Transmission pricing methodology: Use of LCE to offset transmission charges

Summary of submissions

8 September 2014

Contents

1 Introduction

1.1 This paper provides a summary of the submissions received on the paper 'Transmission pricing methodology: Use of LCE to offset transmission charges', published on 19 November 2013 (the LCE working paper).[1] "LCE" refers to loss and constraint excess.

1.2 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).

1.3 The Authority considers that the current TPM can be improved 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. In October 2012 the Authority released a consultation paper 'Transmission Pricing Methodology: issues and proposal' (October 2012 issues paper) to obtain feedback on the TPM proposal.

1.4 The Authority received extensive feedback on the TPM proposal through various sources including submissions, cross submissions and a conference held in May 2013. Concerns were raised and suggestions made by stakeholders on the Authority's TPM proposal. As a result of these, the Authority decided to issue a second issues paper.

1.5 Prior to developing a second issues paper, the Authority has decided to prepare a series of working papers to seek a further understanding of the issues raised by submitters. Feedback on the working papers will form a key input into the Authority's development of the second issues paper.

1.6 In the LCE working paper, the Authority considered the use of LCE to reduce the size of transmission charges recovered by other means. In submissions on the October 2012 issues paper, stakeholders raised concerns about the proposal in relation to the muting of efficient nodal price signals and the risk of inefficient generator offer behaviour.

1.7 The Authority's proposed options to address those issues, as described in the working paper, were as follows:

1) credit LCE against the maximum allowable revenue (MAR) in bulk;

[1] The first working paper 'Transmission Pricing Methodology: CBA' was published on 3 September 2013. The second paper. 'Transmission pricing methodology: Sunk Costs' was published on 8 October 2013. The third paper 'Transmission pricing methodology: Avoided cost of transmission payments (ACOT) for distributed generation' was published on 19 November 2013. A further working paper, 'Transmission pricing methodology review: Beneficiaries-pay options' was published on 21 January 2014.

2) classify LCE by asset class and apply LCE originating from connection assets against charges for individual assets. Under this option, the remaining LCE would be credited against the MAR in bulk;

3) classify LCE by asset class and apply LCE originating from connection assets against charges for individual assets, crediting LCE from other asset classes against the MAR by asset class.

1.8 The Authority's preferred option was Option 2.

2 Overview of submitters

2.1 The Authority received thirteen submissions from submitters covering a range of topics in the working paper. Table 1 lists the submitters and the sector of the industry with which they are associated.

Retailer/Generator	Distributors	Consumers	Others
Contact Energy	Electricity Networks Association[2]	Major Electricity Users Group (MEUG)	Andrew Shelley Economic Consulting Ltd
Genesis Energy	Orion		Transpower
Meridian Energy	Powerco		
Mighty River Power	Vector		
Nova Energy			
Trustpower			

3 Form of summary

3.1 This summary is arranged in table form, under the following headings:

Part 1: Comments on legal and process issues (table items 1-18)

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

Part 2: Comments on the Authority's preferred option (Option 2) (table items 19-33)

Part 3: Comments on Option 1 (table items 34-39)

Part 4: Comments on the status quo (table items 40-44)

Part 5: Alternative suggestions (table items 45-46)

Part 6: General comments (table items 47-71)

3.2 Some submitters made the same, or substantially the same, submission in relation to more than one option. In that situation, the submission is included in more than one place – for example, in Part 2 (comments on Option 2) and Part 3 (comments on Option 1).

3.3 Option 3 does not have its own part. No submitters supported Option 3. Comments made on Option 3 were often made in conjunction with comments about Option 2. Those comments have been included in Part 2. Other comments on Option 3 are included in Part 6, as those comment applied generally to all options.

3.4 Part 6 also contains comments that relate to LCE in general, rather than any specific option.

3.5 This paper is a summary only and does not contain an exhaustive list of submissions made on each subject. For more information please refer to the submissions themselves, which can be found on https://www.ea.govt.nz/development/work-programme/transmission-distribution/transmission-pricing-review/consultations/#c7493

PART 1: COMMENTS ON LEGAL AND PROCESS ISSUES

Issue	Submitter(s)	Submission	Submission reference	Item number
Quality of working paper	Andrew Shelley Economic Consulting	Working paper lacks rigorous economic analysis.	Pages 1, 6	1
	Orion	Working papers lack coherence and are not well or clearly related to each other. The TPM has to work as a whole.	Para 3	2
Analytical faults – counterfactual, framework for analysing LCE	Andrew Shelley Economic Consulting	Working paper does not consider logic that underpins existing approach to LCE. Hogan's quote about FTRs is insufficient to overturn that logic.	Pages 3-4	3
	ENA	The LCE paper lacks a clear framework against which to test LCE options. Incomplete criteria. Inadequate consideration and analysis of implementation/administrative issues (which are significant, particularly with Option 2 and Option 3), benefits of changing from status quo, or correct counterfactual. Correct counterfactual is the status quo.	Paras 5, 8, 9, 10, 11, 14	4
	Genesis	Concerned that criteria used to assess LCE are inappropriate because they are weighted against criticisms and tailored to the LCE component of the TPM and therefore are not consistent with the criteria for assessing other components of the TPM. Authority should adopt criteria that are more consistent and robust, for example, the criteria proposed in Castalia's analysis: (a) providing efficient investment signals for load (b) providing efficient investment signals for generation (c) enabling efficient outcomes in the wholesale market (d) enabling efficient outcomes in the retail market (e) ensuring efficient transmission investment.	Pages 2-3	5

Issue	Submitter(s)	Submission	Submission reference	Item number
		Castalia's approach considers the impact of each component across the market and is a clearer framework for quantifying benefits and developing a CBA.		
	Orion	Aspects such as spot price signals and gaming must not be considered in isolation from other aspects of the wider TPM proposal.	Para 10	6
	Orion	Agree that the three options are better than the original proposal, but it is the status quo that they must improve on.	Para 7	7
	Trustpower	LCE allocation should be addressed within the context of the current spot market and existing TPM, rather than as part of a hypothetical TPM, especially one with so many unresolved complications.	Para 4	8
	Vector	When making decisions about LCE, the Authority should consider: • what would distort intended transmission and nodal pricing the least? • what would ensure the greatest pass-through of the rentals to consumers?	Page 2	9
Longevity of LCE solution	Andrew Shelley Economic Consulting	Whatever LCE methodology is chosen should be capable of being applied regardless of the TPM that applies at the time.	Page 7	10
Problem definition	ENA	The extent to which there are issues with the current methodology is not established in either this paper or the October TPM issues paper.	Para 11	11
	MEUG	While MEUG was initially unsure whether any change was necessary for allocation of LCE, the working paper was helpful in isolating and putting into perspective issues with the October 2012 issues paper's proposed treatment of LCE. Agree that alternatives to the October 2012 issues paper's proposed treatment of LCE need to be considered, based on nodal pricing distortion and gaming risk issues.	Paras 2-3	12

Issue	Submitter(s)	Submission	Submission reference	Item number
Engagement with Commerce Commission	Orion	Concerned that Authority has not engaged adequately with Transpower and/or the Commerce Commission to develop an understanding of Transpower's regulatory regime sufficient to support a coherent TPM proposal.	Para 13	13
	Transpower	Transpower has not scoped the changes that would likely be required to the IPP, or discussed the issue with the Commerce Commission.	Page 2	14
Failure to address first order issues	Orion	Authority has not responded clearly to the key messages from submitters that should be addressed first, especially that there has been no material change in circumstances and the problems with SPD.	Para 4	15
Cost benefit analysis	Genesis	Options 1 and 2 should be robustly assessed against the criteria suggested (see Genesis' submission regarding framework for analysing LCE).	Page 5	16
	MEUG	Final judgment as to whether Option 2 should be adopted will depend on overall proposal in the second consultation round and quality of the cost benefit analysis relied to support the proposal.	Para 5	17
	Transpower	Whatever Option is progressed will likely require consequential changes to the IPP to recognise the LCE as a revenue stream. Implications for Commerce Act regulation should be considered explicitly as part of any options assessment and factored into the cost benefit analysis.	Page 2	18

PART 2: COMMENTS ON THE AUTHORITY'S PREFERRED OPTION (OPTION 2)

Position in relation to option	Submitter(s)	Submission	Submission reference	Item number
Support Option 2	Contact	Prefer Option 2. Simple, pragmatic way to manage downstream effect of complicated SPD methodology.	Para 3	19
	Meridian	Gaming risk and muting of price signals are low risk issues but addressing them may ensure a more durable outcome. On the basis that HVDC and HVAC assets will be charged together, support Option 2. Crediting LCE to individual connection assets will avoid cross-subsidisation between asset classes and does not carry any practical risk of muting short term price signals or creating inefficient generator offer behaviour.	Pages 1-2	20
	MRP	Support Option 2. Option 2 is the most straightforward. Gaming risk is low under Option 2. Benefit of reducing gaming risk is likely to outweigh the costs of LCE cross-subsidising costs between asset classes under Option 2.	Page 1	21
Support either Option 1 or Option 2	Vector	Recommend either Option 1 or 2. Support transformed rentals being netted off against revenue requirement, without being assigned to individual assets. This approach would reduce nodal price distortions, lower the revenue needed to recover through the imperfect TPM, reduce administration costs, and guarantee pass through. Agree with Castalia's point that linking rentals to SPD assets will have the perverse impact of lower transmission charges in areas where wholesale energy prices are raised by transmission constraints. Options 1 or 2 best satisfy what Vector considers should be the relevant considerations: • what would distort intended transmission and nodal pricing the least? • what would ensure the greatest pass through of rentals to consumers?	Pages 1-2	22

Position in relation to option	Submitter(s)	Submission	Submission reference	Item number
Conditional or partial support of Option 2	Genesis	Support Option 1 but comfortable with Option 2. Would want to review the connection charges paper before fully supporting Option 2. Recommend that the Authority take Options 1 and 2 to the development stage of a revised TPM proposal. Do not support Option 3, which is too complex and may establish an alternative price signal that reduces the effectiveness of the FTR market.	Page 4	23
	MEUG	The Authority's three options are feasible to overcome nodal price distortion and gaming risk issues. Options 2 and 3 are better than Option 1 because they are market-like. Option 2 is better than Option 3 because of lower gaming risks. Agree with Option 2, subject to overall process and quality of CBA.	Pages 1-2	24
	Nova	Nova favours Option 2 out of the options presented. However, Nova wants the Authority to reconsider its decision to credit residual LCE against transmission charges. Puts forward alternative proposal. Questions whether cost of allocating LCE across all of the appropriate assets would provide a significant benefit over crediting the LCE in bulk.	Page 1	25
	Transpower	Support Option 1, but Option 2 would be acceptable. There are operational policy choices required in relation to Option 2, for example impact of negative LCE on connection assets, how to treat LCE if there are insufficient funds.	Page 1	26
	Trustpower	Within the "narrow" context presented by the Authority, support Authority's view that Option 2 would best address the nodal price distortion and gaming risk issues. However, prefers direct return of LCE to spot market purchasers who paid it in the first place.	Paras 5-6	27

Position in relation to option	Submitter(s)	Submission	Submission reference	Item number
Do not support Option 2	Andrew Shelley Economic Consulting	No need to group the LCE by asset class and then allocate the aggregate total among the assets in a class. The grouping of LCE with that earned on other connection assets, and then allocating out an "averaged amount" across the connection assets will distort the price signal received by the parties that pay for transmission connection assets. The introduction of unpredictable randomness reduces efficiency.	Page 6	28
	ENA	Due to the way Transpower models losses, negative value LCEs would require relevant transmission customer to pay a surcharge. This may require the renegotiation of CICs, which could be costly/time consuming.	Paras 18-19	29
	ENA	Including LCE in the MAR would likely require forecasting LCE for the annual MAR calculation. This is problematic for Options 2 and 3 given the volatility of LCEs and lack of any structural relationship.	Para 15	30
	ENA	Option 2 is likely to have significant practical implementation and administration issues. The Authority has not investigated these costs or identified the source of any efficiency benefits from a change.	Para 8	31
	Powerco	Reject Options 2 and 3 because of negative LCEs and related difficulty with CICs, and the muting of nodal price signals.	Page 2	32
Reserves position on all options	Orion	Practical considerations apply to all the options in the paper but not to the status quo. Practical considerations can "render inoperable some solutions that might otherwise be conceptually elegant". Reserves position until full picture presented in new issues paper.	Para 14	33

PART 3: COMMENTS ON OPTION 1

Position in relation to option	Submitter(s)	Submission	Submission reference	Item number
Support Option 1	Transpower	Support Option 1 which is non-distortionary and is likely to be the most administratively efficient and direct way to return the surplus to consumers. Option 2 is acceptable.	Page 1	34
Support Option 1, Comfortable with Option 2	Genesis	Support Option 1. Option 1 reduces volatility of charge, is simpler, and addresses concern about negating wholesale market signals. Comfortable with Option 2.	Page 4	35
Support either Option 1 or Option 2	Vector	Recommend either Option 1 or 2. Support transformed rentals being netted off against revenue requirement, without being assigned to individual assets. This approach would reduce nodal price distortions, lower the revenue needed to recover through the imperfect TPM, reduce administration costs, and guarantee pass through. Agree with Castalia's point that linking rentals to SPD assets will have the perverse impact of lower transmission charges in areas where wholesale energy prices are raised by transmission constraints. Options 1 or 2 best satisfy what Vector considers are the relevant considerations: • what would distort intended transmission and nodal pricing the least? • what would ensure the greatest pass through of rentals to consumers?	Pages 1-2	36
Support status quo or Option 1, depending on case for change from status quo	ENA	Support offsetting residual LCEs against transmission charges. If LCE is to be deducted from the MAR this should be done at an aggregate level. However, Authority's case for change from the status quo is not established, either in relation to implementation costs or in relation to benefits. Status quo should be retained unless a MAR approach is better at managing volatility or provide significant improvement in the transparency of LCE to end users. It is an	Paras 9, 12	37

Position in relation to option	Submitter(s)	Submission	Submission reference	Item number
		advantage (not a disadvantage) that, under Option 1, LCE originating from particular assets would not necessarily offset charges for those assets directly.		
Do not support Option 1	Powerco	Option 1 is potentially practicable as it preserves nodal price signals. This is an advantage and not a disadvantage as the Authority suggests. However, Option 1 would be more costly than the status quo. The costs would not be outweighed by benefits. Main costs identified are costs of forecasting and wash-up (especially if MAR was to be modified by amending Part 4 of the Commerce Act) and review of the Benchmark Agreement.	Pages 2-3	38
Reserves position on all options	Orion	Practical considerations apply to all the options in the paper but not to the status quo. Practical considerations can "render inoperable some solutions that might otherwise be conceptually elegant". Reserves position until full picture presented in new issues paper.	Para 14	39

PART 4: COMMENTS ON THE STATUS QUO

Position	Submitter(s)	Submission	Submission reference	Item number
Support status quo	Andrew Shelley Economic Consulting	Support status quo. Authority has not considered economic/logical basis for LCE, which is that the allocation of LCE should not alter the customer's decision between owning an asset or paying Transpower, given that there is a benefit in owing a transmission line. LCE is paid to remove the distortion in favour of ownership. Worked example provided. Muting of price signals is not a concern from an economic perspective. Departure from marginal price signals is desirable for optimal economic outcomes. Under the status quo, transmission charges are kept separate from LCE so that the underlying level of transmission charges are visible. LCE can change significantly and this should be kept separate from the relatively stable charges required to recover the cost of transmission assets.	Pages 2-5	40
	Andrew Shelley Economic Consulting	If potential gaming is a reason to change the method of LCE allocation, then it is a reason to abandon the Authority's TPM proposal because a generator wanting to game LCE would need to risk a lower wholesale price.	Page 5	41
	Powerco	Not opposed to offsetting LCE against transmission charges. Concerned that Authority has not demonstrated that any option delivers net benefits in relation to the status quo. Option 1 would be more costly than the status quo and no better than the status quo in managing volatility of LCE or making it more transparent.	Pages 1-3	42

Position	Submitter(s)	Submission	Submission reference	Item number
Support status quo or Option 1, depending on case for change from status quo	ENA	Support offsetting residual LCEs against transmission charges. If LCE is to be deducted from the MAR this should be done at an aggregate level. However, the Authority's case for change from the status quo is not made out, either in relation to implementation costs or in relation to benefits. Status quo should be retained unless a MAR approach is better at managing volatility or provides significant improvement in the transparency of LCE to end users. It is an advantage, not a disadvantage, that under Option 1 LCE originating from particular assets would not necessarily offset charges for those assets directly.	Paras 9, 12	43
Reserves position on all options	Orion	Authority has not identified efficiencies that will result from changing from the status quo. Not convinced that proposals would improve on status quo. Practical considerations apply to all the options in the paper but not to the status quo. Practical considerations can "render inoperable some solutions that might otherwise be conceptually elegant". Reserves position until full picture presented in new issues paper.	Paras 2, 6, 7, 14	44

PART 5: ALTERNATIVE SUGGESTIONS

Submitter(s)	Submission	Submission reference	Item number
Nova	Authority should reconsider its decision to credit the residual LCE against transmission charges. Volatility could be avoided by crediting LCE against aggregate wholesale electricity purchases at the Clearing Manager. This would not impact on locational pricing, and high LCE would offset the high prices that create the high surplus LCE to some extent.	Page 1	45
Trustpower	LCE should be returned as directly as possible to the spot market purchasers who paid it in the first place, in order to provide a simple hedge against locational price risk across all nodes. This may blunt pure nodal price signals but the current allocation and Option 2 both have the effect of returning (some) LCE to purchasers through a more indirect method. A more direct LCE allocation would achieve a better result with less risk, volatility and cost to consumers. This would benefit retail competition.	Para 6	46

PART 6: GENERAL COMMENTS

Issue	Submitter(s)	Submission	Submission reference	Item number
Nature of charge, including whether it should be considered market-based or administrative	ENA, Orion, Powerco	The allocation of LCE is an administrative process, not a market-based approach.	ENA para 13, Orion para 9, Powerco page 1	47
	Meridian	Use of LCE to offset transmission charge is a market-based approach and therefore preferred under the Authority's decision-making framework.	Page 1	48
	MEUG	Allocation of LCE is amenable to a market approach.	Para 3	49
	Transpower	Agree conceptually that LCE should be thought of as a revenue stream that recovers some of the economic cost of providing transmission services.	Page 1	50
Use of LCE to offset transmission charges or revenue requirement	Contact, ENA	Agree with using LCE to offset transmission charges.	Contact page 1, ENA para 4	51
	Powerco	Do not oppose concept of offsetting residual LCE against revenue requirement.	Page 1	52
	Vector	Support Transpower retaining transformed rentals and netting them off revenue requirement.	Para 5	53
Gaming and volatility	MEUG, MRP	A long averaging period will mitigate gaming risk.	MEUG para 3, MRP page 1	54
	Andrew Shelley Economic Consulting	Gaming risk unlikely to exist. If potential gaming is a reason to change the method of LCE allocation, then it is a reason to abandon the Authority's TPM proposal, because a generator wanting to game LCE would need to increase offers, risking a lower price.	Page 5	55
		LCE can change significantly from year to year, this should be kept separate from the relatively stable charges required to recover costs of transmission	Page 5	56

Issue	Submitter(s)	Submission	Submission reference	Item number
		assets.		
	Contact	Nodal price signals and gaming risk are low risk issues compared to the impact of the complex SPD charge on the spot market energy price.	Page 1	57
	ENA	TPM should generate steady and predictable transmission prices. It is important to identify which LCE approach best manages volatility.	Para 15	58
	Genesis	Support aggregating LCE over a longer period, as this will address participants' concerns about volatility. Averaging approach for LCE should align with other averaging approaches in the TPM.	Page 4	59
	Meridian	Risk of muting of short term price signals and inefficient generator offer behaviour is low but allocating LCE to address these concerns is likely to provide a more durable outcome.	Page 1	60
	Nova	Volatility of LCE can have a significant impact when determining retail pricing.	Page 1	61
Commerce Commission/MAR	ENA	Efficiency gain would need to be material in order to offset cost of changing the rebating process to one that includes adjustments to Transpower's MAR. Costs particularly high for Options 2 and 3. TPM should not interfere with Transpower's ability to earn MAR. Including LCE in the MAR is likely to complicate forecasting of the MAR. Deducting LCE from the MAR may require changes to the Commerce Commission regime (which would be time consuming and costly).	Paras 14, 16	62
	MRP	Agree that, while the Commerce Commission sets the MAR, the Electricity Authority could amend the TPM and/or other parts of the Code to deal with any issues.	Page 1	63
	Orion	Unsure if offsetting would be permitted by the IPP. LCE would be allocated	Paras 12-13	64

Issue	Submitter(s)	Submission	Submission reference	Item number
		across both regulated and unregulated revenue streams. In addition, annual wash-up might create odd inter-year effects due to LCE volatility.		
	Powerco	Forecasting and wash-up costs would be especially high if MAR was to be modified by amending Part 4 of the Commerce Act.	Page 2	65
	Transpower	Whatever option is progressed will likely require consequential changes to the IPP to recognise the LCE as a revenue stream. Authority needs to consider this. Transpower has not scoped the changes required or discussed the issue with the Commerce Commission.	Page 2	66
Money flows and invoicing	MRP	Considerations such as the timing of money flows and invoicing can be worked through in the detailed design of the TPM and are likely to apply equally to all Options.	Page 1	67
FTRs	Andrew Shelley Economic Consulting	If part of the LCE is used to fund FTRs then the auction process from the FTRs should be returned to those transmission customers paying for the relevant assets.	Page 6	68
	Genesis	Diversion of LCE to offset transmission charges should not impact FTR market. Only residual LCE should be diverted. FTR market should be the primary method by which LCE is returned to the market. Incorporation of LCE into the TPM must enable the development of the FTR market without the need to change the TPM. This includes the potential use of most or all of the LCE to fund future FTR products (if necessary).	Pages 1-2	69
Negative LCEs	Orion	Whatever LCE arrangements apply, negative LCEs should be replaced with a zero value.	Para 11	70
Benchmark Agreement	ENA, Powerco	Changing the process of rebating LCEs may require changes to the Benchmark Agreement.	ENA para 17, Powerco page 2	71