Transmission pricing methodology: beneficiaries-pay options working paper

Summary of submissions

8 September 2014

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 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 21 January 2014, the Authority published its fifth working paper on beneficiaries-pay options (the working paper).[1] The working paper examined options for applying beneficiaries-pay to recover the costs of HVDC and interconnection assets that the Authority proposes to consider for inclusion in the second issues paper.

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

2 Overview of submitters

2.1 Twenty-four submissions were received from submitters, covering a range of topics in the working paper. Table 1 lists the submitters.

[1] The first working paper 'Transmission pricing methodology: CBA' was published on 3 September 2013. The second working paper 'Transmission pricing methodology: Sunk costs' was published 8 October 2013.

Retailer/Generator	Distributors	Consumers	Others
Contact Energy	Electricity Networks Association (ENA)[1]	Fonterra	Electric Power Optimization Centre (EPOC)
Meridian Energy	Pricewaterhouse Coopers (PwC) on behalf of 21 distributors[2]	Carter Holt Harvey (CHH)	Joint letter on behalf of 46 submitters[3]
Nova Energy	Vector	Norske Skog Tasman Limited	Simply Energy
Genesis Energy	PowerCo	Refining NZ	Transpower
Mighty River Power	Orion New Zealand	Major Electricity Users' Group (MEUG)	
Pioneer Generation		NZ Steel	
Ringa Matau (a subsidiary of Tauhara North No. 2 Trust)		Pacific Aluminium	
Trustpower			

Source: Electricity Authority

1 ENA's submission was made with the support of its 29 members: Alpine Energy Ltd, Aurora Energy Ltd, Buller Electricity Ltd, Centralines Ltd, Counties Power Ltd, Eastland Network Ltd, Electra Ltd, EA 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.

2 PwC's submission is on behalf of the following 21 Distributors: Alpine Energy Ltd, Aurora Energy Ltd, Buller Electricity Ltd, Counties Power Ltd, Eastland Network Ltd, Electra Ltd, EA Networks Ltd, Electricity Invercargill Ltd, Horizon Energy Distribution Ltd, MainPower New Zealand Ltd, Marlborough Lines Ltd, Nelson Electricity Ltd, Network Tasman Ltd, Network Waitaki Ltd, Northpower Ltd, OtagoNet Joint Venture, The Lines Company Ltd, The Power Company Ltd, Top Energy Ltd, Waipa Networks Ltd and Westpower Ltd.

3 The Joint letter was prepared on behalf of the following 46 parties: Alpine Energy Ltd, Auckland District Health Board, Aurora Energy Ltd, Buller Electricity Ltd, Centralines Ltd, Contact Energy Ltd, Counties Power Ltd, EA Networks Ltd, Eastland Network Ltd, Electra Ltd, Electricity Invercargill Ltd, Horizon Energy Distribution Ltd, Karaponga Hydro Ltd, MainPower NZ Ltd, Marlborough Lines Ltd, Mighty River Power Ltd, Natural Systems Ltd, Nelson Electricity Ltd, Network Tasman Ltd, Network Waitaki Ltd, Northpower Ltd, NZ Energy Ltd, Omanawa Falls Hydro Ltd, Opuha Water Ltd, Orion New Zealand Ltd, OtagoNet Joint Venture, Palmerston North City Council, Pioneer Generation Ltd, Powerco Ltd, Pulse Energy Ltd, Scanpower Ltd, Simply Energy Ltd, Tauhara North No. 2 Trust, The Embedded Network Company Ltd, The Lines Company Ltd, The Power Company Ltd, Top Energy Ltd, Transpacific Industries Group (NZ) Ltd, Trustpower Ltd, Unison Networks Ltd, Vector Ltd, Waipa Networks Ltd, Waste Disposal Services, WEL Networks Ltd, Wellington Electricity Lines Ltd, Westpower Ltd.

Note: ENA submission is expressly endorsed or supported by Vector, Orion, Powerco, PwC for 21 EDBs. NZIER's report to MEUG is supported by Pacific Aluminium.
MEUG's submission is supported by Fonterra, except where a different view is expressed.
MEUG's submission is supported by Carter Holt Harvey and generally supported by Refining NZ.

Options considered in the beneficiaries-pay working paper

2.2 The purpose of the working paper was to investigate beneficiaries-pay options that seek to address the issues identified in submissions and to promote dynamic efficiency without greatly compromising static efficiency.

2.3 The Authority considered the following beneficiaries-pay options:

(a) a simplified version of the SPD charge that sought to address submitters' key concerns about design of the charge (**simplified SPD charge**)

(b) a beneficiaries-pay charging approach based around the grid investment test (**GIT**). This had two variants, the **GIT-plus-SPD** option and the **SPD-plus-GIT** option

(c) a zonal beneficiaries-pay option that would apply beneficiaries-pay on a zonal basis (**zonal SPD option**).

2.4 All of the above options utilised the SPD method for determining charges for some assets. In the case of the GIT-plus-SPD option, the SPD method was only used to calculate charges on investments subject to beneficiaries-pay that were not subject to the GIT charge. In contrast, the SPD-plus-GIT option applied SPD to all beneficiaries-pay assets (but the GIT was used to cover revenue shortfalls). The zonal SPD option used the SPD method to determine charges for transmission that enabled electricity transfer between zones.

2.5 In identifying beneficiaries-pay options, the Authority decided to limit its consideration to options that use the SPD method to apply a beneficiaries-pay approach to at least some assets. The SPD method enables beneficiaries-pay to be applied in an objective way, with beneficiaries identified using actual wholesale market outcomes.

2.6 The working paper did not examine whether beneficiaries-pay options should be applied to new investments only, as suggested by some submitters, or historical investments as well. The Authority's approach to charging for historical investments will be informed by the sunk costs working paper and associated feedback. The working paper did, however, consider *if* beneficiaries-pay charges were applied to historical investments, *how* this should be done.

2.7 The Authority stated that it intended to develop a refined option or options based on feedback on the beneficiaries-pay working paper and the other working papers. Quantitative cost-benefit analysis would be applied in the second issues paper to the Authority's preferred option and an alternative or alternatives.

3 Form of summary

3.1 The summary has been grouped as follows:

(a) Part 1: Legal and process issues (item numbers 1-159)

(b) Part 2: General comments (item numbers 160-386)

(c) Part 3: Comments on each option discussed in the working paper, as well as others raised in submissions (item numbers 387-519)

(d) Part 4: Comments on analytical inputs (for example, capping) (item numbers 520-626).

3.2 In general, Part 3 does not contain matters that clearly fall under a category in Parts 2 or 4.

3.3 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 at: http://www.ea.govt.nz/development/work-programme/transmission-distribution/transmission-pricing-review/consultations/

PART 1: COMMENTS ON LEGAL AND PROCESS ISSUES

Issue	Submitter(s)	Submission	Submission ref	Item no
Preliminary issues				
Proposals not consistent with statutory objective	Fonterra, MEUG	Amending the TPM charges is worth exploring, but any change must show long-term benefits to consumers if it is to be adopted.	Fonterra para 14, MEUG para 7	1
	Contact	In the Authority's interpretation of its statutory objective, the Authority states that dynamic efficiency occurs when consumers have confidence that price movements reflect demand and supply. There is a significant risk to confidence in prices under the proposed SPD methodology, due to the complexity of SPD and the incentives it creates.	Page 3	2
	ENA	The SPD charge would create price distortions that the Authority has already concluded are not in the long-term interests of consumers.	Para 20	3
	Fonterra	There is an asymmetry of information to consumers. The Authority therefore needs to act on behalf of consumers as per its statutory objective.	Para 12.3	4
	Castalia for Genesis	The Authority's evaluation criteria do not seem to fit with the Authority's statutory objective.	Page ii	5
	MEUG	The working paper provides no analysis of how each option in the paper might be assessed for the long-term benefit of consumers.	Para 5	6
	NZIER for MEUG	Reserves judgment about the extent to which the beneficiaries-pay paper is positive from the point of view of the long-term benefit of consumers.	Page 16	7

Issue	Submitter(s)	Submission	Submission ref	Item no
	Pacific Aluminium	Short-run generator pass-through of transmission costs would result in higher wholesale prices, making consumers materially worse off. This is a critical issue.	Para 6	8
	Ringa Matau	Consultation to date assumes a need to change TPM without the requirement of a suitably high burden of proof. Change must clearly and significantly meet the Authority's statutory objective and result in net public benefits.	Page 1	9
	Transpower	The Authority's interpretation of its statutory objective (including the use of a single efficiency criterion) risks underweighting the competition and reliability limbs of the objective. There should be explicit consideration of those limbs.	Para 2.2.2	10
	Transpower	Not comfortable with the Authority adopting a different interpretation of its statutory objective to that adopted by the Commerce Commission (particularly the exclusion of wealth transfers).	Para 2.2.2	11
	Transpower	Considerable work needed to ensure that outcomes are for the long-term benefit of consumers. Submitters have raised a number of matters that go to the heart of whether SPD/beneficiaries-pay would be to the long-term benefit of consumers.	Page 7, para 2.1	12
	Trustpower	None of the options in the working paper would promote the Authority's statutory objective better than the status quo.	Para 1.1.6	13
	Vector	The Authority's proposal will not deliver long-term benefit to consumers.	Paras 4, 8, 47-49	14

Issue	Submitter(s)	Submission	Submission ref	Item no
Problem definition/what is the problem?	Joint letter, Carter Holt Harvey	The Authority has yet to set a clear problem definition.	Joint letter page 1, CHH page 1	15
	Carter Holt Harvey	Two problems might be the recent large capital expenditure that appears to be unjustified and the ongoing tension in relation to HVDC charges.	Para 1	16
	Contact	The Authority implies that a problem with the current TPM is inefficient generation investment. However, generators are not building generators in the middle of nowhere, causing inefficient building of transmission.	Page 4	17
	Fonterra	The current TPM is working well. It could be improved. However, no need to rush the review process because the current TPM is not failing to any material extent.	Para 12.5	18
	Genesis	There is considerable industry disagreement about the problem definition.	Page 14	19
	Meridian	Agree that the present TPM can be improved upon.	Page 1	20
	MEUG	There has been inefficient capital investment by Transpower. This needs to be mitigated in the future.	Para 7	21
	MRP	There are material issues with the problem definition that have yet to be resolved in the consultation to date.	Page 3	22
	Norske Skog	There is no real/significant problem with the current TPM.	Page 1	23
	Orion	The Authority implies there was a problem with poor decision-making in grid investment. However, given that the private benefits of these investments exceeded the costs, the potential dynamic efficiency	Para 18	24

Issue	Submitter(s)	Submission	Submission ref	Item no
		gains from the Authority's proposals are quite different from what the Authority suggests.		
	PwC for 21 EDBs	It is unclear what the problems are with the current TPM that justify such radical change. It appears that the Authority is targeting problems that are not articulated but are inherent in the proposal design (eg, inefficient investment). PwC is concerned that significant changes being justified on relatively high level economic efficiency arguments and that specific quantifiable problems are yet to be identified. The second issues paper needs to quantify the problems with current TPM, with CBA.	Paras 23-26	25
	Transpower	The issues paper did not properly define a problem with the status quo. It is premature to lock down preferred alternatives before the problems with the status quo are properly identified. The Authority needs to address the problem definition by first establishing whether there has been a material change in circumstances, then establishing how it will interpret its statutory objective, and then undertaking a situation assessment (including assessing signals). The Authority needs to take care not to conflate efficiency drivers or outcomes with equity drivers or outcomes.	Pages 12-16	26
	Transpower	The Authority's problem definition is not well grounded, and does not provide a robust basis for considering anything other than incremental refinements to the status quo. The problem definition confuses the identification of a problem with a potential solution. It is	Executive summary para 2.2.4	27

Issue	Submitter(s)	Submission	Submission ref	Item no
		circular and creates the impression of a solution looking for a problem.		
	Transpower	Problem definitions should be done before options for change are developed. The Authority needs to do a situation assessment of status quo, including assessment of how signals work together. Detailed assessment of status quo included (described in Table 2).	Paras 3.1, 3.2	28
	Transpower	Some of the problems identified by the Authority (especially in relation to grid investment) are not actually problems with the TPM.	Para 3.3	29
	Trustpower	Trustpower struggled to understand what problems the proposed TPM guidelines are attempting to solve.	Pages 4, 12	30
	Trustpower	Submitters have a lack of clarity about the problem that is apparently being solved by changing the current TPM guidelines in relation to interconnection assets.	Para 6.1.4	31
	Vector	The Authority should not try to solve the "problem" of inefficient transmission investment through the TPM. That problem is addressed by locational marginal pricing and the Part 4 input methodologies. Instead, the problem definition should address whether the current TPM benefits consumers in the long-term by: • allocating transmission costs to beneficiaries where possible • minimising cross subsidies by allocating costs in the range of incremental and standalone costs when beneficiaries cannot be identified • applying prudent discounts when that is not possible; and	Paras 40-43	32

Issue	Submitter(s)	Submission	Submission ref	Item no
		• not distorting locational price signals. The current TPM does this.		
Material change in circumstances threshold has not been met	Contact	Concerned that the Authority has not met the regulatory threshold in relation to the material change in circumstances test.	Page 1	33
	Orion	There are overwhelming submissions from submitters that there has not been a material change in circumstances.	Page 1	34
	Transpower	Further work is needed on material change in circumstances. It appears that the review is driven by the Authority's view that there are opportunities for improving efficiency, rather than a material change in circumstances per se. Unclear whether there has been a material change in circumstances that could justify changes to the TPM, particularly of the magnitude the Authority is proposing. It is unclear whether a material change in circumstances in relation to a discrete aspect of the TPM should warrant radical reform. A robust material change in circumstances is critical to ensure that the TPM is stable and durable.	Para 2.2	35
Consultation/engagement				
Authority has not responded to submissions	MRP, Genesis	The Authority should provide its views on the feedback provided to date by participants prior to issuing a revised proposal. Genesis wants responses to submissions for each working paper.	MRP page 3, Genesis page 3	36
	NZIER for MEUG, Powerco	The Authority has not addressed fundamental/core submissions.	NZIER para 1.1, Powerco page 3	37

Issue	Submitter(s)	Submission	Submission ref	Item no
	Vector, Transpower, Powerco, MRP, Trustpower, ENA, Genesis	The Authority has not addressed substantial/legitimate/fundamental concerns raised in submissions in relation to problems with SPD. Particular isslackses raised include: conceptual problems, material workability issues, doubts about improved grid investment, doubts about participation in the investment process, problems with the counterfactual, distortion of price signals, complexity, durability, changes in use of grid assets, sensitivity of charges to key parameters, and sunk assets.	Vector paras 11-13, Transpower para 4.2, Powerco pages 1, 3, MRP pages 1-3, Trustpower para 5.10.1 and Appendix A item 15, ENA para 18, Genesis pages 1-2	38
	Contact	The Authority has failed to address Contact's and other submitters' concerns that there has not been a material change in circumstances.	Page 1	39
	Contact	Submitters have been asked to respond to working papers in isolation without clarity from the Authority as to how responses to date have been interpreted.	Page 1	40
	Joint letter	The Authority has not responded on its emerging views, despite submissions on the TPM proposal and various working papers. The 46 submitters do not know which of the issues the Authority thinks are relevant and which it perceives to have been resolved. It would be useful if the Authority could summarise its position in terms of the	Page 1	41

Issue	Submitter(s)	Submission	Submission ref	Item no
		problem it is aiming to address and its emerging views on a revised TPM.		
	Genesis	The Authority has not shown any indication of learning from submissions made on the CBA working paper – working paper does not use a consistent set of criteria to robustly evaluate beneficiaries-pay options.	Page 2	42
	Genesis	The second issues paper needs to present clear information on the relative changes in transmission charges that different regions may expect.	Page 2	43
	Genesis	There is a lack of transparency in how the Authority is using the submissions. No assurance that views have been fully considered or summarised correctly to the Authority's Board.	Page 14	44
	Norske Skog	The Authority has ignored our suggested solutions to problems raised by others in relation to the current TPM.	Page 1	45
	Orion	The Authority has not responded clearly to the overwhelming key messages from submitters, which were that there is no material change in circumstances and that the SPD method is not appropriate. These issues should be addressed first.	Para 3, para 11	46
	Orion	The Authority must in due course respond to all concerns raised.	Para 11	47
	Transpower	The Authority needs to address the overwhelming view that the Authority erred in relation to the problem definition.	Page 5	48
	Transpower	Responses to submissions and cross submissions in relation to the issues paper consultation and the TPM conference should have been provided prior to the working paper being published.	Page 11	49

Issue	Submitter(s)	Submission	Submission ref	Item no
	Trustpower	The Authority's failure to respond has affected our ability to consider options presented and develop alternative options.	Para 1.1.3, Appendix A item 15	50
	Trustpower	The Authority has expressed interest in being presented with alternative proposals. Parties have presented other options that are likely to lead to greater net benefits than SPD options (for example, the economic model approach suggested by Frontier Economics in 2004). Surprised that the Authority did not select these options to see if they could be made to work, particularly given criticism of SPD method.	Para 6.1.3	51
	Vector	Difficult for submitters to engage in consultation without knowing the Authority's response to substantive issues raised in submissions.	Paras 11-13	52
Objections to assessing working paper/beneficiaries-pay in isolation	Carter Holt Harvey, Pacific Aluminium, Fonterra, Genesis, NZIER for MEUG, Vector	Difficult to assess working paper/beneficiaries-pay without seeing the whole TPM proposal.	CHH para 1, Pacific Aluminium para 4, Fonterra para 10, Genesis page 14, NZIER para 2.2, Vector para 13	53

Issue	Submitter(s)	Submission	Submission ref	Item no
	NZ Steel, Ringa Matau, Contact, NZIER for MEUG, Fonterra, Pacific Aluminium, Carter Holt Harvey	Difficult to assess working paper/beneficiaries-pay in isolation from information about how the residual will be treated.	NZ Steel page 1, NZIER para 2.2, Fonterra para 10, Pacific Aluminium para 4, CHH page 1, Contact page 1, Ringa Matau page 1	54
	Fonterra	Difficult to assess GIT-based options without further detail on the options and how the residual would be treated.	Para 11.1	55
	Joint letter	The working papers have been issued without a common assessment about how each topic contributes to resolving a perceived problem.	Page 1	56
	MEUG	Unlike other working papers, the beneficiaries-pay and residual papers are not discrete topics. Difficult to assess beneficiaries-pay options and the future residual charges paper in isolation due to complexity.	Para 4	57
	Orion	The TPM working papers lack coherence and are not well or clearly related to each other. The TPM has to work as a whole.	Para 3	58
Quality of consultation process	Contact, Genesis	The TPM review process lacks transparency.	Pages 1, 3	59

Issue	Submitter(s)	Submission	Submission ref	Item no
	Contact, Vector, Norske Skog, MEUG	The current TPM process has been costly and/or has required significant time and resources to be used in order to evaluate proposals and make submissions.	Contact page 1, Vector para 8, Norske Skog page 1, MEUG paras 4-5	60
	MEUG, Fonterra	Support an extended consultation timeframe for consultation on the residual paper and second consultation paper.	Fonterra para 13, MEUG para 6	61
	Contact	There has been little debate about issues such as changes to offer behaviour, interaction with nodal pricing, price credibility issues.	Page 2	62
	Fonterra	Supports holding several workshops to assist stakeholders to understand the proposals. Consumers in particular do not have the resources and expertise to assess proposals. No need to rush process.	Paras 12.5, 13	63
	Genesis	There has been a lack of transparency that is inconsistent with the Authority's Consultation Charter. It is not clear that submitters' views have been fully considered by the Board.	Pages 3, 14	64
	MEUG	A forum in Auckland would have been useful. A second workshop partway through the consultation would also have been useful, as would be a post beneficiaries-pay submissions workshop to discuss specific topics in submissions.	Para 6	65
	MEUG	MEUG appreciates the work the Authority has done in discussing the working paper with members, answering questions, and running models at MEUG's request.	Para 6	66

Issue	Submitter(s)	Submission	Submission ref	Item no
	PwC for 21 EDBs	Alternative pricing approaches are dismissed too quickly, which limits quality of debate.	Para 9	67
	Ringa Matau	There has been a lack of consultation on effectiveness/inappropriateness of SPD, and the recovery of the residual charge. There has been no consultation on who the beneficiaries of the grid are and whether the level of private benefit can be established.	Page 1	68
	Transpower	The consultation process so far has materially advanced thinking on transmission pricing. The process has tested many assumptions and assertions, has focused on the merits of the current TPM, and has cast doubts on the validity of the SPD proposal. Consultation allows ideas to be scrutinised before decision-making. The Authority must take time and make effort to properly understand the views of interested parties. This is a good time to reflect on the process to date and the very strong submissions before the Authority.	Page 4	69
Inaccurate characterisation of support for proposals	Joint letter	The working paper misconstrues the level of support for beneficiaries-pay. Signatories do not support the design of the beneficiaries-pay approach as proposed in the 2012 TPM proposal, or the options in the working paper.	Page 1	70
	Orion	The Authority's characterisation of Orion as partially supporting beneficiaries-pay is incorrect.	Paras 7-9	71
	Vector	The Authority has misrepresented the support submitters have attributed to its issues paper. Vector does not support the design of the beneficiaries-pay approach as proposed in the 2012 TPM proposal, or the design of the options proposed in the working paper.	Para 51	72

Issue	Submitter(s)	Submission	Submission ref	Item no
Assessment				
Has the Authority approached the matter with an open mind?	Contact, Joint letter, Genesis, Norske Skog, ENA, Vector	The Authority is too focused/stuck on SPD.	Contact pages 1, 3, Joint letter page 1, Genesis page 14, Norske Skog page 1, ENA paras 3, 23, 40, Vector para 52	73
	Contact, Vector, PwC for 21 EDBs	Given the widespread opposition to SPD, the Authority's failure to explore alternatives is surprising and/or the Authority should have explored non-SPD options.	Contact page 1, Vector para 7, PwC para 8	74
	Vector, Genesis	Despite expert advice from stakeholders, the Authority has not adequately considered alternatives.	Vector para 6, Genesis page 2	75
	Contact	Seemingly unwavering adherence to SPD lends itself to challenge.	Page 3	76
	Genesis	The process so far suggests that the Authority has not been sufficiently open-minded during the working paper process. The criteria used appear to predetermine an outcome.	Page 3	77
	MRP	The decision to charge for sunk assets may be predetermined.	Page 1	78
	Norske Skog	The Authority's obsession with SPD is harming economic efficiency.	Page 1	79

Issue	Submitter(s)	Submission	Submission ref	Item no
	Trustpower	Parties have presented other options that are likely to lead to greater net benefits than SPD options (for example, the economic model approach suggested by Frontier Economics in 2004). Surprised that the Authority did not select these options to see if they could be made to work, particularly given criticism of SPD method.	Para 6.1.3	80
	Trustpower	The Authority has assumed that SPD will lead to more efficient investment outcomes.	Para 7.1.1	81
	Vector	The Authority needs to step back from what appears to have become an entrenched fixation to promote better transmission investment using a beneficiaries-pays approach to transmission pricing.	Para 52	82
Problems with criteria				
Quality and appropriateness of criteria/valuation methods	CEG for Transpower, Transpower	None of the Authority's options accurately capture the extent to which individual parties actually benefit from particular assets. Instead, the Authority has focused on the options that produce greater revenue recovery. This may exacerbate allocative efficiency problems.	Paras 60-66	83
	ENA, Sapere for ENA	The GIT component of the SPD-plus-GIT method should be compared with other potential methods for allocating residual, but the assessment does not include this comparison.	ENA para 36, Sapere no. 16	84
	Trustpower, Contact	The Authority is using unclear criteria to discriminate between options.	Trustpower para 6.1.4, Contact page 2	85
	Contact	The evaluation framework lacks transparency and industry buy-in.	Page 2	86

Issue	Submitter(s)	Submission	Submission ref	Item no
	ENA	Since the zonal SPD option is based on a very different set of assets to the other options, it is difficult to compare it to the other options. The asset base would need to be aligned across options in order to compare them properly.	Para 37	87
	ENA	It is not clear how the objectives of cost recovery and reflection of benefits are weighted relative to each other. For example, using gross benefits is described as superior because it is considered less costly to implement and yields more revenue (albeit inefficiently).	Para 28	88
	ENA	There is a lack of clarity about what behavioural changes are desirable and why/why not.	Para 28	89
	ENA	It is not clear whether the Authority has considered design choices in combination (eg, how the appropriate choice of capping period is influenced by length of averaging period).	Para 28	90
	ENA	The Authority has not addressed how design choices will affect the residual, for example, choice of net/gross injection or charging at a substation.	Para 28	91
	ENA	The Authority has dismissed LRMC on basis of difficulty. An LRMC approach would not be straightforward but it is not clear why the Authority perceives that the LRMC approach is insurmountable but the SPD method is not.	Paras 49-50	92
	ENA	The Authority should consider other conventional ways of comparing and assessing the design of transmission pricing options. The Authority should consider employing the six "efficiency considerations" used by TPAG.	Para 23	93

Issue	Submitter(s)	Submission	Submission ref	Item no
	Genesis	The Authority's criteria for assessing the TPM appear to predetermine an outcome, are unduly biased towards the criticisms of the issues paper, and are inconsistent with criteria used for evaluating other aspects of the TPM. Castalia's efficiency criteria would be better (see below). A consistent approach will provide a robust assessment framework that considers the impact of each component across all aspects of the market. It will also more clearly quantify benefits.	Pages 3, 5-6	94
	Castalia for Genesis	The evaluation criteria in the working paper assess options based on desirable characteristics, rather than expected market outcomes. This is inconsistent with the Authority's statutory objective. Options should be assessed against their ability to improve dynamic and static efficiency in the electricity sector, including: • providing efficient signals for load, generation, and new investment • supporting efficiency in the wholesale and retail markets.	Page ii	95
	Joint letter	The Authority should consider other ways to compare and assess TPM design options.	Page 1	96
	Nova	The simplified criteria used in all options are acceptable and pragmatic.	Page 1	97
	NZIER for MEUG	The Authority needs to strike the right balance across multiple pricing and transmission investment objectives given the limited number of tools available to it.	Para 2.8	98

Issue	Submitter(s)	Submission	Submission ref	Item no
	CEG for Transpower	Important for the Authority to make a distinction between equity considerations and efficiency considerations. Equity considerations are not relevant when assessing the efficiency of a charge.	CEG Appendix A.4, Transpower page 13	99
	CEG for Transpower	The Authority has used the term "beneficiary" to assess options, but does not have guiding principles about what this term means. This has led it to adopt different characterisations of concepts across options.	Paras 60-63	100
	Trustpower	The Authority should try to mimic market outcomes more closely. This would more closely align with the decision-making and economic framework and would be more likely to increase dynamic efficiency benefits.	Para 5.2.2	101
	Trustpower	Wants further advice from the Authority on selection criteria for design changes.	Para 5.2.1	102
	Professor Bushnell for Trustpower	When developing a cost recovery policy, focus should be on inefficient decisions made specifically in response to incentives provided by the cost recovery mechanism.	Page 4	103
Application of decision-making and economic framework	ENA, Joint letter, Powerco	The Authority's rigid application of the decision-making and economic framework reached a conclusion that beneficiaries-pay is superior to other options. Using the framework in this way does not assist in the sound economic assessment of feasible options.	ENA paras 2, 22, Joint letter page 1, Powerco page 3	104
	Transpower, ENA	The application of the decision-making and economic framework rejects LRMC pricing, which ranks higher in the decision-making and economic framework than beneficiaries-pay.	Transpower paras 2.2.3, 6.1, ENA para 56	105

Issue	Submitter(s)	Submission	Submission ref	Item no
	ENA	LRIC, tilted postage stamp, and peak charge based on LRMC are all worthy of further consideration. As they are higher on the Authority's decision-making and economic framework hierarchy, they should be given priority over beneficiaries-pay options.	Para 55	106
	Powerco	The Authority should abandon the ranking decision-making and economic framework and assess economic merits of all options on an equal basis.	Page 3	107
	PwC for 21 EDBs	There has been little detailed consideration given to a pure exacerbators-pay approach despite it being ranked higher under the economic and decision-making framework.	Para 11	108
	Transpower	The application of the decision-making and economic framework may divorce the identification of a problem from determination of a solution. The decision-making and economic framework has taken the Authority to a preferred beneficiaries-pay option independently of an assessment of problems that may exist with the status quo. Using the framework in this way means that solutions are not in response to actual identified problems. It confuses problem definition with identification and evaluation of alternative options.	Paras 2.2, 6.2	109
Quality of working paper (including deficiencies in logic)	Contact, Carter Holt Harvey	The working paper elements are not presented as a unified whole with clear evaluation criteria. It is difficult for submitters to assess the elements without a clear idea of overall proposal.	Contact page 2, CHH page 1	110
	Transpower, Castalia for Genesis, Genesis	The Authority has not considered beneficiaries-pay pricing approaches that have been adopted overseas, particularly following the FERC Order 1000.	Transpower page 4, Castalia for Genesis pages 2-3,	111

Issue	Submitter(s)	Submission	Submission ref	Item no
			Genesis page 7	
	ENA	SPD-plus-GIT may result in double-counting. The Authority does not provide an explanation of how significant this issue is or how it might be mitigated.	Para 35	112
	ENA	The working paper does not engage with the fundamental issue of whether the very substantial costs to implement any of the options are warranted.	Para 21	113
	ENA	There is a lack of analytical support for Authority's preliminary views. This is a gap in the logic of the working paper.	Paras 6-7	114
	ENA	The working paper does not engage with challenges regarding whether beneficiaries-pay approach will deliver net benefits.	Para 22	115
	ENA	The Authority has not presented strong arguments or adequate explanation of many aspects of the design of its proposals including: • the practical implications of changes in market share of retailers (including entry and exit) • how cost recovery/reflection of benefits are weighted against each other • the reasons for VoLL and demand response inputs and lack of clarity about what behavioural changes are desirable and why. It is not clear that design elements have been considered in combination or in relation to the residual.	Para 28	116

Issue	Submitter(s)	Submission	Submission ref	Item no
	ENA	The working paper does not attempt to rank costs and benefits of each option. Thus it is not clear how the Authority comes to a view that each option would result in a net benefit relative to the status quo.	Para 24	117
	Sapere for ENA	The working paper does not demonstrate how efficiencies would be created.	Nos 1, 3, 4, 9, 12, 36	118
	Fonterra	We cannot assess GIT-based options without further details on the GIT-based options and how the residual would be treated.	Para 11.1	119
	Genesis	The working paper does not provide evidence of the benefits of charging retailers instead of distributors.	Page 2	120
	Genesis	The working paper does not establish how much of a price signal would be necessary for industry participants and consumers to better engage in the transmission investment process.	Page 4	121
	Genesis	The Authority has presented a more complete solution in relation to the zonal SPD option, in that the zonal SPD option proposal addresses the residual. This makes a fair comparison difficult.	Page 5	122
	Castalia for Genesis	The working paper fails to explore a sufficiently broad range of options.	Page (i)	123
	Castalia for Genesis	The beneficiaries-pay options presented have been narrowed too much, too early in the consultation process. The Authority has tweaked the application of SPD charge rather than considering true alternatives, meaning that the working paper is unlikely to allay industry concerns about beneficiaries-pay, or improve understanding of how pricing approaches might be designed.	Page 22	124

Issue	Submitter(s)	Submission	Submission ref	Item no
	MRP	In some cases the Authority has invalidated its own principles eg, by using all transmission assets for zonal SPD option but not for other options.	Page 1	125
	Norske Skog	The Authority has suggested that consumers would understate their bids to avoid the transmission charge. However, the Authority is not concerned about generators doing the very same thing by manipulating their offers.	Page 2	126
	Orion	The working paper confuses cost allocation with pricing, and pricing with charging (and invoicing). The paper uses "charging period" to refer to both "how long charges are known for" and "how many years of history goes into the calculation". The Authority needs to determine both a cost allocation method and a pricing method. They are different things. Price signals only come with a price.	Paras 23-28	127
	Powerco	Working paper fails to assess the degree to which complexity of the SPD method increases the scope for disputes and rent seeking lobbying activity.	Page 2	128
	Powerco	The Authority describes SPD as "beneficiaries-pay" even though (for the GIT-based charge) it allocates only part of the benefits of grid use (at least for reliability investments).	Page 2	129
	PwC for 21 EDBs	It is important to understand how different participants will respond to changes in transmission charges, and to map the incentives that will be created. This has not been done.	Para 29	130
	PwC for 21 EDBs	Alternative pricing approaches are dismissed too quickly, which limits quality of debate and decision-making.	Para 9	131

Issue	Submitter(s)	Submission	Submission ref	Item no
	Ringa Matau	The Authority's approach in relation to the inclusion of assets is arbitrary and inconsistent. Any methodology or definition should be able to be applied consistently across all assets and through time.	Pages 3-4	132
	Transpower	Reasons for rejecting LRMC may not be valid. Complexity issues that relate to LRMC also apply to SPD.	Para 2.2.3	133
	Transpower	While the Authority is motivated by efficiency, it is possible to conflate efficiency drivers or outcomes with equity drivers or outcomes.	Para 3.2	134
	Transpower	If information asymmetry (in relation to participation in the grid investment process) is a strong driver for the case for change to the TPM, the Authority needs to provide strong evidence that this is a problem.	Para 3.3	135
	Transpower	The working paper confuses revenue recovery with better application of beneficiaries-pay. Under a beneficiaries-pay approach, charges should not exceed private benefit. It is unclear from the working paper why charging a subset of primary beneficiaries would be superior to charging all parties that benefit from an investment.	Para 4.1.1	136
	Transpower	The working paper continues to argue that SPD method will result in improved decision-making by the Commerce Commission, but has not addressed how this would occur or the widespread opposition to this view by submitters.	Para 4.2	137
	Transpower	The critical stages in the analytical process have been inadequate, and this has skewed the subsequent analysis.	Para 2.2	138
	Transpower	Allocative and dynamic efficiency impacts have been treated as both advantages and disadvantages in relation to options.	Para 4.2	139

Issue	Submitter(s)	Submission	Submission ref	Item no
	Transpower	The working paper repeats disputed reasoning from the first issues paper in support of beneficiaries-pay and the SPD method.	Executive summary, paras 2.2, 2.2.6, 4.2	140
	Trustpower	In relation to the post-2004 cut off for assets, the Authority's logic that all assets will be upgraded or replaced and so eventually it will not matter when assets have been commissioned could equally be used to reallocate assets commissioned before 2004. A better methodology would be to use the current system, which approximates average charges and average benefits for all consumers across the entire grid, regardless of when the asset was built.	Paras 5.9.1-5.9.3	141
CBA required	Fonterra, MEUG	Second TPM consultation paper should contain a robust CBA.	Fonterra para 10, MEUG para 5	142
	NZIER for MEUG, MEUG	Criticisms of GIT-based charge need to be assessed empirically as part of a CBA.	NZIER for MEUG page 11, MEUG para 3	143
	Contact	With no clear CBA it is difficult to simply rule out incremental changes to the status quo.	Page 5	144
	ENA	There is no estimate of costs and benefits, resulting in the absence of analytical support for preliminary views.	Paras 6, 24	145

Issue	Submitter(s)	Submission	Submission ref	Item no
	Fonterra	It is difficult to determine if the options put forward in the working paper are in the long-term benefit of consumers without a detailed qualitative and quantitative CBA.	Para 10	146
	MEUG	No analysis of how each option in the paper might be assessed for the long-term benefit of consumers. A CBA is required.	Para 7	147
	NZIER for MEUG	Quantitative CBA of the full TPM package is a formidable matter outstanding.	Para 2.8	148
	PwC for 21 EDBs	Proposals should not be short listed until a more detailed CBA can be undertaken as part of the second issues paper. Short-listing options too early without a rigorous CBA makes the CBA process redundant for assessing potential options. At a minimum, CBA should be carried out for: • preferred option from working paper • LRMC option • low-cost modified option of the status quo • any other reasonable option raised by submitters • the status quo.	Paras 20-21	149
	Refining NZ	Any changes need to be supported by a realistic, rigorous and robust CBA.	Page 2	150
	Transpower	The Authority has reached the conclusion that the options in the working paper may better promote its statutory objective than the status quo, because its qualitative CBA has not fully taken into account legitimate criticisms of the SPD method raised in response to	Para 6.1	151

Issue	Submitter(s)	Submission	Submission ref	Item no
		the first issues paper. Qualitative CBA needs work. It presently compares the benefits of SPD against the status quo but compares the cost against LRMC pricing.		
Other				
Level of detail is closer to a methodology than guidelines	Vector	The Authority can issue guidelines for the TPM. The level of detail and prescription proposed in the Authority's papers is closer to a methodology than guidelines by which Transpower must establish its TPM. Vector questions whether the Authority has general jurisdiction to determine the TPM in this way.	Paras 44-46	152
Changes since issues paper need to be taken into account	Contact	The Authority needs to consider the changes in the market that have occurred since the first consultation paper, including increased focus on the retail market, potential exit of Tiwai load, and establishment of FTR market.	Page 2	153
Expectations of parties	Ringa Matau	Inefficient investment may justify a better method for future investments, but does not justify re-litigating the decisions made inefficiently. Parties investing in the power system as a consequence of decisions should expect enduring property rights in respect of those decisions.	Page 4	154
Timing	Transpower	The proposed timeframe for delivering the second issues paper appears challenging, particularly if the Authority wishes to address issues raised in submissions.	Para 2.2	155
	Transpower	The Authority should take the time it requires to reach the right answer and should not truncate the process to meet self-imposed	Para 2.2	156

Issue	Submitter(s)	Submission	Submission ref	Item no
		deadlines.		
	Transpower	It was the right thing to do to extend the original timetable to permit additional consultation.	Para 2.2	157
Miscellaneous	Carter Holt Harvey	To ensure longevity of any TPM change, the onus and standard of proof of the proposed change must be very high.	Page 2	158
	ENA	No visibility over whether the Authority explored an LRMC approach.	Para 53	159

PART 2: GENERAL COMMENTS

Issue	Submitter(s)	Submission	Submission ref	Item no
Overall views expressed/views on preferred next steps for the Authority				
Overall views expressed/views on preferred next steps for the Authority	Carter Holt Harvey, MEUG	Support beneficiaries-pay, concerns expressed about proposals and/or process.	Overall position	160
	Genesis, Castalia for Genesis	The Authority should investigate a wider range of options, including the area of benefit option described in Genesis's submission and in Castalia's report.	Genesis page 10, Castalia page (i)	161
	Pacific Aluminium, NZ Steel, Fonterra, Pioneer Generation, Ringa Matau, Refining NZ	Concerns expressed about proposals and/or process.	Overall position	162
	Contact	The Authority should consider making incremental changes to the TPM. A simpler solution would achieve efficiency objectives without inefficiencies from anticipated and unanticipated consequences.	Page 5, 6	163
	ENA	The Authority should consider other ways to compare options. The Authority should reassess SPD with alternative charging options, without according the beneficiaries-pay arrangements any assumed priority. The Authority should consider an LRMC charge. If the Authority is unwilling to consider approaches other than beneficiaries-pay, the Authority should make modest changes to the status quo.	Paras 23, 42, 45-58	164
	EPOC	Gaming incentives are not as strong as EPOC previously thought.	Executive summary	165

Issue	Submitter(s)	Submission	Submission ref	Item no
	Joint letter	The Authority should consider other TPM options, and other ways to compare options.	Page 1	166
	Meridian	Supports SPD-plus-GIT, with simplified SPD.	Page 7	167
	MRP	The Authority should consider a wider set of options including a prospective long-term forecasting modelling approach.	Page 3	168
	Norske Skog	The Authority is heading in the wrong direction. There are not any great problems with current TPM.	Page 1	169
	Nova	Favours SPD-plus-GIT out of options presented.	Page 1	170
	Orion	The Authority should consider an LRMC-based charge. Such a charge could be achieved with modest changes.	Paras 29-30	171
	Pioneer Generation	Do not support beneficiaries-pay, as it is too complex.	Page 1	172
	Powerco	The Authority should consider an LRMC-based charge.	Page 3	173
	PwC for 21 EDBs	The Authority should consider (and conduct a detailed CBA on) the following options: • the preferred option from the Working Paper • an LRMC option • a low-cost modified version of the status quo • any other reasonable options raised by submitters • the status quo.	Para 21	174
	Simply Energy	Do not support beneficiaries-pay.	Page 1	175

Issue	Submitter(s)	Submission	Submission ref	Item no
	Transpower	Further work is needed on the Authority's statutory objective, material change in circumstances, whether the decision-making and economic framework has been appropriately applied, the problems the Authority is trying to solve with the current TPM, and what alternatives should be considered in more detail.	Para 2.2	176
	Transpower	The Authority should conduct further analysis of the problems with status quo, and identify a range of options, commensurate with the problems (if any) that it identifies with the status quo.	Para 6.2	177
	Transpower	The Authority should consider the following options: • status quo • incremental changes to current TPM • modification of HVDC charge only • introduction of more LRMC-like signals • alternative approaches to beneficiaries-pay (ie, not exclusively versions of SPD).	Para 2.2.5	178
	CEG for Transpower	None of the options in the working paper would promote allocative or dynamic efficiency.	Para 37	179
	Trustpower	None of the options would improve overall efficiency. Do not support beneficiaries-pay. Trustpower would not preclude other incremental changes to the TPM.	Para 1.1, 4.2.2	180
	Trustpower	If the Authority wants to persist with a beneficiaries-pay approach, it should use a forecast model approach. However, Trustpower does not support beneficiaries-pay.	Para 1.1.9	181

Issue	Submitter(s)	Submission	Submission ref	Item no
	Trustpower	The Authority should provide further advice regarding criteria for design changes.	Para 5.2.1	182
	Professor Bushnell for Trustpower	Should rely on locational marginal pricing to provide signals for transmission investments. Ex post calculation of charges risks distortions in behaviour.	Abstract	183
	Vector	Vector hopes the Authority will: • recognise the flawed assumptions in its approach • stop trying to improve transmission investment using transmission pricing and recognise that it is primarily the role of Part 4 (not the TPM) to encourage efficient transmission investment • recognise that transmission assets are sunk • recast its objectives to be consistent with New Zealand's current regulatory regime • consider other possible designs to the TPM.	Para 52	184
	Vector	If the Authority is unwilling to deviate from its path, it should consider incremental changes to the status quo, for example, ENA's suggestions.	Para 54	185
Will the proposals give rise to efficiencies?				
Will the proposals give rise to efficiencies?	Contact, CEG for Transpower, Orion, Castalia for Genesis, Trustpower	Improvements to the grid investment process (eg, through participation) are unlikely to eventuate and/or lead to efficiency.	Contact page 5, CEG for Transpower paras 96-127, Orion para 14, Castalia for Genesis page	186

Issue	Submitter(s)	Submission	Submission ref	Item no
			15, Trustpower para 3.1.3, Professor Bushnell pages 14	
	Contact, Trustpower, Genesis, Castalia for Genesis, Orion	The proposals will not/are unlikely to lead to an increase in net efficiency.	Contact page 5, Trustpower para 1.1.2, Genesis page 9, Castalia for Genesis page 1, Orion para 14	187
	Castalia for Genesis Transpower, CEG for Transpower, PwC for 21 EDBs, Vector, Powerco, Professor Bushnell for Trustpower, Trustpower	The proposals would incentivise changes in generator offer behaviour, changing price signals in the wholesale electricity market. This would/may not be efficient.	CEG for Transpower paras 84-91, PwC para 30, ENA para 19, Transpower para 4.2, Vector paras 37-39, Castalia for Genesis pages 18-19, Powerco page 2, Professor Bushnell pages 14-15,	188

Issue	Submitter(s)	Submission	Submission ref	Item no
			Trustpower para 5.10	
	PwC for 21 EDBs, Sapere for ENA, ENA	The proposals do not reflect LRMC, and therefore would not promote efficiency.	PwC (in relation to zonal SPD) page 3, Sapere for ENA (for example) no. 30, 9, ENA para 47	189
	CEG for Transpower, Transpower	Prices would be lowest and spread among the greatest number of beneficiaries at the end of an asset's life, encouraging the use of an already-constrained asset. This is the opposite of what efficient transmission pricing requires.	CEG para 93, Transpower para 4.2	190
	Trustpower, Professor Bushnell for Trustpower, PwC for 21 EDBs	There is no efficiency benefit in revisiting cost allocation of sunk assets.	Trustpower para 4.1.7, Professor Bushnell pages 14-16, PwC para 31	191

Issue	Submitter(s)	Submission	Submission ref	Item no
	Trustpower, Professor Bushnell for Trustpower, Ringa Matau, Vector	Locational marginal pricing already provides efficient signals for investment.	Trustpower paras 1.1.12, 4.2.2 Professor Bushnell (for example) page 2 Ringa Matau pages 2, 4, Vector paras 37-39	192
	Trustpower, Professor Bushnell for Trustpower	The SPD method would create first-mover disadvantage for generators locating at the end of a large transmission line, potentially delaying investment.	Appendix A item 15, Professor Bushnell page 13	193
	Trustpower, Professor Bushnell for Trustpower	In markets that have locational marginal pricing, the most efficient solution for allocating costs of transmissions with widely-disbursed beneficiaries is to have a credible central decision-making authority oversee a planning process with a broad and long-term horizon.	Trustpower para 4.1.11, Professor Bushnell page 18	194
	Trustpower, Professor Bushnell for Trustpower	Postage-stamp pricing can be efficient in markets with appropriate congestion pricing/locational marginal pricing.	Trustpower para 3.1.3, Professor Bushnell page 2	195
	Trustpower, Professor Bushnell for Trustpower	Beneficiaries-pay is reasonable in terms of fairness, but offers little benefit in terms of efficient investment incentives in markets that have locational marginal pricing.	Trustpower para 3.1.3, Professor Bushnell page 2	196
	Professor Bushnell for	Once an investment has been made, any updated calculations about	Professor	197

Issue	Submitter(s)	Submission	Submission ref	Item no
	Trustpower,	benefits have nothing to do with dynamic efficiency. It is the benefits before the investment is made that should influence a generator's incentives to support or not support the investment. A distinction needs to be made between investments that made sense before they were made but turned out not to be so, and decisions that were expected to be socially inefficient even at the time they are made but were undertaken because the charging regime distorted an investor's incentives.	Bushnell pages 4, 10, Trustpower para 3.1.3	
	Contact	Proposals would create inefficient incentives to under-use transmission.	Contact page 5	198
	ENA	No linkages have been identified between the proposed new transmission pricing signals and market participants' incentives and ability to improve investment decision making.	Para 19	199
	Sapere for ENA	The working paper assumes that efficient investment from a simplified SPD charge would outweigh inefficient investment because charging does not reflect LRMC. This is an empirical issue.	No 9	200
	Sapere for ENA	None of the options would promote allocative efficiency. They would not reduce deadweight loss. Shifting the charge to beneficiaries does not mitigate inefficient avoidance of charge. Other aspects need to be considered including the structure of the charge, price sensitivity, and relative ability to reflect to consumers' transmission charges as a fixed or capacity fee.	Nos 3, 15, 31, 38	201
	Meridian	Each option is likely to be superior to the status quo because of improvements in dynamic efficiency and durability.	Page 1	202

Issue	Submitter(s)	Submission	Submission ref	Item no
	NZIER for MEUG	The beneficiaries-pay mechanism is founded on a party's willingness to pay for a service that is of benefit. If there is a time lapse delay, that signal is muted and the solution might not be durable.	Para 2.3.5	203
	NZIER for MEUG	Minimising pass-through of charges to improve dynamic efficiency gains from TPM is a formidable matter outstanding.	Para 2.8	204
	Pacific Aluminium	Short-run generator pass-through of transmission costs would result in higher wholesale prices, making consumers materially worse off. It would also raise the long-run cost of new generation entry, but Pacific Aluminium is more concerned with the short-run impacts.	Page 2	205
	PwC for 23 EBDs	The GIT-plus-SPD option would allocate large proportions of costs to load in North Auckland and Northland regions, giving incentives to reduce demand. This is counterintuitive. The sunk nature of these investments suggests that prices should actually encourage greater use of the assets in order to reduce the average cost to serve.	Para 31	206
	PwC for 23 EBDs	Inefficiency from distortion of wholesale electricity market signals is a profoundly significant deficiency.	Para 30	207
	PwC for 23 EBDs	Aligning transmission charges with short-term wholesale pricing does not take into account dynamic responses to transmission constraints in the medium- to long-term. It is not appropriate to try to apply a short-run wholesale pricing model to recover the costs of long-life transmission assets subject to an annual revenue requirement.	Paras 32, 39	208
	Ringa Matau	It is possible that parties that receive a benefit from an economic investment are not paying a proportional share of charges, and that this would lead to inefficient investment if the benefiting non-paying party has the ability to significantly influence the decision to invest. We are	Page 2	209

Issue	Submitter(s)	Submission	Submission ref	Item no
		not convinced that this a material issue, and it cannot apply: • generally to the entire power system • to investments prior to the separation of ECNZ and Transpower • to reliability investments.		
	Ringa Matau	Transmission price signals are only required if locational marginal prices are insufficient, otherwise TPM needs to be as non-distortionary as possible.	Page 2	210
	Transpower	There is the potential for allocative inefficiencies to arise if the TPM fails to accurately estimate private benefits.	Para 4.2	211
	Transpower	The Authority has claimed that charging according to benefit would incentivise consumers to make efficient decisions, because prices will incentivise them to consume no more than the private benefit. However, it would not matter to a consumer whether the marginal cost of consuming more was more than the private benefit, because they are not paying the marginal cost, they are only paying up to their private benefit.	Para 4.2	212
	Transpower	The benefits of dynamically efficient pricing are at their greatest when demand is high relative to investment. However, given excess capacity in the grid, the most efficient approach to transmission pricing would be to focus on static efficiency and optimal utilisation of the grid.	Para 3.3.1	213

Issue	Submitter(s)	Submission	Submission ref	Item no
	Transpower	The SPD method cannot replicate the efficiency benefits of coalition-based investment decision-making because it is based on a measure of actual benefits, not expected benefits. Actual benefits could be considerably different from those expected at the time of an investment decision, many of them completely independent of the actions of the participants whose dynamic efficiency the scheme is trying to incentivise.	Para 3.1.6	214
	CEG for Transpower	The inaccurate estimates of benefits may compromise efficiency.	Para 43	215
	CEG for Transpower	It is not efficient for parties to be charged more than their private benefits, as would be the case for the GIT-based charge.	Para 64	216
	CEG for Transpower	A marginal cost-based price does not allow firms to recover fixed costs. Therefore, a two part charge, which includes a unit price based on short-run marginal cost and a fixed fee based on willingness to pay, is efficient.	Para 155-158	217
	CEG for Transpower	If prices depend on estimated benefits, not real private benefits, whether allocative efficiency arises depends on other factors, including deadweight loss from unserved demand, accuracy with which private benefits can be identified, and whether consumers change their consumption patterns.	Section 2	218
	CEG for Transpower	There is little material unserved demand with the current TPM, though some improvements could be made in relation to the HAMI charge. There is a low material prospect for allocative efficiency gains to be achieved by implementing the Authority's options.	Section 2	219

Issue	Submitter(s)	Submission	Submission ref	Item no
	Trustpower	The focus of TPM should be the efficient recovery of costs of long-run transmission plan. The current TPM efficiently recovers sunk/sunk-like costs of Transpower as it approximates the principles of Ramsey pricing by allocating costs to load rather than generation. Coincident peak demand charging methodology is an efficient cost recovery mechanism.	Para 4.2.2	220
	Trustpower	The degree of cost recovery is not in itself an indication of the efficiency of a charge, nor is it a valid criterion for determining the design parameters of a charge.	Para 5.5.8	221
	Trustpower	Charges that are not directly linked to consumption of generation are the most efficient. Peak demand charges distort incentives but may be efficient if the demand charge is based on the need to ration periodically limited capacity. Volumetric charges are the least efficient as they have potential to impact behaviour in every period of the year. Charging on the basis of RCPD may be the most efficient method available.	Paras 5.10.1-5.10.6	222
	Trustpower	Care must be taken not to over-signal locational benefits.	4.1.9	223
	Professor Bushnell for Trustpower	Market driven investment for transmission is problematic because a beneficial investment is still used at marginal cost which means no charge if the investment results in excess capacity.	Page 6	224
	Professor Bushnell for Trustpower	Incentives to change behaviour could distort market outcomes and would have a major impact on the allocation of costs. This would be bad for allocative efficiency (because distorted bids affect market outcomes and result in underutilisation of assets) and dynamic efficiency (because firms will base investment decisions on expected benefits and their ability to distort the measurement of those benefits).	Pages 15-16	225

Issue	Submitter(s)	Submission	Submission ref	Item no
	Vector	The Authority should stop trying to fix transmission investment problems by using a beneficiaries-pays approach to transmission pricing, and consider other designs for the TPM. Fixing transmission investment problems using transmission pricing will lead to bad pricing signals and inefficiencies. The electricity market is a system of interconnected price signals. Failures in one part of the market should be fixed at source, not by amending other parts of the system. To achieve efficient outcomes, integrated price signals are necessary. In a physically complex system, if benefits and costs cannot be allocated to beneficiaries through a competitive market, it is highly unlikely that the transmission costs would be efficiently allocated through an administrative arrangement or proxy.	See for example paras 14-29, 52	226
	Vector	Efficient transmission costs should be allocated in a way that does not distort pricing signals, demand response participation, energy efficiency or the location of new generation. Locational marginal pricing and the Part 4 input methodologies should incentivise efficient investment. Using the TPM to target efficient investment creates inefficient conflicts in pricing signals and higher costs for consumers, compromising static and dynamic efficiency.	Paras 37-39	227
	Vector	The Authority should make an explicit judgment about whether to focus on allocative efficiency (by focussing on minimising distortions to locational marginal pricing and transmission use), or on dynamic efficiency (by signalling future transmission costs).	Para 14	228

Issue	Submitter(s)	Submission	Submission ref	Item no
Changes in generator and load behaviour				
Changes in generator offer behaviour	Contact, Powerco, Vector, PwC for 21 EDBs, Transpower, ENA, Castalia for Genesis, Professor Bushnell for Trustpower	SPD charges would distort wholesale electricity market signals.	Contact pages 3-4, Powerco page 2, Vector paras 14-29, PwC para 30, Transpower paras 6.1, 42, ENA paras 19-20, Castalia page 7, Professor Bushnell pages 14-16	229
	ENA, CEG for Transpower	Inefficient changes in offer behaviour would have the same inefficient effects as Dr Layton describes in relation to pay-as-offered.	ENA para 20, CEG for Transpower paras 89-90	230
	Powerco, Professor Bushnell for Trustpower, Trustpower, Sapere for ENA, Trustpower, Contact, Orion, Norske Skog, PwC for 21 EDBs, Transpower,	SPD may incentivise parties to alter behaviour (eg, increasing bids above SRMC or changing demand) to avoid charges.	Powerco page 2, Professor Bushnell pages 15-16, Trustpower para 3.1.3, 5.10, Sapere for ENA no 11,	231

Issue	Submitter(s)	Submission	Submission ref	Item no
	Vector, ENA, CEG for Transpower, Castalia for Genesis		Trustpower para 5.10.1, Contact pages 2-4, 6, Orion para 19, Norske Skog, PwC, Transpower, Vector paras 14-29, 37-39, 52, ENA para 20, CEG for Transpower paras 84-91, Castalia for Genesis page 18-19	
	Contact	The avoidability of charges means that the issue for any SPD method is the treatment of cost recovery of NAaN and NIGU.	Page 6	232
	Contact	SPD charges need to be factored into offer strategy, creating a distortion in the spot market. This may erode price confidence and raise consumers' bills. Actions of generators seeking to avoid SPD charges would lead to higher average prices and higher peak prices (example given). Contact has already observed similar issues in relation to the South Island HAMI charge.	Pages 3-4	233
	Sapere for ENA	Beneficiaries-pay criterion does not mitigate the inefficient avoidance of charges. Authority needs to consider structure of the charge, price	No. 11	234

Issue	Submitter(s)	Submission	Submission ref	Item no
		sensitivity, ability to reflect to customers transmission charges as a fixed or capacity fee.		
	EPOC	EPOC previously claimed that suppliers would be incentivised to change offer strategies to increase prices on infra-marginal tranches and increase prices on a supra-marginal bid in some circumstances. These incentives are not as strong as EPOC previously thought. Incentives weaken with increased uncertainty in demand shocks. Incentives increase when the benefits of line expansion are large or there is a high probability of the expanded line being congested. (Note: very detailed analysis and modelling presented.)	Executive Summary	235
	Norske Skog	The incentives that exist for generators to avoid charges should indicate that the Authority should not charge generators, but instead the Authority has tried to change the methodology to minimise incentives, making the methodology more complicated. This will increase costs to consumers.	Pages 1-2	236
	Norske Skog	A generator or consumer that adjusts bids or offers to avoid charges takes a risk that the actual dispatch instruction will not be what they wish for. Norske Skog would be happy to sign a certificate vouching that its bids reflect its business's economics.	Page 2	237
	Norske Skog	If peak demand justifies investing in the grid, then a peak charging method is what is needed.	Page 2	238
	NZIER for MEUG	The beneficiaries-pay mechanism is founded on a party's willingness to pay for a service that is on benefit. If there is at time lapse delay, that signal is muted and the solution might not be durable.	Para 2.3.5	239

Issue	Submitter(s)	Submission	Submission ref	Item no
	NZIER for MEUG	Charges should not inefficiently penalise decisions by load and generation not to rely on interconnection. This is a formidable matter outstanding.	Para 2.8	240
	Orion	Capping is the wrong way to solve gaming risks. If gaming is a serious risk, it undermines the credibility of the SPD method. Support modifying data used in the SPD benefit calculation to remove effects of generator offer behaviour.	Para 18	241
	Pacific Aluminium	The design of beneficiaries-pay and residual charges should be such that they do not flow through into wholesale price offers.	Page 2	242
	PwC for 23 EBDs	Efficient pricing should give individual parties incentives to legitimately minimise transmission charges.	Para 30	243
	Transpower	Based on the analysis in the working paper, if the Authority attempts to address the problems with the pricing signals created by SPD, it will exacerbate gaming incentives and vice versa. This is a fundamental issue regarding whether beneficiaries-pay/SPD would be to the long-term benefit of consumers. Sceptical about whether these issues can be resolved.	Para 2.2.6	244
	Transpower	The combination of the TPM, nodal pricing and the application of the GIT provide pricing signals in relation to both capacity and location (albeit weaker than the signals that might be expected from full LRMC pricing).	Para 3.3.1	245
	Professor Bushnell for Trustpower, Trustpower	Charges should be distributed in a way that is least likely to elicit behavioural change/parties shifting costs onto others through manipulation of bids and offers.	Professor Bushnell page 17, Trustpower para 4.1.6	246

Issue	Submitter(s)	Submission	Submission ref	Item no
	Professor Bushnell for Trustpower	A six-monthly fee would have no impact on short-run behaviour compared with a MWh charge. Peak charging creates a less severe incentive to change behaviour than MWh fees. The method that is least likely to change behaviour would be a fixed charge that is only loosely calibrated to the usage of the customer, for example, a small number of charging bins per customer class, with customers sorted by the average level of demand and general location.	Page 17	247
Relationship between TPM and grid investment process				
Relationship between TPM and grid investment	Fonterra	Support the Authority's approach to link TPM to grid investment decisions under the GIT options.	Para 11.1	248
	Fonterra	Agree with MEUG that there are many solutions available to mitigate future inefficient capital investment by Transpower.	Para 14	249
	MRP	Support the Authority seeking to align elements from its proposal with the grid investment approvals process through a prospective long-term forecasting modelling approach linked to the identification of benefits in the grid approval process for major capex investment.	Page 1	250
	NZ Steel	Transpower's guaranteed revenue removes price signals relating to the efficient use and investment in the network. Until this issue is resolved, an acceptable TPM is unlikely to be found. NZ Steel acknowledges that the Authority cannot influence the fact that Transpower has a guaranteed revenue base.	Page 1	251
	PwC for 21 EDBs	SPD/GIT charge do not increase the efficiency of sunk investments in existing assets. Users of recent grid investments did not contribute to the detailed scope or design option for those investments, but would be required to pay for them. No clear link between the SPD/GIT charge	Paras 33-34	252

Issue	Submitter(s)	Submission	Submission ref	Item no
		and the investment approvals process undertaken by the Commerce Commission.		
	PwC for 21 EDBs	No clear link between the proposed TPM options and incentives on Transpower to invest efficiently in the grid. This is true for historical investments as well as looking forward.	Para 33	253
	Transpower	The Commerce Commission's decision-making process for investment approval is rigorous and appropriate.	Para 3.3	254
	Vector	Efficient transmission costs should be allocated in a way that does not distort pricing signals, demand-side participation, energy efficiency or the location of new generation. Those should be achieved by locational marginal pricing and the Part 4 input methodologies in order to be good regulatory design. Attempting to achieve this objective through the TPM would create inefficient conflicts and pricing signals and higher costs for consumers, compromising static and dynamic efficiency.	Paras 37-39	255
Participation in grid investment process				
Participation in grid investment process	Professor Bushnell for Trustpower, Trustpower	In relation to participation in the grid investment process, firms and customers with more money and time would have a disproportionate effect on decision-making. In addition, basing charges on benefits would dilute incentives to participate because those most strongly in favour of a good project may be less motivated to participate. If losers are compensated, they may support a project based on compensation. Parties may not have good knowledge of how investments would affect them.	Trustpower para 4.1.11, Professor Bushnell pages 8-9	256
	Contact	There will not be greater participation in grid investment if the methodology can only be understood by a few well-resourced	Page 3	257

Issue	Submitter(s)	Submission	Submission ref	Item no
		companies. SPD is too complex.		
	Sapere for ENA	Working paper does not demonstrate how the options would strengthen incentives on beneficiaries to participate, when they would be unable to capture private benefits from such participation.	Nos 1, 13, 36	258
	Genesis	Consumers, retailers, and distributors may not be able to advocate for or against an investment, given the diverse drivers and interests among their customer base.	Page 4	259
	Genesis	The Authority has not established how much of a price signal is necessary for consumers and industry participants to engage in the transmission investment process.	Page 4	260
	Castalia for Genesis	If parties are charged their private benefit, participants would be indifferent about whether a project proceeds. Parties may have reasons to withhold information from the regulator.	Page 15	261
	Orion	Extremely sceptical that there will be improvements in dynamic efficiency as a result of improved decision making. For there to be improved decision-making, there must be incentives to participate, participation must bring better information to the process, and the rules around decision-making must accommodate greater involvement.	Para 14	262
	Pioneer Generation	Pioneer Generation is unlikely to analyse and submit on proposed transmission investments unless it is very directly related to its operation.	Pages 3-4	263
	Powerco	The Commerce Commission's transmission investment process does not currently lack material information and is not susceptible to lobbying.	Page 1	264

Issue	Submitter(s)	Submission	Submission ref	Item no
		Changes in transmission charges are unlikely to materially encourage participants to engage in grid investment process.		
	Transpower	If information asymmetry in relation to participation in the grid investment process is a strong driver for the case for change to the TPM, the Authority needs to provide strong evidence that this is a problem.	Para 3.3	265
	Transpower	Working paper continues to argue that SPD method would result in improved decision-making by the Commerce Commission, but has not addressed how this would occur or the widespread opposition to this view by submitters.	Para 4.2	266
	Transpower	If the Authority is correct that SPD could provide the Commerce Commission with useful information regarding investment decisions, this could be done without the SPD method being in the TPM.	Para 6.1	267
	CEG for Transpower	The Authority has not established that there is a problem with the Commerce Commission's process. Even if there was, parties would have incentives to campaign for or against an investment on the basis of wealth transfers, not efficiency gains. This would not reveal the most efficient investment. At best, this would have no effect. However, because the proposed charge would recover more costs from fewer "beneficiaries" immediately after construction of a new asset, with such charges both decreasing and being spread over more beneficiaries as time goes on, private beneficiaries of an investment may still have incentives to lobby against the investment. This may lead to more parties opposing good investments, leading to the wrong things being built at the wrong time.	Paras 96-127	268
	Trustpower	No evidence that parties have been withholding information relevant to	Para 4.1.2	269

Issue	Submitter(s)	Submission	Submission ref	Item no
		the grid investment process.		
	Trustpower	To achieve the effect of improving incentives for investment, signals would have to be available at the time the investment was made.	Para 4.1.4	270
	Trustpower	Well-resourced participants might withhold information or over-influence decision-making.	Para 4.1.11	271
	Trustpower	A party may not participate because they do not know how a transmission investment will affect them over time.	Para 4.1.11	272
	Trustpower	In markets that have locational marginal pricing, the most efficient solution for allocating costs of transmissions with widely-dispersed beneficiaries is for a credible central decision-making authority to oversee the planning process with a broad and long-term horizon.	Para 4.1.11	273
Sunk costs/charging for assets that are already built				
Sunk costs/ charging for assets that are already built	Transpower, MRP	The SPD method should not be applied to sunk transmission assets.	Transpower para 4.1, MRP page 1	274
	Professor Bushnell for Trustpower,	Once an investment has been built, any changes in the calculation of benefits have nothing to do with dynamic efficiency. It is the ex ante expected benefits that influence generators' incentives to support or not support an investment. Once an investment has been made, locational marginal pricing provides the correct signals for future investments and operational decisions. Ideally, charges should be calculated when the investment decision is made.	Bushnell page 10, Transpower para 5.9, Appendix A item 4, Trustpower para 4.1.6-4.1.7	275

Issue	Submitter(s)	Submission	Submission ref	Item no
	Genesis	Most of the current investment decisions have already been made, and a price signal may create inefficient decisions around how those investments are used. Dynamic efficiency benefits will be much easier to realise on future or proposed assets.	Page 4	276
	PwC for 21 EDBs	The SPD and GIT charges do not increase the efficiency of sunk investments in existing assets. Users of recent grid investments did not contribute to the detailed scope or design option for those investments, but would be required to pay for them. No clear link between SPD/GIT charge and the investment approvals process undertaken by the Commerce Commission.	Paras 33-34	277
	PwC for 21 EDBs	The GIT-based approach would allocate large proportions of costs to load in North Auckland and Northland regions, giving incentives to reduce demand. This is counterintuitive. The sunk nature of these investments suggests that prices should actually encourage greater use of the assets in order to reduce the average cost to serve.	Para 31	278
	Refining NZ	Sunk costs have a very significant impact on outcomes. We question the validity of the inclusion of sunk costs in general and whether this would improve transmission decisions.	Page 2	279
	Ringa Matau	If there has been a problem with inefficient investment, it may be a justification for implementing a better method for future investments, but not for re-litigating the decisions made inefficiently. Parties investing in the power system as a consequence of decisions should expect enduring property rights in respect of those decisions.	Page 3	280
	Vector	Transmission assets are sunk because there is nothing a user can do to avoid the fixed, efficient costs of transmission assets once approved by	Paras 30-33	281

Issue	Submitter(s)	Submission	Submission ref	Item no
		the Commerce Commission. Transpower can recover the efficient costs of owning, operating and disposing of an asset even if it cannot be redeployed after it is no longer needed.		
Durability stability of TPM				
Durability of TPM/stability of TPM	MRP, PwC for 21 EDBs, Trustpower, CEG for Transpower, Transpower	The SPD charge is sensitive to changes in key parameters/assumptions (eg, capping period, gross v net, assets to be included). This may affect durability and/or lead to lobbying.	MRP page 2, PwC para 28, Trustpower para 5.3.3, CEG for Transpower paras 67-68, Transpower para 4.2	282
	Carter Holt Harvey	For a durable TPM, the onus and standard of proof for any proposed change should be set very high.	Para 2	283
	Contact	The proposal has too much scope for arbitrarily charging (eg, a retailer could adjust tariffs more regularly than others as their view on estimated SPD costs change). This would undermine the long-term credibility of the regime.	Page 5	284
	ENA	The TPM proposal would be very susceptible to lobbying, and therefore be unstable.	Para 19	285
	Sapere for ENA	The options in the working paper reveal a high degree of subjectivity and would not be more durable than the status quo.	No. 5	286

Issue	Submitter(s)	Submission	Submission ref	Item no
	Fonterra	Ambiguity and uncertainty in the TPM proposal combined with potential wealth transfers would be likely to lead to further lobbying and legal action from parties.	Para 12.4	287
	Genesis	The TPM's impact on consumers will affect durability. The Authority's proposals will potentially increase significantly charges in some regions.	Page 2	288
	Genesis	There is the potential for significant increases in charges in some regions. Authority needs to consider the impact of this on consumers. While the Authority does not have the mandate to expressly consider social impacts, the consumer impacts of the proposal are an implementation and durability issue.	Page 10	289
	Meridian	The SPD method for determining beneficiaries is constructive and durable.	Page 1	290
	NZIER for MEUG	The beneficiaries-pay mechanism is founded on a party's willingness to pay for a service that is of benefit. If there is a time lapse delay, that signal is muted and the solution might not be durable.	Para 2.3.5	291
	Orion	Capping is the wrong way to solve gaming risks. If it is a serious risk, it undermines the credibility of the SPD method. Support modifying data used in the SPD benefit calculation to remove effects of generator offer behaviour.	Para 18	292
	Pioneer Generation	One of the criteria for the four options is incentives for evolution of more efficient charging over time. Concerned that methodology implemented after the review will only be temporary, and more time and money will be required at a later stage.	Page 4	293

Issue	Submitter(s)	Submission	Submission ref	Item no
	Powerco	The complexity of SPD method and elements that require Authority's/Transpower's judgement will increase scope for disputes and rent-seeking lobbying activity, threatening the long-term durability of the method.	Page 2	294
	PwC for 21 EDBs	Setting prices based on SPD is risky because it is a significant departure from standard network pricing concepts.	Para 28	295
	Refining NZ	The Authority should focus on a solution that is simple, transparent and enduring.	Page 2	296
	Transpower	Durability and stability of the TPM is important. Robust material change in circumstances is critical to ensure TPM is stable and durable.	Para 2.2.1	297
Complexity				
Complexity	Contact, Simply Energy	Complexity will adversely impact on customers' electricity bills.	Contact pages 1-3, 6, Simply Energy page 1	298
	Meridian, Genesis	Charging retailers would increase complexity.	Meridian page 6, Genesis pages 11-13	299
	Meridian, Genesis	Complexity creates barriers to entry for new market participants.	Meridian page 1, Genesis pages 11-13	300
	Pioneer Generation, NZ Steel, Contact, Vector, PwC for 21 EDBs, Meridian,	The current proposals are too complex.	NZ Steel page 1, Contact pages 1-3, PwC paras 27-28.	301

Issue	Submitter(s)	Submission	Submission ref	Item no
	Simply Energy, Norske Skog		Meridian page 1, Simply Energy page 1, Norske Skog page 2	
	Pioneer Generation, Fonterra, NZ Steel	Complexity makes it difficult for consumers to predict their transmission charges and how proposals will affect outcomes in a practical/operational sense.	Pioneer Generation page 4, Fonterra para 12.2, NZ Steel page 1	302
	Contact	Complexity will inhibit participation in grid investment process.	Pages 3, 5	303
	ENA	Authority has dismissed LRMC on basis of difficulty. An LRMC approach would not be straightforward but it is not clear why the Authority perceives that the LRMC approach is insurmountable but the SPD method is not.	Paras 49-50	304
	Fonterra	Consumers do not have the resources to analyse and check SPD modelling to ensure they have been charged correctly.	Para 12.2	305
	Norske Skog	The proposed methodology is complicated, and even more unnecessarily complicated because the Authority is trying to reduce incentives on generators to avoid the charge, when the real conclusion should be that generators should not pay the charge.	Page 2	306
	Powerco	Working paper fails to assess the degree to which complexity of the SPD method increases scope for disputes and rent-seeking lobbying activity.	Page 2	307

Issue	Submitter(s)	Submission	Submission ref	Item no
	PwC for 21 EDBs	Costs associated with charging retailers or distributors indicate the unnecessary cost and complexity created by SPD.	Para 48	308
	PwC for 21 EDBs	Specific concerns about complexity are: • multiple pricing methodologies are applied to a range of different grid assets • asset groups based on ad hoc historical decisions • learning costs and risks are high for SPD • subjective assumptions for SPD charge many grid customers would need to spend money getting set up to interact in the wholesale market.	Paras 27-28	309
	Refining NZ	The Authority should focus on a solution that is simple, transparent and enduring.	Page 2	310
	Simply Energy	Beneficiaries-pay approach would complicate settlement flows, which would be bad for retail competition.	Page 1	311
	Vector	Current proposals are complex.	Vector para 4	312
Volatility				
Volatility	MRP	Appreciate the Authority's efforts to reduce volatility. Volatility may reduce product innovation and create a barrier for retail entry.	Page 2-3	313

Issue	Submitter(s)	Submission	Submission ref	Item no
	Nova	Volatility of the SPD charge an important consideration as it impacts on the margin required to cover retailers' pricing risk. Favour reducing volatility with rolling averages.	Page 2	314
	PwC for 21 EDBs	An ex ante application of charges will reduce volatility issues.	Para 42	315
	PwC for 21 EDBs	Consumers are likely to experience greater year on year volatility under SPD relative to the status quo, even when using a rolling average approach. Larger connections are likely to be disproportionately affected. Further analysis needs to be done on this issue.	Paras 32, 42-45	316
	Simply Energy	Proposed methodologies would increase volatility and unpredictability of transmission charges, creating pressure for network companies to unbundle transmission pricing, which will increase prices for consumers.	Page 1	317
	Trustpower	Authority should consider timing issues related to the size of benefits, and disconnection between beneficiaries-pay charges and residual charges. These issues go away to an extent if charges are less volatile from year to year.	Appendix A, item 14	318
	Vector	The proposed solution introduces pricing volatility without any justification.	Para 4	319
Identification of beneficiaries				
Identification of beneficiaries	MRP, Ringa Matau	Beneficiaries of the interconnected grid cannot be unambiguously identified.	MRP page 1, Ringa Matau pages 2-3	320

Issue	Submitter(s)	Submission	Submission ref	Item no
	MRP, Trustpower	The four options are radically divergent in their identification of beneficiaries. This calls into question whether any option correctly identifies beneficiaries.	MRP page 1, Trustpower paras 5.3.1-5.3.4	321
	Meridian	Further work is required in terms of how beneficiaries of a reliability investment are identified.	Page 7	322
	Orion	The benefits calculated by the SPD method are very sensitive to administrative choices and assumptions.	Para 18	323
	Ringa Matau	Charging "deemed" beneficiaries of the grid may not improve efficiency.	Pages 2-3	324
	Ringa Matau	The SPD method arbitrarily assesses benefits because it does not recognise dynamic efficiency benefits, producer and consumer surplus except for marginal investment, and the benefits of reliability investments.	Page 3	325
	Ringa Matau	Authority is confusing the numerical ability to deem participants to be beneficiaries with a clear identification of actual beneficiaries, even if that was possible.	Page 4	326
	Transpower	Changes in assumptions used in the SPD method have a high impact on calculations of private benefit. Authority needs to confirm the interpretation of private benefits that should be applied.	Para 4.1.1	327
	CEG for Transpower	Calculation of beneficiaries depends on a large number of parameters. Inevitable errors in parameters would result in inaccurate estimate of benefits and the corresponding inefficient reduction in demand.	Paras 67-68	328
	Trustpower	Using a net benefit approach results in much lower risk of costs being	Para 5.5.7	329

Issue	Submitter(s)	Submission	Submission ref	Item no
		recovered from parties who are not beneficiaries, increasing efficiency.		
Wealth transfers				
Wealth transfers	Fonterra, MEUG, Refining NZ	The Authority should avoid rearranging the TPM leading to wealth transfers without evidence of benefits.	Fonterra para 14, MEUG para 7, Refining NZ page 2	330
	Ringa Matau	Good regulatory practice should not treat wealth effects as trivial.	Page 5	331
	Transpower	The impact of wealth transfers will dominate any efficiency impact of the change in the TPM.	Para 2.2.2	332
Who should pay charges?				
Who should pay charges?	Genesis, MRP, Meridian	Charging retailers will create a barrier to entry for new retailers.	Genesis pages 11-13, MRP pages 2-3, Meridian page 6	333
	Genesis, MRP, Meridian, Trustpower	Charging retailers will negatively affect the transparency of charges.	Genesis page 11, MRP pages 2-3, Meridian page 6, Trustpower Appendix A item 13	334
	Genesis, Transpower,	Disagree/doubt that there are incentives for retailers to scrutinise	Page 11,	335

Issue	Submitter(s)	Submission	Submission ref	Item no
	CEG for Transpower	charges.	Transpower para 5.1, CEG for Transpower paras 33, 139	
	Genesis, CEG for Transpower	There are no observable efficiency gains from charging retailers instead of generators.	Genesis page 13, CEG para 148	336
	Meridian, CEG for Transpower	Authority's airports analogy is not useful because of a number of structural distinctions between markets.	Meridian page 6-7, CEG for Transpower paras 129-133	337
	Pioneer Generation, Simply Energy, MRP, Meridian, Genesis, Transpower, CEG for Transpower, Trustpower	Distributors should pay SPD charge on load, not retailers.	Simply Energy page 1, MRP pages 2-3, Meridian page 6, Genesis pages 11-15, Transpower paras 4.1, 5.1, CEG for Transpower para 33-34, 128-147, Trustpower Appendix A 13	338
	Transpower, PwC for	If retailers are charged, there would potentially be greater need for regulation (for example, a Benchmark Agreement between Transpower	Para 5.1, PwC	339

Issue	Submitter(s)	Submission	Submission ref	Item no
	21 EDBs	and retailers, access regulation, distribution access arrangements eg, prudential security, amendments to the definition of designated transmission customer).	paras 46-47	
	Transpower, CEG for Transpower	It is irrelevant that retailers are more familiar with the wholesale market.	Transpower para 5.1, CEG for Transpower paras 140-144	340
	Transpower, CEG for Transpower, Genesis	Charging both distributors and retailers would lead to additional transaction costs (submitters mentioned the cost of new contracts, use of system agreements and risks for retailers).	Transpower para 5.1, CEG paras 145-147	341
	Transpower, CEG for Transpower, Trustpower, MRP	The shift away from ex post charges negates concerns about volatility that led to charging retailers in the first place.	Para 5.1, CEG for Transpower paras 140-143, Trustpower Appendix A item 13, MRP pages 2-3	342
	Genesis	Making retailers subject to the beneficiaries-pay charge would require the Authority to amend the definition of designated transmission customers and will require Transpower to sign a benchmark-type agreement with all retailers. This increases complexity and would be costly.	Para 13	343

Issue	Submitter(s)	Submission	Submission ref	Item no
	Castalia for Genesis	No observable efficiency gains from charging retailers. Much of the need for transmission charges that respond to changing market circumstances disappear if distributors are charged for transmission. Distributors have a degree of permanence that retailers can never achieve.	Page 20	344
	Meridian	Imposing the charge on retailers rather than distributors would create extra costs and complexities.	Page 6	345
	Meridian	Changes would need to be made to accommodate entry/exit and changing market shares if retailers were charged.	Page 6	346
	MRP	Having retailers pay beneficiary charges would reduce product innovation and would materially impact retail competition.	Page 2	347
	Norske Skog	Do not support charging generators for transmission (except for the HVDC link).	Page 2	348
	NZIER for MEUG	Reasonably agnostic about who is charged. Prefer to see clear pricing and direct pricing signals to users of the grid. Two main issues are: • distribution companies are transmission customers but are not participants and retailers are the other way around • charges for sunk transmission assets could be viewed as cost recovery by both retailers and distributors which means that the pricing signal might be lost.	Para 2.3.8	349
	Pioneer Generation	Charging retailers would mean that independent embedded generators would be at a competitive disadvantage to vertically integrated	Page 3	350

Issue	Submitter(s)	Submission	Submission ref	Item no
		operators, having to negotiate with up to 15 retailers. The TPM must provide embedded generators with a mechanism for calculating and receiving compensation for the benefits of running embedded generation, including having one party in each network to contract with and invoice.		
	PwC for 21 EDBs	Pros and cons in relation to each option. Retailers are already familiar with the wholesale market. There may be issues with pass-through. Transmission costs could be passed on more transparently by the retailer.	Paras 46-47	351
	Transpower	If volatility is an issue, the solution should be to make charges more predictable, not charge retailers.	Para 5.1	352
	Transpower	Charging distributors is consistent with the outcomes in a workably competitive market.	Para 5.1	353
	Transpower	In relation to the possible need for contracts with retailers, the contractual framework currently reflects that customers are connected to the grid which may not be appropriate for retailers, eg, contracts for new parties would only cover pricing relationships. No way to withdraw supply to non-paying customers that do not have a physical grid connection.	Para 5.1	354
	Transpower	Distributors can change their behaviour by responding to price signals to reduce their transmission costs, so charging distributors would preserve transmission price signals.	Para 5.1	355
	Transpower	Charging retailers would not widen the tax base, it would just change the extent to which retailers incur charges directly or indirectly.	Para 5.1	356

Issue	Submitter(s)	Submission	Submission ref	Item no
	CEG for Transpower	Charging retailers would heighten risks for retailers, disproportionately affecting smaller retailers without natural hedges.	Para 147	357
	Trustpower	Retailers' perceived greater knowledge of wholesale market operation is of lesser relevance if charges are smoothed.	Appendix A, item 13	358
	Professor Bushnell for Trustpower	Ramsey pricing tries to recover costs in a manner that minimises deadweight loss, by allocating costs proportionally to the least responsive users. This would usually mean applying transmission investment costs to load rather than generation.	Pages 16-17	359
Embedded generation				
Embedded generation	Carter Holt Harvey, NZIER for MEUG	Where generation is tightly linked to load and benefits are proportional to net load/net injection (eg, co-generation plants), charges should be on the basis of net injection.	CHH page 2, NZIER page (i)	360
	NZIER for MEUG, MEUG	Efficient charging of industrial cogeneration needs to be based on net injection. Finding the most efficient basis for other embedded generation is more challenging.	NZIER for MEUG page (i), MEUG page 2	361
	Nova, PwC for 21 EDBs, Fonterra, Pioneer Generation, Trustpower	Embedded and/or distributed generation should be charged on net injection basis (Nova: particularly for co-generation).	Nova page 1, PwC paras 49-50, Fonterra para 11.4, Pioneer Generation page 2, Trustpower Appendix A item 10	362

Issue	Submitter(s)	Submission	Submission ref	Item no
	Contact	Embedded generators should be treated the same as other generators (subject to the 10MW threshold). Any efficiency issues should be dealt with through an alternative mechanism.	Page 6	363
	Fonterra	Calculating distributed generation on the basis of gross injection would incorrectly overstate benefits that the distributed generator gains from use of transmission assets.	Para 11.4	364
	Meridian	Embedded generators should be subject to the SPD benefit charge and residual charge.	Page 5	365
	Meridian	Whether embedded generation should be charged on net or gross generation should be determined by a CBA and administrative factors.	Page 5	366
	Norske Skog	Co-generation should be charged on net injection because the price of the grid is irrelevant for industrial cogeneration. Calculation should be at the local GXP to avoid penalising load that draws off one bus and injects in a different bus.	Page 2	367
	NZIER for MEUG	The Authority's exercise in Appendix B is instructive in that it shows that local generation is a substitute for grid-based supply.	Page 14	368
	NZIER for MEUG	TSLRIC would show that local generation reduces demand and therefore costs (except to the extent that it injects into the grid, needs to be supported by the grid, or imposes quality and reliability costs). Those costs are most closely approximated by net generation, not gross generation.	Page 14	369

Issue	Submitter(s)	Submission	Submission ref	Item no
	NZIER for MEUG	The Authority is seeking to ensure that the charge does not promote inefficient behaviour, but is not clear what inefficient behaviour means. In the context of beneficiaries-pay, demand response is never inefficient. Only the structure and level of prices are inefficient.	Page 14	370
	NZIER for MEUG	If the Authority is concerned about generators having incentives to embed to get higher prices (without charges), this logic does not apply to co-generation.	Page 14	371
	NZ Steel	Concerned at the degree of administrative intervention for embedded generation. Effective methodology would cover most situations without intervention and ideally scale down to distribution network charging. It would also give pricing signals to influence behaviour for efficient investments. Current proposals do not do this.	Page 2	372
	Pioneer Generation	Gross injection would result in over-charging and would be inconsistent with beneficiaries-pay. Net injection is the longstanding method of calculating the value of the grid to transmission customers. Embedded generation is efficient and should be charged on a net basis because it is akin to load with its own generation.	Page 2	373
	Pioneer Generation	The TPM must provide embedded generators with a mechanism for calculating and receiving compensation for the benefit of running embedded generation, including having one party in each network to contract with an invoice.	Page 4	374
	PwC for 21 EDBs	Net injection represents actual use of grid capacity, recognises the benefits of embedded generation, maintains existing contractual arrangements in relation to benefits, and avoids signing up all large embedded generators to Transpower contracts.	Paras 49-50	375

Issue	Submitter(s)	Submission	Submission ref	Item no
	Trustpower	The Authority needs to consider situations in which multiple embedded generators are generating on a network and power is being net exported to the grid.	Appendix A item 10	376
Other				
Other	ENA	The Authority needs to consider how the transmission prices would interact with other aspects of pricing for electricity.	Para 25	377
	MEUG	If Transpower's assets do not provide benefit, they should be written down. This should occur for any beneficiaries-pay option where a residual representing uneconomic asset values is identified. This may require amendments to the input methodologies.	Para 7	378
	NZIER for MEUG	Ensuring that the TPM is integrated into the wider regulatory system is a formidable matter outstanding.	Para 2.8	379
	Norske Skog	The main criticism of the current TPM comes from those who pay for the HVDC link.	Page 1	380
	Orion	The Authority needs to decide whether HVDC and HVAC revenues should be included in a single bucket. This a decision separate from SPD.	Para 31	381
	Orion	The fact that the Authority is considering allocating large wedges of cost (for reliability investments) on a purely conceptual approach indicates that the Authority would be fine with less technical approaches to beneficiaries-pay. This has wider implications.	Para 17	382
	Powerco	The Authority continues to style the SPD method as a beneficiaries-pay method, even though the method allocates to beneficiaries only part of the benefits of grid use, at least for reliability investments.	Page 2	383

Issue	Submitter(s)	Submission	Submission ref	Item no
	Transpower	Transmission is long-term. Taking a snapshot of accounting book values at a particular point in time could create a misleading impression about the fairness and incidence of transmission charges. A longer-run view of costs may be more appropriate than current book value eg, replacement value.	Para 3.2.5	384
	Transpower	The Authority has skipped a number of policy development steps and has gone straight to a preferred alternative TPM.	Para 2.2.5	385
	Trustpower	If the SPD method is being pursued as a proxy for coalition-based merchant transmission investment schemes, the parameters that should apply should closely mimic the market-based outcomes that would occur under such a scheme.	Paras 5.4.1-5.4.8	386

PART 3: COMMENTS ON EACH OPTION

Issue	Submitter(s)	Submission in relation to option	Submission ref	Item no
General comments about all 4 options				
General comments about all 4 options (note: specific matters that fall under other categories have not been included in this category)	Pacific Aluminium, Castalia for Genesis	All of the options are better than the October 2012 proposal.	Pacific Aluminium page 1, Castalia page 22	387
	Vector, Trustpower, Genesis, Castalia for Genesis, CEG for Transpower, Orion, ENA, Powerco	None of the options would/have been proven to give rise to net benefits relative to the status quo.	Vector para 4, Trustpower para 1.1.6, Castalia page 22, Genesis page 9, CEG for Transpower para 37, Orion para 4, ENA para 21, 24, Powerco page 3	388
	Joint letter	Not supportive of the design of any of the options proposed in the working paper. Do not support original proposal.	Page 1	389
	Meridian	Each option is likely to be superior to the status quo.	Page 1	390
	Pacific Aluminium	The alternatives in the working paper appear to offer some advantages over the October 2012 proposal, but Pacific Aluminium still has significant concerns.	Para 3	391

Issue	Submitter(s)	Submission in relation to option	Submission ref	Item no
General comments about SPD and/or beneficiaries-pay				
General comments about SPD and/or beneficiaries-pay (note: specific matters that fall under other categories have not been included in this category)	Trustpower, Pioneer Generation, Simply Energy	Do not support beneficiaries pay.	Trustpower para 1.1.7, Pioneer Generation page 1, Simple Energy page 1	392
	Carter Holt Harvey	Supportive of concept of beneficiaries-pay.	Page 2	393
	Contact	A beneficiaries-pay approach would not lead to net efficiency gains.	Page 2	394
	Contact	Beneficiaries-pay is impractical for the New Zealand electricity industry.	Page 2	395
	ENA	The SPD charges would disadvantage areas where there has been underinvestment in transmission relative to demand growth. Participants that use electricity principally in the peaks would be advantaged.	Para 20	396
	ENA	No evidence that beneficiaries-pay approach would result in net benefits relative to the status quo.	Paras 6, 10	397
	Sapere for ENA	The implementation and operational costs for SPD would be high. Operational costs could be mitigated by using the SPD model to recalibrate charges periodically (eg, once a year).	Nos 6, 7	398
	Genesis	The SPD-based options will reduce efficiency in the wholesale market, because they will create new efficiencies for generator and load behaviour.	Page 9	399
	Meridian	Support SPD.	Page 1	400

Issue	Submitter(s)	Submission in relation to option	Submission ref	Item no
	MEUG	Conceptually, a beneficiaries-pay approach is better than the current flat tax method. The challenge is to find an implementable option with demonstrable long-term benefits for consumers.	Para 7	401
	MEUG	For any beneficiaries-pay option where a residual representing uneconomic asset value is identified, Transpower's shareholders should bear the costs by writing down the assets. This is not a trivial matter and may require amendments to the input methodologies and pass a robust CBA.	Para 7	402
	NZIER for MEUG	A GIT-based charge warrants further investigation, because it recognises that reliability investments do not benefit everyone and therefore should not be charged through the residual.	Para 2.4	403
	Orion	The SPD beneficiaries-pay calculation does not establish that the cost of HVDC should be included in a single bucket with HVAC. The Authority needs to make that decision separately. If HVDC is kept separate, SPD might provide a reasonable allocation between generators in various regions.	Para 31	404
	Orion	If it is agreed that SPD is useful, SPD could be used to allocate proportions of Transpower's total interconnection revenue requirement. This removes the need to allocate the residual.	Para 32	405
	Pacific Aluminium	Support the Authority in its work to develop a more efficient and durable TPM using beneficiaries-pay approach.	Para 3	406
	Simply Energy	Beneficiaries-pay would be detrimental to retail competition because of added complexity, unpredictability and volatility, cost allocation at a portfolio versus ICP level, and increased market complexity.	Page 1	407

Issue	Submitter(s)	Submission in relation to option	Submission ref	Item no
	Transpower	Submitters have raised concerns about the impact of SPD on retail market competition. This is a fundamental issue regarding whether beneficiaries-pay/SPD would be to the long-term benefit of consumers.	Para 2.2.6	408
	Transpower	Concerns raised about beneficiaries-pay SPD go to the heart of whether the options considered would benefit consumers.	Para 2.2.6	409
	Trustpower	Do not support beneficiaries-pay charging for interconnection assets. The Authority could make other changes to the TPM, eg, change treatment of HVDC link or change the basis of allocation of costs to load.	Paras 4.2.1, 4.2.3	410
	Trustpower	If the Authority wants a beneficiaries-pay charging methodology, it should use a forecast method with benefits offset over a long period. Forecasts would be required to give parties certainty about their businesses. However, we do not think such a change would be justified.	Paras 6.2.1, 6.28-6.29	411
	Trustpower	The SPD method is not likely to achieve either efficiency or equity in relation to cost recovery for Transpower's interconnection assets.	Para 1.1.7	412
Simplified SPD charge				
Simplified SPD charge (note: specific matters that fall under other categories have not been included in this category)	Contact	The simplified SPD charge appears to be the option that is most aligned with the Authority's valuation framework for current TPM because: • SPD charges will be largely avoidable and will relate to cost of recovery of NAaN and NIGU	Page 6	413

Issue	Submitter(s)	Submission in relation to option	Submission ref	Item no
		• GIT-based options replicate problems with the current TPM by allocating large amounts of costs to regions • benefits of NIGU are not valued in GIT-based options.		
	ENA	There are practical implications of the changes in the market shares of retailers, including entry and exit, where charges are based on the previous three years.	Para 28	414
	ENA	The simplified SPD charge option is little different from the October 2012 proposal, and has not taken into account criticisms in relation to that proposal.	Para 27	415
	Sapere for ENA	Because the GIT-plus-SPD charge collects a lower amount of revenue through SPD than would be the case with simplified SPD charge, efficiency costs would also be lower for the GIT-plus-SPD option.	No 17	416
	Castalia for Genesis	The simplified SPD charge would offer reasonably predictable charges but is not expected to lead to more efficient decisions by load, generation, or investment. There would be a need for a residual charge, which is unlikely to improve the investment decisions of new generators, and raises the risk that beneficiaries may not value benefits they pay for. No material impact on efficiency of retail market, but will materially distort wholesale market signals.	Page 11, see summary page on (iii), detailed analysis given	417
	Meridian	Support simplifying the original SPD proposal.	Page 2	418
	NZIER for MEUG	Compared to the status quo, consumers will have lower charges and generators will have higher charges under the simplified SPD charge option.	Para 2.2	419

Issue	Submitter(s)	Submission in relation to option	Submission ref	Item no
	NZIER for MEUG	The simplified SPD charge is very sensitive to how the residual is allocated as well as how the charges fall between regions.	Para 2.2	420
	NZIER for MEUG	In terms of the Authority's view that the simplified SPC charge option is better than the status quo, we disagree with the Authority's qualitative assessment. The option has not addressed some of the important issues and leaves a number of new design issues to be resolved.	Para 2.3.9	421
	NZIER for MEUG	The simplified SPD charge option is not simple/easy to understand.	Para 2.3	422
	Transpower	The simplified SPD charge option is superior to the other options and is a considerable improvement on the option proposed in the first issues paper.	Paras 4.1, 6	423
GIT-plus-SPD, and general comments about a combination GIT/SPD method				
GIT-plus-SPD option	ENA, Sapere for ENA	Rigidity in the GIT-based method in relation to charges over time is undesirable. It is also unclear what the basis would be for any reset.	Sapere no 24, ENA para 33	424
	Genesis, Nova, PwC for 21 EDBs	Under this option, North Auckland and Northland would face significantly higher charges than load in other areas.	Genesis page 10, Nova page 1	425
	NZIER for MEUG, MEUG	The GIT-based charges shift costs of transmission from obvious non-beneficiaries to a set of possible and probable beneficiaries. This potentially improves on the status quo but has costs because it is not well targeted. The trade-off between the costs of the approach (eg, not well targeted) and benefits (eg, recognition that reliability investments do not belong in the residual) need to be decided as part of a full cost-benefit analysis.	NZIER for MEUG para 2.4, MEUG page 2	426

Issue	Submitter(s)	Submission in relation to option	Submission ref	Item no
	NZIER for MEUG, ENA, CEG for Transpower, Transpower	The GIT-based charge could lead to some consumers paying more than their private benefits.	NZIER para 2.4, ENA paras 30-31, CEG para 64, Transpower para 4.2	427
	Powerco, ENA	The option's approach risks over-recovery of costs from GXPs in the deemed "area of benefit" if secondary benefits exist outside that area.	Powerco page 2, ENA para 30	428
	Carter Holt Harvey	Prefer this option, subject to a CBA that takes residual charges into account. The combination of GIT and SPD takes account of both major reasons for investment ie, reliability and economic supply.	Page 3	429
	Carter Holt Harvey	The GIT-based charge should be charged on peak MW basis.	Page 3	430
	ENA	The Authority's described rationale as aligning charges with willingness to pay is inconsistent with the test for approving reliability investments.	Para 32	431
	ENA	The consumption-based charge means that the charge bears little relationship to the way transmission costs scale over the medium- to long-term, in respect of capacity.	Para 34	432
	Sapere for ENA	Unconvinced that participants will have incentives to participate in investment decision-making in relation to reliability investments.	No 13	433
	Sapere for ENA	The possibility of socialising transmission costs over the general tax base is novel. The Authority should clarify this if it is what it has in mind.	No 25	434

Issue	Submitter(s)	Submission in relation to option	Submission ref	Item no
	Sapere for ENA	Cannot assume that benefits of reliability investments exceed costs, as sometimes assessed benefits are less than cost (for example with NAaN).	No 21	435
	Sapere for ENA	The Authority's assessment seems to be that a GIT-based charge would be superior to the simplified SPD charge due to the GIT-based charge being a capacity-based charge (in terms of efficient use of the grid). It would be useful if both charges were also assessed relative to the existing RCPD structure.	No 32	436
	Fonterra	Support the Authority's approach to link grid investment process with the TPM under the GIT options. Cannot comment on the option without further details, including about how the residual would be treated.	Para 11.1	437
	Meridian	Support recovering some of the revenue requirement for reliability investments through a GIT-based charge.	Page 7	438
	Meridian	SPD–plus-GIT option is better than GIT-plus-SPD option.	Page 7	439
	NZIER for MEUG	A GIT-based charge would not reflect changing market conditions very well. It would impose the cost of reliability investments regardless of whether benefits materialised. The SPD-plus-GIT option is therefore more appealing than GIT-plus-SPD option because it will minimise the impacts of inaccuracies and other shortcomings.	Para 2.4	440
	NZIER for MEUG	The GIT-plus-SPD option could result in double counting benefits to some consumers.	Para 2.4	441
	Nova	It is positive that the approach recognises reliability benefits.	Nova page 1	442

Issue	Submitter(s)	Submission in relation to option	Submission ref	Item no
	Nova	The fact that the NAaN and NIGU projects make up such a large component of the GIT-plus-SPD option is undesirable.	Page 1	443
	Nova	The GIT-based options have the benefit of generating higher revenues than simplified SPD charge option, reducing the amount needed to be recovered through a residual charge.	Page 2	444
	Orion	It is reasonable to assign costs of reliability investments to a defined beneficiary group (this should be load). Concerned that some costs would be materially in excess of the benefit calculated at the time the investment was approved. Benefits should only be allocated if less than cost of asset. The remainder should be recovered from other parties.	Para 16	445
	Orion	For NIGU, SPD calculates significant private benefits. This may indicate that a hybrid approach is risky given the meshed nature of the interconnected grid and how the value of components can change over time.	Para 17	446
	Powerco	There is not enough information about how GIT-plus-SPD would work in practice. A GIT-based charge could be justified on equity grounds, but not clear how it would be more efficient. Allocating GIT-plus-SPD charge based on MWh consumed at relevant GXPs would take the charge further away from LRMC because it is not based on peak demand, the main driver of transmission.	Page 2	447
	Powerco	There may be a problem with over-recovery for reliability investments that are not NPV positive but are made to preserve N-1 reliability.	Page 2	448
	PwC for 21 EDBs	High charges in North Auckland and Northland regions would produce incentives to reduce demand. This is counterintuitive.	Para 31	449

Issue	Submitter(s)	Submission in relation to option	Submission ref	Item no
	Transpower	In relation to GIT-based charges, it should not be assumed that the quantum of private benefits for assets exceeds the investment cost. Assigning the cost of reliability investments to load might result in load paying charges that exceed private benefits.	Para 4.2	450
	Transpower	The working paper confuses revenue recovery with better application of beneficiaries-pay. Under a beneficiaries-pay approach, charges should not exceed private benefit.	Para 4.1.1	451
	CEG for Transpower	Load in locations outside the charging area may benefit.	Paras 77-83	452
	CEG for Transpower	It is not clear why the GIT-based charge would improve upon the status quo. In addition, deadweight loss and unserved demand would result because customers may reduce the use of reliability investments. The Authority characterises its approach as beneficiaries-pay but its method resembles a causers-pay approach. However, the method does not identify causers, nor does it identify beneficiaries.	Paras 77-83	453
	Trustpower	Favour the proposed GIT-based options over the SPD-based options.	Para 5.8.3	454
SPD-plus-GIT				
SPD-plus-GIT	ENA	This option has similar drawbacks to the GIT-plus-SPD method.	Para 35	455
	ENA	The SPD-plus-GIT option may result in double-counting some of the benefits to those deemed to be beneficiaries (note that this may be mitigated as the SPD method may not fully capture the benefits of transmission investments designed to reduce expected unserved energy).	Para 35	456

Issue	Submitter(s)	Submission in relation to option	Submission ref	Item no
	ENA	The GIT component of this method should be compared with other potential methods for allocating residual costs, but the assessment does not include this comparison.	Paras 35-36	457
	Sapere for ENA	The combination of applying the SPD charge and GIT-based charge to reliability investments may decrease allocative efficiency, to the extent that parties subject to the SPD charge seek to shift costs on to parties paying the GIT-based charge. This reflects an inefficiency in the design of the SPD charge.	No 35	458
	Nova	While GIT-based charges partially recognise reliability benefits, the price impact of the GIT-plus-SPD option in Northland and the fact that NAaN and NIGU make up a large component of the GIT-based charge leads Nova to favour the SPD-plus-GIT option.	Page 1	459
	Powerco	Problems with simplified SPD charge and GIT-plus-SPD option apply.	Page 2	460
	PwC for 21 EDBs	The SPD-plus-GIT option does not increase the efficiency of sunk investments in existing assets. Users of recent grid investments did not contribute to the detailed scope or design option for those investments, but would be required to pay for them. No clear link between the SPD-plus-GIT option and the investment approvals process undertaken by the Commerce Commission.	Paras 33-34	461
Zonal SPD option				
Zonal SPD option	Meridian, Nova	The zonal SPD option is the least preferred option out of the 4 options.	Meridian page 7, Nova page	462
	Meridian, Nova	The zonal SPD option would reproduce the problem with the current TPM that a subset of beneficiaries pay for the HVDC link.	Meridian page 7, Nova page 2	463

Issue	Submitter(s)	Submission in relation to option	Submission ref	Item no
	ENA	ENA recommends that consideration of how to allocate within-zone charge should be extended to include LRMC measures.	Para 38	464
	Castalia for Genesis	The zonal SPD option would have no material impacts on load decisions. It would obscure transmission price signals for generation and would be unlikely to affect efficiency of new investments. The option creates incentives to change offer behaviour.	Page 11	465
	Meridian	The zonal SPD option involves contentious design choices and mutes price signals.	Page 2	466
	Meridian	Doubt whether the zonal SPD option would be simpler to understand or implement than other options.	Page 7	467
	NZIER for MEUG	The zonal SPD option would not be consistent with beneficiaries-pay. There would be considerable difficulty in agreeing zones, identifying interconnector assets, defining an intra-zone charging mechanism.	Para 2.5	468
	Nova	There would be an arbitrary breakdown of zones. Difficult and potentially costly to resolve issues regarding breakdown of zones and inter-zonal assets (specific examples given).	Page 2	469
	Powerco	The zonal SPD option has the same drawbacks as SPD. A residual based on per MWh charges would move away from the chief driver of transmission investment (peak demand). The approach would not enhance efficiency because there would be no relationship between charges and LRMC. Method for the zonal SPD option would be complex and involve many arbitrary assumptions, which would expand the scope for disputes and mean rent-seeking lobbying. Concerned about durability over time.	Page 3	470
	PwC for 21 EDBs	The zonal SPD option deals with issue of asset grouping in a more	Para 41	471

Issue	Submitter(s)	Submission in relation to option	Submission ref	Item no
		principled manner by grouping all assets into zonal interconnectors and within zone assets.		
	Transpower	The zonal SPD option appears to be better suited to application of LRMC pricing rather than beneficiaries-pay.	Para 4.1	472
	Trustpower	Do not support zonal SPD, because it uses the SPD method.	Para 4.1, Appendix item 3	473
	Trustpower	Oppose the within-zone charge being allocated on a ratio of 50:50 between generation and load. Prefer within-zone charge to be allocated entirely to load.	Appendix A item 3	474
Status quo				
Status quo	Fonterra	The current TPM is working well, but acknowledge that it could be improved.	Para 8	475
	Meridian	The present TPM can be improved upon.	Page 1	476
	Norske Skog	There is no great problem with the current TPM.	Page 1	477
	Ringa Matau	The benefits of change from the status quo are highly uncertain and expected to be minor.	Page 5	478
	Transpower	The current TPM, coupled with nodal pricing, scores well in terms of static efficiency and (coupled with nodal pricing and the capex IM) dynamic efficiency.	Para 3.2	479
	Transpower	The current TPM is broadly understood and stable and, relative to the Authority's proposals, comparatively simple.	Para 3.2	480

Issue	Submitter(s)	Submission in relation to option	Submission ref	Item no
	Transpower	There may be minor issues with connection charges.	Para 3.2.1	481
	Transpower	There may be scope to refine the current interconnection charges so that RCPD charges provide better medium- to long-term price signals, eg, by adjusting allocation between regions, number of peaks.	Para 3.2.3	482
	Transpower	There is potential for incremental refinement in relation to the HAMI charge (eg, by charging number of peaks). Could also reallocate part or all of HVDC charges to consumers. Authority would need to address the fact that the efficiency impact from current HVDC charges is very modest compared to wealth transfers from consumers to South Island generators.	Para 3.2.3, 3.2.4	483
	Transpower	It is currently a pressure point on the TPM that Transpower is currently undertaking substantial amounts of transmission investment. Some changes (eg, move to greater user pays or a form of beneficiaries pays) might be justified, but Transpower cautions against arbitrary change based on current accounting book values that may advantage certain regions of the country compared to others.	Para 3.2.5	484
	Transpower	There is no incentive under the status quo for generators to game generation offers by increasing bids above SRMC.	Para 4.2	485
	CEG for Transpower	The current TPM is fairly efficient in terms of allocative efficiency. There is not material unserved demand associated with the current TPM. There is some allocative efficiency associated with the HAMI-based charge, which leads to South Island generators occasionally withholding capacity, as well as some problems with the interconnection charge at the margin. However, there is not a	Paras 45-57	486

Issue	Submitter(s)	Submission in relation to option	Submission ref	Item no
		substantial level of efficient unserved demand.		
	Trustpower	There is no evidence that the current TPM does not ensure that the full economic costs of Transpower's services are allocated in a manner which ensures competition in, reliable supply by, and the efficient operation of the industry. The case for a shift from the status quo for charging interconnection assets has not been established.	Paras 7.1.5-7.1.6	487
	Vector	The current TPM delivers long-term benefit to consumers by: • allocating efficient sunk and fixed costs of transmission to beneficiaries where possible • minimising cross-subsidies and unintentional stranding risk by allocating costs to be within the range of incremental and standalone costs when beneficiaries cannot be identified (and using prudent discounts where this cannot be done) • not distorting locational marginal pricing.	Paras 40-43	488
Incremental changes				
Incremental changes	Contact	Incremental changes are OK. The Authority could: • change allocation of costs of the HVDC link from South Island generation to load • amend HAMI-based charging.	Page 5	489

Issue	Submitter(s)	Submission in relation to option	Submission ref	Item no
	ENA	If Authority wishes to persist with beneficiaries pay, charges could be designed as follows (note: should not be interpreted as ENA's preferred approach to a TPM): • develop estimates of the LRMC of incremental capacity • levy LRMC charge on those able to respond to it over extended periods of time (perhaps injection and offtake GXP customers, but that would need to be tested) • use a beneficiaries-pay charge, or an RCPD/I charge, or combination to collect residual interconnection revenue requirement • levy interconnection charges at GXPs • set the interconnection charge in advance of the pricing year.	Para 44	490
	Sapere for ENA	The Authority could address the most contentious issue (HVDC pricing) using variants of the status quo.	No 5	491
	Norske Skog	Suggest that the Authority make incremental changes by charging Pole 3 to consumers and refining RCPD charges (for instance, one changing to national zone).	Page 1	492
	PwC for 21 EDBs	Authority should consider low cost alternatives to the status quo.	Para 17	493
	Trustpower	Do not support beneficiaries-pay. The Authority could make other changes to the TPM, eg, change treatment of HVDC link or change the basis of allocation of costs to load.	Paras 4.2.1, 4.2.3	494

Issue	Submitter(s)	Submission in relation to option	Submission ref	Item no
LRMC/exacerbators-pay				
LRMC	ENA	ENA recommends that the Authority should consider an LRMC charge.	Paras 38, 53	495
	ENA	The Authority has used consumption as the charging variable. The Authority could have used a capacity-based charging regime, which would not be that complex, and not as complex as SPD.	Para 39	496
	ENA	LRMC charge would provide price signals that approximate the long-run costs of transmission usage at peak times. This is desirable from an efficiency perspective and addresses many concerns in the working paper and in relation to ACOT.	Para 46	497
	ENA	The working paper recognises desirability of LRMC charges.	Para 48	498
	ENA	The Authority has dismissed LRMC on the basis of difficulty (especially in relation to capacity rights). An LRMC approach would not be straightforward but it is not clear why the Authority perceives that the LRMC approach is insurmountable but the SPD method is not.	Paras 49-50	499
	ENA	Authority's reasoning suggests that a demand-based charge should be structured as a capacity charge (preferably for peak periods), as this would best reflect the usage that drives the need for incremental transmission capacity.	Para 57	500
	ENA	The Authority could use the Total Service Long Run Incremental Cost (TSLRIC) method used in telecommunications as an example of a way to estimate LRMC for interconnection.	Para 51	501

Issue	Submitter(s)	Submission in relation to option	Submission ref	Item no
	ENA	LRMC charge should not be discarded because it will not recover the full costs of assets. A residual charge would be needed for most of the options the Authority is considering.	Para 58	502
	ENA	The ENA encourages the Authority to explore ways of estimating LRMC for interconnection and publish the results.	Para 53	503
	Sapere for ENA	The Authority's arguments about efficiency imply that a move towards LRMC is desirable.	See for example no 21	504
	Orion	Prices should reflect LRMC, should not be avoidable, should not inefficiently affect the use of the grid, and should be higher the more inelastic the demand. For example, the TPM could be amended to: • combine HVDC and HVAC interconnection revenue requirements • allocate interconnection to generation and load separately, based on regional groupings that reflect reasonably clear clusters of benefit on a $/MW basis • use HAMI and RCPD to calculate prices to parties within regions • advise charges to parties for the year ahead based on their previous year's measured HAMI and RCPD quantities • bill monthly.	Para 30	505
	PwC for 21 EDBs	Under an exacerbators-pay approach, customers that increase Transpower's costs through usage should pay costs. Examples of exacerbators-pay approaches include: • a charge levied on demand	Paras 8-14	506

Issue	Submitter(s)	Submission in relation to option	Submission ref	Item no
		• circuit length recognised in a zonal-based charge • quality of supply considerations recognised through reactive support charges or in recognition of reliability investments. The Authority has adopted some exacerbators-pay approaches, but has rejected others as impracticable to apply. These decisions have been made with less justification and analysis than the SPD method, despite exacerbators-pay being ranked higher on the decision-making and economic framework.		
	PwC for 21 EDBs	An exacerbators-pay approach would align Transpower's prices to key cost drivers.	Para 12	507
	PwC for 21 EDBs	A reasonable LRMC proposal could be developed with the same degree of effort as has been applied so far to the SPD charge. In addition, other jurisdictions have already applied LRMC charges.	Paras 8-21	508
	Transpower	The complexity issues with LMRC also apply to SPD.	Para 2.2.3	509
RTO based				
RTO-based	Castalia for Genesis, Genesis	The area of benefit approach models market interactions to forecast the benefit that transmission assets are expected to provide.	Genesis page 10, Castalia page (i)	510
	Genesis	RTOs in the United States have successfully implemented alternative beneficiaries-pay regimes (eg, vote and pay, area of benefit). Both options would potentially improve efficiency and are directly linked to the investment approval process. The area of benefit option is preferable as it is likely to deliver net benefits. It has no material impacts on load or generation decisions and will not impact on	Pages 7-10	511

Issue	Submitter(s)	Submission in relation to option	Submission ref	Item no
		wholesale/retail markets. Castalia has evaluated these alternatives as well as the Authority's alternatives.		
	Genesis	A number of unanswered questions with the area of benefit option will need resolving, for example, how the model can respond to changes in market dynamics over time.	Page 12	512
	Castalia for Genesis	The GIT-based charge is an area of benefit approach, but is limited to reliability assets. The area of benefit approach can also be applied to economic investments.	Page 7	513
	Castalia for Genesis	A good case study regarding an RTO approach is the MISO system in the USA. Some changes to US approaches may be appropriate (eg, periodic re-run of models to promote dynamic efficiency) (details given on pages 8-9).	Pages 5, 8-9	514
	Castalia for Genesis	The area of benefit is preferable. The area of benefit approach would generate more stable and predictable price signals by creating a signal before an investment is made, and incentivising participants to use existing assets. The area of benefit approach would have no material impact on efficiency of other aspects of other aspects of the electricity market. Castalia sets out extensive analysis in relation to these points, including how to mitigate issues/risks.	Pages 12-17	515
	Castalia for Genesis	Under a vote and pay system, a regulatory investment test is run to determine that an investment will provide overall net benefits. Benefits are identified by modelling. Beneficiaries are assigned voting rights based on a share of costs. Beneficiaries can then vote on future investments.	Page 9	516

Issue	Submitter(s)	Submission in relation to option	Submission ref	Item no
	Castalia for Genesis	The vote and pay approach could reduce efficiency signals to generation and load. For example, parties may vote against investments, not recognising their private benefits. The vote and pay approach has the strongest link with transmission investment approval process. Would not change efficiency of retail or wholesale markets. Castalia sets out detailed analysis on these points.	Pages 14, 17, 19, 20	517
Forecast model approach				
	Trustpower	The Authority should use a forecast model approach if it wants to persist with beneficiaries-pay. This is analogous to the economic model methodology discussed in section 6.5 of the October 2012 issues paper. Charges would be based on offsetting benefits, calculated over the lifetime of the investment/long-term outcomes, over a range of scenarios. Only parties with a positive offsetting benefit would be charged. Charges could be recalculated periodically. Charges would not be volatile unless a large player entered/exited market. A forecast model would allow parties to know impact of charges on business.	Para 6.2	518
	Trustpower	If the HVDC link was to be charged separately, forecast analysis could be used to determine cost allocation for the HVDC (note: this is not Trustpower's preferred solution).	Para 6.2	519

PART 4: COMMENTS ON ANALYTICAL INPUTS

Issue	Submitter(s)	Submission	Submission ref	Item no
Net benefits vs gross benefits	Carter Holt Harvey, Genesis, NZ Steel, Trustpower, PwC for 21 EDBs	Prefer net benefits only approach.	Carter Holt Harvey page 3, Genesis para 36, NZ Steel pages 1-2, Trustpower paras 5.5.1-5.5.6, PwC para 36	520
	Carter Holt Harvey, NZIER for MEUG, PwC for 21 EDBs	Net benefits are the benefits that matter to grid customers when making decisions.	Carter Holt Harvey page 3, NZIER para 2.3.7, PwC para 36	521
	Meridian, NZIER for MEUG, Trustpower	Do not support net benefits with refund approach.	Meridian page 3, NZIER for MEUG page (i) para 2.3.7, Trustpower paras 5.5.1-5.5.6	522
	NZIER for MEUG, MEUG	Charging on net benefits has some merit. The Authority should consider whether inefficiencies regarding net benefits (eg, inefficient investment and production decisions) are of much practical	Page (i), para 2.3.7, MEUG page 2	523

Issue	Submitter(s)	Submission	Submission ref	Item no
		consequence. It is not clear from the Authority's reasoning whether this is the case.		
	NZIER for MEUG, MEUG	Net benefits with refund approach is highly inefficient as it encourages inefficient production and investment.	Page (i) para 2.3.7, MEUG page 2	524
	Trustpower, Professor Bushnell for Trustpower	It is invalid to use the quantum of costs recovered via a gross benefit approach to justify whether an investment was required. Gross benefits ignore transfers from parties made worse off to those made better off, overstating the true benefit of an investment.	Para 5.5.9, Professor Bushnell page 8	525
	ENA	It is not clear that gross benefits is superior to net benefits.	Para 28	526
	Genesis	Gross benefits inaccurately portrays the benefits consumers place on individual assets.	Para 36	527
	Meridian	The gross benefits approach is better than net benefits with refund. The net benefits with refund approach is better than net benefits only approach. Gross benefits will create more appropriate incentives than net benefits with refund in relation to dynamic efficiency, and static efficiency.	Pages 2-3	528
	Meridian	The net benefits with refund approach would turn the right to enjoy a transmission constraint into a compensable property right. This is undesirable.	Page 3	529
	Meridian	The gross benefits approach is preferable from a dynamic efficiency perspective in terms of generation, load investment, and scrutiny and lobbying for transmission proposals.	Pages 3-4	530

Issue	Submitter(s)	Submission	Submission ref	Item no
	Norske Skog	Charging based on net benefits would create different incentives for different persons. The Authority should look at a number of cases and apply the net benefits only approach when it is justified.	Page 2	531
	Nova	The SPD-plus-GIT option (Nova's favoured option) should be calculated using the net benefits with refund approach. That provides for reliability benefits to be taken into account in determining total charges. Gross benefits would disadvantage parties arbitrarily.	Page 1	532
	NZ Steel	Gross charges would incentivise non-optimal behaviour requiring intervention of the prudent discount test.	Pages 1-2	533
	Trustpower	It is a key requirement of any netting that the charging period be as long as possible. Shorter than three years would deviate inefficiently from the calculation of the true level of benefits.	Para 5.5.1 – 5.5.6	534
	Trustpower	A net benefits only approach would ensure that charges are based on a measure that most closely reflects willingness to pay. A net benefits only approach would reduce risk of costs being recovered from parties who are not beneficiaries.	Para 5.5.3, 5.5.7	535
	Professor Bushnell for Trustpower	"Losers" should not be compensated, because they may support a project that makes them worse off simply because of compensation. One alternative is to make the payment zero for negative periods. Another is to cap over a long time period (the lifetime of the investment is the only obviously appropriate timeframe but is not practical). It would be better to limit and simplify the degree to which benefits enter the cost of allocation formula.	Page 9	536

Issue	Submitter(s)	Submission	Submission ref	Item no
Assets to be included in calculation of SPD	NZIER for MEUG, Fonterra	Pole 2 should not be included in the SPD model.	NZIER para 2.3.2, Fonterra para 12.1	537
	Transpower, Trustpower	The SPD method should not be applied retrospectively to assets that are already sunk or committed.	Transpower Para 4.1, Trustpower section 5.9	538
	Fonterra	Pole 2 should not be treated any differently from any other connection assets with clearly identifiable beneficiaries.	Para 12.1	539
	Meridian	Supportive of the Authority's choice of assets to include.	Page 2	540
	Meridian	The choice of assets is inevitably a pragmatic balance of being more comprehensive versus increasing complexity.	Page 2	541
	MRP	The post-2004 threshold is arbitrary, as indicated by the fact that the zonal SPD option applies to all transmission assets rather than the post-2004 subset.	Page 1	542
	Orion	The paper's proposal to further limit assets subject to the SPD method is unnecessary, because of the change to the timing of calculations (ex post calculation and charges determined ex ante).	Para 15	543
	Pioneer Generation	Support reduction in number of transmission assets modelled to determine beneficiaries in order to reduce complexity.	Page 1	544
	PwC for 21 EDBs	When deciding the assets to be subject to SPD, greater consideration should be given to the operational use of individual assets, eg, Poles 2 and 3 are operated together under normal conditions. The zonal	Para 41	545

Issue	Submitter(s)	Submission	Submission ref	Item no
		SPD option deals with this issue in a more principled manner by grouping all assets into zonal interconnectors and within-zone assets.		
	PwC for 21 EDBs	Asset groupings should not be based on ad hoc historical decisions.	Para 28	546
	Ringa Matau	Query whether Pole 2 involves more significant costs than Pole 1 and other assets. Does the Authority mean Pole 1 and Pole 2 when it uses the term Pole 2? Inclusion of capital projects on HVDC (regardless of cost) cannot be reconciled with the post-2004 definition. Why are projects such as the Otahuhu-Whakamaru lines not captured by the definition applied to Pole 2? Why are the costs of those projects not considered as significant as HVDC? Very concerned that the approach for Pole 2 is very inconsistent with the approach taken with other assets.	Pages 3-4	547
	Transpower	Poles 2 and 3 should not be treated as two discrete assets reflecting that they are complementary in nature.	Para 4.1	548
	Trustpower	A better method (than the 2004 cut-off) would be to approximate average benefits across the grid, regardless of when the asset was built. Threshold for new assets should be $20 million as this aligns with the Commerce Commission's grid investment process. Charge should exclude reliability investments.	Paras 5.9.1-5.9.3, Para 5.9, Appendix A, item 4	549
Rolling averages	Carter Holt Harvey (views subject to a CBA that takes residual into account)	Any smoothing period should include a robust CBA analysis. The period for which the charge remains fixed should be assessed on its ability to reduce volatility.	Para 5	550
	Castalia for Genesis	A rolling average would reduce volatility.	Page 7	551

Issue	Submitter(s)	Submission	Submission ref	Item no
	Meridian	Support having a two or three year rolling average to reduce volatility.	Page 4	552
	MRP	Three year rolling average approach would materially improve original proposal.	Page 2	553
	Nova	Favour reducing volatility by applying the charge as a rolling average.	Page 2	554
	Trustpower	A three year rolling average seems appropriate where benefits are calculated in individual half hours. However, it does not diminish incentives to game charges. Instead, the Authority could use a rolling three year window as both the capping period and the charging period across which to calculate off-setting benefits. Using a rolling average creates issues for the entry of generators and directly connected loads. Exit by parties would require allocation by another mechanism.	Paras 5.1.6-5.6.6, Appendix A, item 7	555
Capping	Meridian	No strong view between daily, weekly or monthly capping, but a longer period may reduce the risk that SPD charge understates true benefits from a transmission asset.	Page 2	556
	NZIER for MEUG	Support daily capping over half-hourly capping. Change has intended outcome of linking more transmission costs to benefits.	Para 2.3.1	557
	Norske Skog	Capping of revenue requirements is contrary to the justification of transmission investments, which are required to meet peak demand. Support peak charging method.	Page 1	558
	Orion	There is no basis for the Authority's conclusion that daily capping is best. Annual capping is preferable given that the ex post calculation with ex ante application will address issues of volatility. However, annual capping may not be necessary – if the benefit exceeds the	Para 18	559

Issue	Submitter(s)	Submission	Submission ref	Item no
		cost, is there really a problem?		
	Orion	If Transpower's calculation of revenue requirement for an asset declines over the life of an asset, the amount of capping will increase and SPD benefits would decrease over time, assuming actual benefits remain constant. This is counterintuitive.	Para 18	560
	Orion	In some cases VoLL generates significant proportions of the SPD benefit, and therefore helps determine the number of periods that would be capped.	Para 20	561
	Orion	If there is concern about changes in generator offer behaviour and this is a serious risk, it undermines the credibility of the SPD method. Orion would support modifying data to remove the effects of gaming, instead of resolving this matter by capping.	Page 5	562
	PwC for 21 EDBs	A shorter capping period would reduce the amount of charges recovered, but a longer period increases the risk of gaming. The Authority should select the capping period that maximises the quantitative CBA for the option.	PwC, paras 37, 38, 40	563
	Trustpower	Support a capping period of at least three years. Capping period should be consistent with charging period. The Authority could use a rolling three year window as both the capping period and the charging period across which to calculate off-setting benefits.	Paras 5.6.1-5.6.6	564
	Professor Bushnell for Trustpower	Truncation of calculated benefits in any given hour can lead to a major adjustment in the underlying magnitude and distribution of benefits.	Page 7	565

Issue	Submitter(s)	Submission	Submission ref	Item no
Counterfactual for non-supply	NZIER for MEUG, MEUG	The Authority's approach to non-supply is sensible, and a considerable improvement on the blanket value of $3,000 per MWh.	MEUG page 2, NZIER for MEUG para 2.3.4	566
	ENA	Assumptions around the value of lost load and demand response appear largely arbitrary and would result in variations in charging with no clear objective argument about which result is better.	Para 28	567
	ENA	The counterfactual for non-supply takes little account of how market participants would reconfigure activities in absence of transmission.	Para 20	568
	Meridian	Agree with Authority's approach to cost of non-supply.	Pages 4-5	569
	NZIER for MEUG	The overall net benefit of the Authority's approach to the counterfactual for non-supply would depend on factors such as the degree of detail to establish benchmark investment costs, the duration over which non-supply events are considered, the benefits of frequent updating of capacity factors to reflect conditions, and the cost of updating calculations.	Para 2.3.4	570
	NZIER for MEUG	In relation to calculating the costs of supply, the Authority should investigate: • extending the calculations for benchmark investment costs and costs of alternative sources of supply to take into account capacity of existing local sources of supply • the extent to which a change in offers of local generation could prevent non-supply.	Para 2.3.4	571

Issue	Submitter(s)	Submission	Submission ref	Item no
	Norske Skog	VoLL of $3,000 per MWh is inappropriate because not all loads value supply equally (for example, Norske Skog could bid demand at $100 per MWh and that is the price at which it would "turn off").	Page 2	572
	NZ Steel	The discussion on demand response and value of lost load does not differentiate between load lost forever and load shifted to another time.	Page 2	573
	NZ Steel	Non-response to price by mass market loads outlined in Appendix D is perhaps due to a lack of utilisation by retailers of load control facilities on domestic water heating.	Para 4	574
	Orion	Applying VoLL where the counterfactual is non-supply means that participants supplied at a lower quality will be deemed to benefit more from the transmission grid.	Para 22	575
	Powerco	The counterfactual (notionally withdrawing particular assets from service) does not take account of how market participants would change their behaviour (eg, manage hydro storage).	Page 2	576
	Transpower	The cost that should apply for non-supply is the LRMC of the transmission alternative that would have been built if the transmission investment in question had not been built.	Para 4.1	577
	Trustpower	Ideally, VoLL would be consistent with that used in the Commerce Commission's grid investment test.	Appendix A, item 8	578

Issue	Submitter(s)	Submission	Submission ref	Item no
Ex ante/ex post calculation and application of charge	Carter Holt Harvey, PwC for 21 EDBs, Orion (Carter Holt Harvey view subject to CBA)	Ex ante application of charges would reduce volatility/concerns about volatility.	Carter Holt Harvey pages 3-4, PwC para 42, Orion para 18	579
	Pioneer Generation, Transpower	Support Authority's proposal to apply charges ex ante.	Pioneer Generation page 1, Transpower para 4.1	580
	Carter Holt Harvey	Subject to a CBA, applying charges ex ante may be appropriate.	Page 3-4	581
	Meridian	The Authority needs to consider second order implementation issues: • data will be used to determine the charge in year 1 • entry and exit to the market • asset transfers.	Page 4	582
	NZIER for MEUG	Beneficiaries-pay mechanism is founded on a party's willingness to pay for a service that is of benefit. If there is a time lapse delay, that signal is muted and the solution might not be durable.	Para 2.3.5	583
	Orion	The proposed timing of charges (ex post determined ex ante for the following year) reduces concerns regarding the number of assets to be subject to the method.	Para 15	584
	Transpower	Support the Authority's proposal not to set SPD charges on an ex post and half hourly basis.	Para 4.1	585

Issue	Submitter(s)	Submission	Submission ref	Item no
	Trustpower	The Authority's proposal to apply charges ex ante does not make the SPD method an ex ante charge. It is an ex post charge with a period of delay.	Appendix A, item 14	586
	Trustpower	Ex ante application provides counterparties with certainty over charges that they face. Charging a year in arrears strengthens the case for charging distributors not retailers. Distributors have enduring relationships with customers.	11	587
	Professor Bushnell for Trustpower	There are issues with calculating charges ex post and ex ante. With charges calculated ex post, firms can conceal benefits in order to avoid charges. With ex post benefits, parties can support investments where they may benefit from additional capacity. If plans change, the share of costs will be fairly modest.	Pages 11-12	588
Inclusion of demand inputs	Carter Holt Harvey	Demand response method needs to take into account the fact that demand changes over time.	Page 3	589
	Carter Holt Harvey	Subject to CBA, support consideration of demand response being included.	Page 3	590
	ENA	Assumptions around the value of lost load and demand response appear largely arbitrary and would result in variations in charging with no clear objective argument about which result is better.	Para 28	591
	Fonterra	Support inclusion of some demand response, but may still not adequately address the issue.	Para 11.2	592
	Meridian	Agree with the Authority's approach to demand response.	Pages 4-5	593

Issue	Submitter(s)	Submission	Submission ref	Item no
	NZIER for MEUG	It is good that the Authority has acknowledged the importance of demand response and takes into account demand elasticity and dispatchable demand.	Para 2.2.3	594
	NZIER for MEUG	The Authority should investigate the use of longer-run demand elasticity parameters. The notional elasticity of demand proposed by the Authority is small considering the material impacts of benefits that an elasticity assumption can have (see Appendix 1 for further details).	Para 2.3.3	595
	NZIER for MEUG	The Authority is right to be cautious about using dispatchable demand bids to infer demand response if the bids have not been dispatched in practice. This could be solved by combining default bids plus actual bids. This would use market information on actual demand response, providing a better reflection of willingness to pay.	Para 2.3.3	596
	NZ Steel	The discussion on demand response and value of loss load does not differentiate between load lost forever and load shifted to another time.	Page 2	597
	Orion	No objection to modelling demand response in calculating SPD. Results are quite sensitive to response assumptions.	Para 21	598
	Transpower	Support use of demand elasticity based on empirical estimation. This should improve the accuracy of the private benefit calculation.	Para 4.1	599
	Trustpower	Support incorporation of demand-side bids. Support the use of further demand bids and/or elasticity in the counterfactual. If further responses are required to be assumed, further steps could be added, provided they were based on empirical evidence. Demand-side is much more elastic in the long-run than the short-run.	Appendix A, item 9	600

Issue	Submitter(s)	Submission	Submission ref	Item no
Modelling	MRP, Orion, Trustpower	The SPD charge is very sensitive to changes in parameters.	MRP page 2, Orion para 18, 21, Trustpower paras 5.3.1-5.3.41	601
	Orion, Trustpower	Sensitivity to modelling means that the TPM may not be able to accurately identify beneficiaries.	Orion paras 18, 21, Trustpower paras 5.3.1-5.3.4	602
	PwC for 21 EDBs, MRP, Trustpower, CEG for Transpower	The SPD charge's dependence on modelling parameters means the TPM could be subject to lobbying.	PwC para 28, MRP page 2, Trustpower paras 5.3.1-5.3.4, CEG para 67	603
	NZIER for MEUG	The incidence of overall transmission charges is very sensitive to how the residual is allocated.	Page 5	604
	NZIER for MEUG	The Authority's calculation of benefits/beneficiaries works conceptually but the result is not assured by the methods proposed by the Authority. This is because the Authority does not consider transmission charges in its calculation of consumer surplus.	Appendix A	605
	Norske Skog	The analysis in Appendix D is not relevant for Norske Skog as Norske Skog has changed its assets and strategies since the data was taken.	Page 2	606

Issue	Submitter(s)	Submission	Submission ref	Item no
	Orion	In some cases VoLL generates significant proportions of the SPD benefit, and therefore helps determine the number of periods that would be capped.	Para 20	607
	Pacific Aluminium	Unable to reconcile the modelling results for NZAS with NZAS's actual transmission charges. Would like to work further with the Authority on this matter.	Para 5	608
	Pioneer Generation	Detailed modelling is obvious given location of recent transmission investment, same outcome could be achieved with less modelling and fewer theoretical complications.	Page 4	609
	Refining NZ	Sunk costs have been included in the modelling and highlight the very significant impact they have on outcomes.	Page 2	610
	Refining NZ	The alternative models result in significantly different outcomes.	Page 1	611
	Ringa Matau	The SPD method results in infeasible solutions, which the Authority solves by adding diesel generation. This solution is fictional and means that the SPD method does not reflect dynamic efficiency. It would be better to use the appropriate VoLL instead, but either way this is not desirable.	Page 4	612
Level of charge	NZ Steel	Support SPD charge being applied at substation level.	Page 1	613
	NZ Steel	Transpower as asset owner has no business enquiring beyond a connection point. Transpower's role as asset owner needs to be distinguished from its role as system operator.	Page 1	614
	Simply Energy	Allocating costs to portfolio level rather than ICP level would disadvantage new entrant retailers because transmission price	Page 1	615

Issue	Submitter(s)	Submission	Submission ref	Item no
		variances would be larger as a percentage for small portfolios.		
Instantaneous reserve	Meridian, Trustpower	Agree that providers of instantaneous reserve should be included in the calculation of the SPD charge	Meridian page 5, Trustpower, Appendix A item 12	616
	Fonterra	Uncertain if this is an appropriate proposal. Hard to align the fact that instantaneous reserve providers assist to minimise further transmission investments with them being beneficiaries of transmission assets.	Para 11.3	617
	Meridian	Charge for instantaneous reserve providers should be on a gross benefits basis rather than a net benefits with refund basis.	Page 5	618
	NZIER for MEUG	Including providers of instantaneous reserve in SPD charge is potentially useful, if it reduces the quantum of costs that must be recovered through less well-targeted instruments.	Para 2.3.6	619
	Trustpower	Charges to reserve market participants should be based on offsetting benefits over the charging period (which itself should be at least three years) rather than just on positive benefits and individual half hours.	Appendix A, item 12	620
10 MW cut-off	Nova, Pioneer Generation, Meridian	These submitters support a 10 MW minimum threshold for generation subject to the SPD charge.	Nova page 1, pages 2-3, Meridian page 5	621
	Meridian	The Authority needs to formalise the definition of "scheme".	Page 5	622
	Nova	The complexity and cost of including generators smaller than 10MW	Page 1	623

Issue	Submitter(s)	Submission	Submission ref	Item no
		is likely to be greater than the expected gain.		
	Pioneer Generation	Pioneer Generation strongly submits that 10 MW by generation ICP is the appropriate threshold. This could be defined as total generation capacity of less than 10 MW measured at the network connection and network metering point.	Pages 2-3	624
	Trustpower	Trustpower supports a threshold of 10MW for generation schemes to be included in a beneficiaries-pay charge.	Appendix A, item 11	625
Transition period	Fonterra	A transitional period will be needed.	Para 12.6	626