumers, that "if changing the methodology by which transmission prices are determined promotes overall efficiency in the electricity industry, the Authority may change the methodology, irrespective of the existence of sunk costs".	Para 4	247
Miscellaneous	Castalia for Contact, Genesis,	Efficient pricing generally requires that where transmission capacity is plentiful, prices should be low to signal that additional use of that capacity would generate	Page 8	248

Issue	Submitter(s)	Submission	Submission reference	Item number
	MRP and Trustpower	economic efficiency. Where available transmission capacity is scarce, potentially requiring new investment to be made, transmission prices should be high to signal the efficiency gains of deferring the need for investment. Transmission pricing typically results in exactly the opposite pricing outcomes. A variable transmission charge that incorporates a beneficiaries-pay component does not appear to change this feature of transmission pricing. A variable beneficiaries-pay pricing approach is likely to continue to lead to higher charges than would signal efficient utilisation initially, but then as capacity becomes constrained would shift to providing prices that are lower than efficient levels. Effectively, a beneficiaries-pay approach does not overcome the standard challenge in pricing regulated assets to signal their available capacity.		249
	Castalia for Contact, Genesis, MRP and Trustpower	The main point that Castalia draws from the working paper is that regardless of whether transmission assets are sunk or fixed, all transmission costs need to be recovered through transmission prices.	Page 1	250
	Castalia for Contact, Genesis, MRP and Trustpower	The working paper points out that as long as marginal transmission prices are set at the willingness to pay of the marginal user, then economic theory provides no definitive tests for the prices paid by other users. The major risk in charging different prices to marginal and infra-marginal users is if prices cause either group of users to inefficiently reduce their demand. The working paper does not explain how a beneficiaries-pay approach might reflect users willingness to pay for transmission, and no clear link was drawn in the 2012 TPM proposal. While conceptual links exist between a beneficiaries-pay charge and new transmission investment decisions, these conceptual links do not apply to existing assets. Instead, charging the beneficiaries of existing assets is more firmly based in notions of fairness and equity (rather than efficiency). In the context of public	Page 9	251

Issue	Submitter(s)	Submission	Submission reference	Item number
		services in New Zealand, Treasury has concluded that beneficiaries-pay is not necessarily efficient as a charging rule. This strongly suggests that to promote efficiency, beneficiaries-pay transmission charges need to have a clear link to the willingness to pay of grid users that are asked to pay those charges.		
	Transpower, Meridian, ENA	A pricing methodology needs to be assessed on its merits.	Transpower page 2, Meridian page 4, ENA paras 8-9, 37	252
	Meridian	Meridian agrees that the current demand for a service should face the economic cost of the service, up to a party's level of benefit.	Page 3	253
	Meridian	Meridian agrees with the Authority's focus on beneficiaries sepepay as a better framework for identifying efficient transmission pricing.	Page 3	254
	NZIER for MEUG	Under the input methodologies, Transpower can be compensated for halting a project that is no longer viable. That is, the costs are sunk in principle because demand is no longer there. Transpower can make investment decisions through to the point of commissioning an asset, after which time the cost to consumers is locked in and demand risks are transferred to consumers.	Para 5	255
	NZIER for MEUG	NZIER has previously commented regarding the difficulties of identifying beneficiaries and the issues associated with a "residual" charge.	Para 6	256
	Orion	Orion sees nothing in the new TPM which implies that different users will end up paying different amounts for the transmission of the same unit over the same assets at the same time.	Para 16	257

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	Orion	Were New Zealand to have a single agency responsible for provision of generation and transmission, that agency would, for efficiency, dispatch as if the transmission system was sunk, taking into account only the effects of marginal losses and constraints. Separating out the generation and transmission into two agencies, and therefore introducing the need for the parties to agree pricing for services, should not change the efficient production decision. Yet the paper seems to argue that it could, and should.	Para 7	258
	Pacific Aluminium	Pacific Aluminium supports the views expressed by the Authority in the paper.	Para 2	259
	Powerco	The ideal charge would be fixed and unavoidable or be consistent with so-called Ramsey pricing.	Page 2	260
	PwC for 20 EDB's	By inference from the Authority's example of R & D costs, TPM pricing can ignore the sunk cost of the network in order to promote productive efficiency.	Para 23	261
	Transpower	There is nothing in the sunk costs working paper that Transpower particularly disagrees with and several conclusions that it agrees with.	Page 1	262
	CEG for Transpower	There is very little in the paper with which CEG disagrees.	Page 1	263
	Vector	The original TPM proposal was preoccupied with the question of whether a sunk investment is economic and should have been approved.	Para 8	264
	Vector	Some parties have relied on static efficiency arguments as the basis for their challenge to the current HVDC charges, even though some of those parties also claim that they consider dynamic efficiency to be more important than static efficiency.	Para 16	265

Issue	Submitter(s)	Submission	Submission reference	Item number
	Vector	Notably, most of the criticism of the current TPM and the HVDC link charges is based on a static efficiency perspective rather than a dynamic efficiency perspective.	Para 38	266