

Summary of submissions

**Oakley Greenwood TPM cost benefit
analysis questions and responses
process**

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1. Process

(A) General

No.	Submitter	Submissions
1.	Entrust	It appears that the changes made to the HVDC CBA were made solely in order to justify the Authority's proposals.
2.	Transpower	Stakeholders have not had an opportunity to submit on the HVDC component of the CBA. Given the wealth transfers, there is now a substantially revised HVDC CBA on which the Authority has not sought submissions. There are some simple but material inaccuracies for key inputs to the model as well as broader methodological issues.
3.	Transpower	Before making final decisions on the TPM, the Authority should draw on the Commerce Commission guidelines for quantitative analysis in relation to the CBA. In particular, the principles that the CBA must be robust, and that the quantitative analysis should be reviewed to ensure it is error free are particularly relevant in light of the deficiencies in OGW's CBA.
4.	Trustpower	Material relevant to the CBA, specifically the original workbook showing the detailed modelling underlying OGW's calculation of net benefits associated with the removal of the HVDC charge, was not provided until 23 February 2017. As the workbook turned out to be riddled with errors, further time should have been given to provide submissions on it.
5.	Trustpower	The Authority's propose-respond format is unsatisfactory as a form of effective consultation, particularly when there is insufficient time to understand and respond to proposals.
6.	Trustpower	The Authority has not been sufficiently transparent about the scale of the errors made in the original HVDC workbook, and the degree of changes that have been made to the workbook over and above correcting the formulaic areas and adding terminal value calculations.

(B) Q&A session

No.	Submitter	Submissions
7.	Pioneer Energy, Transpower	The Authority should have undertaken the Q&A session earlier in the process.

No.	Submitter	Submissions
8.	Pioneer Energy, Transpower	There was not enough time in the Q&A session to enable parties to adequately engage with the content.
9.	Pioneer Energy, Entrust, Trustpower	OGW's answers to the questions were submitted too late, or at odd times.
10.	Pioneer Energy	It is unclear how the information arising from the Q&A session is being incorporated by the Authority in its decision-making process.
11.	Pioneer Energy, Trustpower	The deadline for questions in the Q&A session closed down the process, preventing submitters from being able to seek further clarification to their questions and the responses provided by OGW.
12.	Entrust, Transpower, Trustpower	The lateness of OGW's responses to the questions meant that there was limited or no opportunity for follow-up questions.
13.	Entrust, Transpower, Trustpower	The timeframe to provide comments on the answers from the Q&A session was too short.
14.	Entrust, Vector, Trustpower	An open workshop, rather than an online Q&A session, would have been preferable.
15.	Trustpower, Entrust, Vector	The scope of questions allowed in the Q&A session was unreasonably narrow.
16.	Counties Power, Trustpower	There were unsatisfactory technical issues with the online forum.
17.	Counties Power	The Authority has failed to meet its consultation obligations in relation to the Q&A sessions due to a lack of engagement by OGW.
18.	Vector	The email format of the session impeded reasonable follow up questions.
19.	Trustpower	The Q&A session did not meet the requirements of best practice consultation and raised doubt as to whether the Authority is genuinely interested in understanding alternative views on the assessment of its proposals.
20.	Trustpower	The Q&A session was wholly unsatisfactory.
21.	Trustpower	Given that some follow up questions were submitted after the end of the original period specified for submitter questions, but during the time period in which OGW were still answering their original list of questions, it was a reasonable expectation that those follow up questions would be answered, but they were not.

No.	Submitter	Submissions
22.	Pioneer Energy	Many of the responses from OGW only repeated the information provided in response to prior submissions.
23.	Entrust	The OGW responses appear to reflect an exercise in covering up the problems with its CBA, rather than using the process to improve the robustness of the CBA.
24.	Counties Power, Vector, Transpower, Trustpower, Entrust	Many of the questions were not adequately answered by OGW, and many of the responses gave rise to further questions.

2. OGW's CBA

(A) General

No.	Submitter	Submissions
25.	Pioneer Energy	Much of the information provided to OGW by the Authority was not sufficiently tested or up to date to be relied on for a CBA.
26.	Pioneer Energy	The evidence and value sensitivities relating to the CBA highlight the need for the Authority to revisit its Code amendment principles and tie-breaker provisions to empirically test its proposal against Transpower's recommended ("simplified and staged approach") alternative and a modified business as usual (BAU) alternative (based on retaining the current TPM).
27.	Entrust, Trustpower	The CBA is not fit for purpose, and should not be relied on to make a decision to change the TPM.
28.	Entrust	New Zealand consumers will be worse off by \$600 million net present value from the change in HVDC charges alone, for little or no additional service or benefit, which represents a significant wealth transfer to large corporates like Meridian and Contact. A decision with this magnitude of adverse impact on consumers needs a robust CBA, not a CBA riddled with errors.
29.	Entrust	The CBA does not support the Authority making decisions on detailed aspects of the proposal. This needs to be left to the new TPM development stage.

No.	Submitter	Submissions
30.	Entrust, Transpower	The CBA relates to how people respond to future AoB charges for future investments, not past investments. Therefore, the CBA does not support applying AoB to existing investments such as HVDC, NIGU and NAaN.
31.	Entrust	The fact that the CBA does not support applying AoB to existing investments will not change even if OGW had modelled the impact of the AoB charges on existing assets.
32.	Transpower	The AoB charge does not need to apply to sunk investments to achieve the benefits that OGW has estimated.
33.	Transpower	It is questionable whether OGW or the Authority has attempted to quantify detriments and benefits of the Authority's proposals.
34.	Trustpower	The lack of a top down CBA does not provide assurance that the results of OGW's modelling are robust, given the considerable number of unsupported assumptions it makes.
35.	Trustpower	OGW estimates one category of benefits in relation to the promotion of efficient investment in services that may be substitutes for efficient services. It calculates benefits in this category under "scenario 1A", which assumes that Huntly remains in operation. Conversely, in its assessment of the benefits associated with providing efficient signals to generation, OGW gives equal weight to scenarios with and without Huntly. Despite submissions identifying this inconsistency from several parties, OGW has not explained why it adopts this mix of assumptions.
36.	Trustpower	OGW have not recognised the investment disincentives provided by applying the AoB charge to existing assets.
37.	Trustpower	OGW appears to be unconcerned about inconsistencies, incorrect assumptions or changed inputs to its analysis, on the basis that the benefits would still be positive.
38.	Trustpower	The Authority should ensure that the mandatory parts of any TPM guidelines are supported by, and do not go beyond, the conclusions in the CBA. This would suggest that the Authority should rescind its proposal to apply an AoB charge, because the CBA does not support this.

No.	Submitter	Submissions
39.	Trustpower	The CBA does not support including existing assets in the list of eligible assets as there are no efficiency benefits attributed to reallocation of these assets' charges, and significant wealth transfers would result. Further, there is considerable contention that applying the costs of sunk assets to new entrant generators would lead to material inefficiencies and build decisions, impacting on wholesale electricity prices.
40.	Trustpower	OGW's modelling to support removal of the current HVDC charge is not of sufficient quality.
41.	Trustpower	The revised HVDC workbook contains new material errors and issues with the way OGW has undertaken the modelling, which further highlight the unreliability of the modelling.
42.	Trustpower	OGW's CBA attributes benefits to network investments being avoided where they are more costly than alternatives, network investments being promoted where they are less costly than alternatives, and network costs being signalled to investors in generation facilities. The AoB charge will give rise to charges that reflect estimated benefits, not actual costs, and may therefore not give rise to the net benefits assumed by OGW and the Authority. For individual customers who will face AoB charges, their charges will not be reflective of costs except by coincidence.
43.	Trustpower	The sensitivity analysis undertaken by OGW is far too limited in scope. In particular, further sensitivity and scenario analysis should examine controversial and unsupported assumptions made by OGW in its CBA.
44.	Trustpower	It has not been made clear to submitters that the build decisions and the allocation of build costs in the CBA are now undertaken in a highly unusual way. There are now different methods used across different parts of OGW's analysis. While the revised model addresses some errors identified in the modelling of benefits of removing the SIMI charge, it does not address many of the other modelling issues that were raised in response to the Second Issues Paper by Trustpower and other submitters. New errors and issues are present in the revised HVDC workbook, resulting in a significant overestimation of the benefits of removing the current HVDC charge.

No.	Submitter	Submissions
45.	Transpower	OGW's CBA only estimates the benefit of pricing future AoB investments. This means that OGW's CBA would produce the same results whether the CBA was applied to all sunk investments, the Authority's proposed selection of sunk investments, or no sunk investments.
46.	Transpower	It is not clear what considerations OGW had regard to in calculating implementation costs. OGW should have had regard to the views of Transpower, the party charged with implementing the charges or our independent expert adviser (PwC).
47.	Entrust	The appropriate response to the negative HVDC CBA would have been a decision to retain allocation of HVDC costs to South Island generators.
48.	Trustpower	The net benefit of \$52.3 million estimated by OGW appears to be incorrect. If the revised HVDC workbook is corrected to account for OGW's errors, the result of removing the current HVDC charge is a net cost of \$53.3 million.

(B) Examples of errors in the CBA

No.	Submitter	Submissions
49.	Pioneer Energy, Entrust, Transpower, Trustpower	The TPM CBA does not model the Authority's TPM proposal. Rather, it uses LRMCs to indicate the long-term economic implications of investments in transmission versus generation.
50.	Trustpower	OGW have implemented an approach to assessing the Authority's proposal which is divorced from the reform that has been proposed, in particular the AoB charge.
51.	Trustpower	OGW's framework assumes that benefits of the reform must be positive, with the only category of costs being implementation costs, which are under estimated.
52.	Trustpower	There are errors in the timing of two plants in the "old" schedule (ie the schedule without SIMI charges). These errors have led to net benefits being overestimated by \$5.4 million.

No.	Submitter	Submissions
53.	Trustpower	<p>OGW's revised modelling includes terminal values at the end of the 30 year assessment period. There are a number of problems with OGW's approach for applying terminal values:</p> <p>(a) OGW has replaced wind farms outside of the assessment period in OGW's revised model, because their asset lives are shorter than other generation types and in order to "place wind generation capacity on an equivalent basis to other generation investments". However, this is already accounted for in wind farms lower terminal values, so wind farms should be treated as any other generator in the model. This has led to net benefits being overestimated by \$25.3 million.</p> <p>(b) OGW's revised model uses inconsistent methods for capturing opex and capex terminal values, leading to net benefits being overestimated by \$7.8 million.</p>
		<p>(c) OGW's depreciation method for capital costs' terminal values applies straight line depreciation, which "front loads" the recovery of capital costs, meaning that a higher than proportional share of the capital costs of an asset are recovered in the first years of its life, even though the value of the services provided by generation assets is approximately constant over their useful lives. OGW's method has led to net benefits being overestimated by \$2.7 million.</p> <p>(d) OGW's calculation of terminal values rely on the useful lives of the generators that are being built in the modelling period. However, the lifespans that OGW uses do not match the asset lifespans used by MBIE in its LRMC model, where OGW draws its inputs from. This inconsistency has led to net benefits being underestimated by \$8.7 million.</p>

No.	Submitter	Submissions
54.	Trustpower	<p>In the revised HVDC workbook, the build schedule in the scenario with the SIMI charge is based on assumptions that do not reflect reality and are not consistent with the framework for analysis that OGW has devised.</p> <p>Specifically, OGW has assumed that the capital costs and capacity of a new generator can be smeared over up to 4 years.</p> <p>OGW's new model also compares the present value of new generation without the HVDC charge to a shadow of a build schedule that reflects the build order, but not timing, of the scenario with the HVDC charge.</p> <p>The above has led to:</p> <p>(a) Terminal values in the new schedule being underestimated, leading to net benefits being overestimated by \$36.4 million;</p> <p>(b) Inconsistent treatment of capital, VOM and FOM costs in the scenario with the SIMI charge, leading to net benefits being overestimated by \$42.8 million.</p>
55.	Trustpower	<p>In previous versions of OGW's modelling, it appeared that new generation was built when the unmet demand for electricity exceeded the capacity of the new generator.</p> <p>This rule has not been applied consistently in the revised version, leading to net benefits being underestimated by \$6 million.</p>

3. OGW's responses to Q&A session questions

No.	Submitter	Submissions
56.	Counties Power	<p>When asked directly about the net benefits of excluding historic investments, OGW's answer was unacceptable.</p> <p>The answer noted that "it was not clear from the question the alternative charging arrangement". It is self-evident that the alternative charging arrangement would be to apply the Authority's TPM, which would be to recover the costs through the residual charge.</p>

No.	Submitter	Submissions
57.	Counties Power	OGW's answer to question 9 (relating to the ability of transmission customers to seek optimisation of asset values) shows that the recovery of the historical transmission assets via the AoB charge has no economic benefit over recovering all historical costs through the residual charge.
58.	Counties Power, Trustpower, Transpower	OGW's answer to question 9 (relating to the ability of transmission customers to seek optimisation of asset values) appears not to support the Authority's position to include historical assets in the AoB charge.
59.	Trustpower, Transpower	OGW's answer to question 9 (relating to the ability of transmission customers to seek optimisation of assets) reflects the fact that the CBA is unable to assess whether and how optimisation of asset values should be applied.
60.	Counties Power	OGW's statement, in response to a question about the materiality of benefits, that it does not propose to provide a broader commentary as to the materiality of the economic benefits identified in the CBA, is surprising. This is a key issue that needs to be addressed.
61.	Transpower, Trustpower	Some of OGW's answers highlighted that because the CBA does not model the Authority's proposal, OGW could not model the impact of design variations to the Authority's proposal.
62.	Trustpower	OGW's answers confirm that the inclusion of existing assets as eligible investments for the AoB charge does not give rise to net benefits in its CBA. This suggests that the list of eligible investments should not include existing assets, since there are no efficiency benefits attributed to reallocation of these assets' charges, and significant wealth transfers would result.
63.	Trustpower	OGW's answers show that the choice between the use of IHC and DHC for valuing existing assets does not directly go to efficiency, since neither would be expected to sit outside the bounds of incremental and stand alone cost. This suggests that consideration of the valuation method for the AoB charge should be considered together with other aspects of the Authority's proposals which give rise to significant transfers of wealth.

No.	Submitter	Submissions
64.	Trustpower, Transpower	OGW's response to question 3 (as to whether their CBA would change if the costs of none of the existing transmission investments were recovered by the AoB charge) was inadequate.
65.	Trustpower	OGW's answers to questions 16 and 17 (about validation and assurance) confirm that it did not undertake any validation of the information provided to it by the Authority. The answer is also incomplete. OGW did not just compare its LRMC followed to Australian benchmarks – it specifically made a 30% further downward adjustment to LRMC to align its estimates with them. This step means that the comparison with Australian benchmarks does not cross check or validate the Authority's forecasts of investment or split of expenditure.
66.	Trustpower	OGW's answer to question 5 (relating to the phasing in of charges under a proposed cap on transmission charges) shows that the CBA is unable to assess whether and how a transitional mechanism should be applied. It also shows that the CBA results rely on the AoB charge only to the extent that it is applied to new investments. This further underlines the fact that the CBA does not support the proposed application of the AoB charge to existing investments.
67.	Trustpower	OGW's answer to questions 6, 7 and 8 (relating to the marginal price adjustment) reflects the fact that the CBA is unable to assess whether and how the marginal price adjustment mechanism should be applied. In relation to changes to the mechanism, OGW's response is incomplete, in that it does not address the change to the structure of the mechanism to make it asymmetric in nature.
68.	Trustpower	In relation to OGW's answers to question 40 (relating to the assessment of costs of new generation), the most effective way to avoid double-counting in the CBA with other aspects of the analysis would have been to conduct the analysis of the SIMI charge together with the "more efficient generation" model in a single model. By reporting the net benefit estimate of its SIMI modelling separately this is being presented (and used) in a way that suggests that the estimates identify net benefits of removing the HVDC charge. OGW should clarify that its framework does not directly assess the benefits and costs associated with removing the HVDC charge.

No.	Submitter	Submissions
69.	Trustpower	<p>In relation to OGW's answer to question 46 (relating to calculating the benefits of a more efficient quantity of services demanded), the answer does not adequately address the question. OGW finds that the effect of changes in transmission prices and quantity of electricity demanded may be low. Notwithstanding this, OGW assess a benefit associated with lower quantity demanded of \$0.3 million on the basis of reduced costs. To the extent that there is a reduction in electricity consumed as a result of higher transmission prices, the deadweight losses associated with this are likely to be higher than the cost savings. This is because the marginal costs of providing electricity is low compared to its retail price, and therefore the lost surplus associated with this reduced consumption is likely to be considerable. OGW's response does not explain how it can identify material benefits from reduced costs while assessing deadweight losses to be immaterial.</p>
70.	Trustpower	<p>In relation to OGW's answer to question 44 (relating to terminal values for wind generators), the aim of terminal values is to consider only the capital expenditure that is "used" during the assessment period. In other words, terminal values discount the remaining life of the asset off the capital cost incurred when it is initiated within the assessment period. The asset lifetime is accounted for in the terminal values – there is no need to replace wind to "place it on an equivalent basis". In fact, including the replacement of wind beyond their valuation period is contradictory to the use of terminal values in the modelling. This issue has led to a significant over estimation of the benefits of removing the current HVDC charge.</p>

No.	Submitter	Submissions
71.	Trustpower	<p>In relation to OGW's response to question 45 (relating to the assessment of terminal values), the response indicates that the modelling takes an over simplified approach to the depreciation of generation assets. The purpose of depreciation in this context is to consider the portion of capital expenditure that is "used" during the assessment period, and the residual that is available beyond the period. Straight-line depreciation is an approach that "front loads" the recovery of capital costs, so that the majority of costs are recovered in the first half of an asset's economic life. The value provided by an asset is relatively constant over its life. This should be reflected in the recovery of its capital costs and its terminal value. An annuity approach is a standard economic tool for this problem.</p>
72.	Trustpower	<p>In relation to OGW's response to question 33 (relating to the economic gains from improved investment decisions), OGW has oversimplified the issues in calculating the economic gains from improved transmission investment decisions. For example, OGW's calculation of network LRMC in each region provides no cause or basis for estimating how increasing generation capacity in a region may affect transmission costs required to serve that generation.</p>
73.	Trustpower	<p>In relation to question 32 (relating to the assumption that power can flow freely between islands), OGW's answer reflects the fact that OGW's modelling tools were not fit for purpose. OGW implicitly assumed that the HVDC link does not place any constraints on the ability of generation in the South Island to supply energy or capacity to the North Island, even in times of peak demand.</p>
74.	Trustpower	<p>In relation to OGW's response to question 31 (relating to assumptions as to the closure of Huntly), OGW's response contains factual inaccuracies in describing its modelling. In addition, Genesis Energy's announcement about the extended operation of Huntly was made prior to the CBA being published. This could have been taken into account in OGW's updated CBA, but it was not.</p>
75.	Trustpower	<p>OGW's answers to question 47 and 48 (relating to the cost of disputes) and questions 50, 51 and 52 (relating to implementation costs), reveal that OGW has no basis for its assumptions other than its judgment that they are reasonable. This is not an adequate basis upon which to assess benefits.</p>

No.	Submitter	Submissions
76.	Trustpower	OGW's answers to question 49 (relating to implementation costs) reveal that their calculation of implementation costs is arbitrary and substantially below the only other point of reference that has been identified in this process.
77.	Trustpower	OGW's answer to question 10 (relating to allocation on the basis of average injection) ignores the impact that an AoB charge would have on new entrant investment decision making, and serves to highlight that OGW's CBA does not rely on any aspect of the proposed AoB charge.
78.	Trustpower, Transpower	OGW's response to some questions appears to indicate that neither OGW nor the Authority has cross referenced OGW's modelling outcomes with Concept's AoB indicative charges, to check for consistency. This is concerning and should have been done.
79.	Trustpower	In response to a question about fuel assumptions, OGW states that it is not possible to test the sensitivity of the model outcomes to changes in every input parameter. Rather, OGW said that they have sought to focus their sensitivity analysis on the key input parameters that they believe are likely to affect the results. This response sets out a framework for sensitivity analysis which has not been applied. OGW has avoided investigating parameters that are of considerable importance to its results, most notably its estimates of LRMC.
80.	Trustpower	In response to a question about the appropriateness of the sensitivities used, given the concern that the CBA is not representative of the likely sensitivities of future outcomes, OGW responded that the sensitivities were based on their knowledge of the input parameters driving the CBA, which were cross checked with the Authority. This answer is not credible. OGW must have been aware of the impact of LRMC on its results, given the significant adjustments made to LRMC in its calculations.
81.	Trustpower	OGW's answer to question 4 (relating to the impact of using DHC rather than IHC), confirms OGW's view that neither DHC nor IHC would lead to material inefficiencies, because neither would result in charges that exceed any individual customer standalone costs. In addition, the answer highlights that the CBA assesses something that is not aligned with the Authority's proposed guidelines. The AoB charge is not cost-reflective and contains many features that are not captured in OGW's analysis.

No.	Submitter	Submissions
82.	Trustpower	OGW's answer to question 25 (relating to the entry of new generation), is not sufficient to resolve the concerns raised, and highlights that OGW is unconcerned about the disconnection between its modelling and reality. Its framework assures positive net benefits by its very construction.
83.	Trustpower	OGW's answer to questions 26 and 29, (relating to the cost of generation) is not sufficient to address the concerns raised. In addition, the response is incorrect, in that the variable operating and maintenance costs used by OGW in its calculation of net benefits does not include fuel and carbon costs.
84.	Trustpower	OGW's answer to question 27 (relating to the cost of capital), is not sufficient to address the concerns raised. In addition, OGW's characterisation of the effect of MBIE's LRMC estimates on its results is inaccurate.
85.	Trustpower	OGW's answer to question 28 (relating to its assumptions about generator capacity), is not sufficient to address the concerns raised. Although OGW has noted that it made an oversight in its response report, it has not taken the opportunity to revise its model to implement more realistic assumptions.
86.	Trustpower	OGW's answer to question 11 (relating to calculating the benefits of attracting additional investment in substitutes for transmission), confirms that OGW's approach to estimating the cost of demand response was unreasonable.
87.	Trustpower	OGW's answer to question 12 (relating to calculating the benefits of attracting additional investment in substitutes for transmission), confirms that it did not use the information provided by Transpower's trial to validate its assumption of a 15% upward adjustment to the LRMC of demand response to account for its lack of reliability compared to network solutions. OGW does not identify any external support for its assumption.
88.	Trustpower	OGW's answer to question 13 (relating to calculating the benefits of attracting additional investment in substitutes for transmission), is not sufficient to address the concerns raised. The answer reveals that OGW has no basis for its assumptions other than that, in its judgement, they are reasonable. This is not an adequate basis on which to assess benefits.

No.	Submitter	Submissions
89.	Trustpower	OGW's answer to question 14 (relating to calculating the benefits of attracting additional investment in substitutes for transmission), is not sufficient to address the concern raised, and points to the inadequacy of the scenarios and sensitivities tested in the CBA.
90.	Trustpower	OGW's answer to question 30 (relating to the inclusion of costs of scrapped generation projects), is not sufficient to address the concerns raised. The errors referred to in the answer may have had a material impact on the result, and OGW should have used the most accurate and up to date information base possible at the time it undertook its modelling.
91.	Trustpower	OGW's answer to question 41 (relating to OGW's assumptions as to asset lives), is not sufficient to address the concerns raised. OGW's assumptions in its revised HVDC workbook rely on much longer asset lifetimes than those provided in MBIE's LRMC model. The two models should be consistent.
92.	Trustpower	OGW's answer to question 42 (relating to OGW's assumptions as to new generation capacity), is not sufficient to address the concerns raised. OGW's revised calculation of net benefits assumes that new generation capacity is perfectly divisible in both its costs and capacity, but it does not also apply this approach in calculating the net benefits of sending network cost signals to investors and generation. This is a highly unusual method of modelling differences in capacity expansion, and has led to significant overestimates of the benefits of removing the SIMI charge. Methods should have been used consistently across the analysis.
93.	Trustpower	OGW's answer to question 18 is not sufficient to address the concerns raised. OGW did not conduct sufficient sensitivity analysis/examine the effects of relaxing its downward adjustment to LRMC on load. In addition, the basis for assessing LRMC was based on inputs with limited external support. OGW applied ad hoc adjustments that were poorly explained.

No.	Submitter	Submissions
94.	Trustpower	OGW's answers to question 19 and 20 (relating to OGW's estimates as to Victorian locational charges and sub-transmission LRMC) are not sufficient to address the concerns raised. OGW did not undertake a careful and thorough review of the evidence for Australian LRMC, which it claims supports its adjustment to LRMC calculated from New Zealand information.
95.	Trustpower	OGW's answer to question 43, (relating to OGW's assumptions about terminal values) is not sufficient to address the concerns raised. OGW's use of terminal values considers the capital expenditure that is "used" during the assessment period, but it then inconsistently incorporates operating costs incurred well beyond the assessment period. This combination of assumptions is nonsensical, and will lead to a significant overestimation of the benefits of removing the current HVDC charge.
96.	Trustpower	OGW's answers to questions 21 and 22 (relating to demand response) are not sufficient to address the concerns raised. The answers reveal that OGW has no basis for its assumptions other than its own judgment that they are reasonable. The assumptions are not credible. OGW's estimate of diesel capacity far exceeds that which has been achieved under the status quo, and is not supported by the Transpower trial results for demand response.
97.	Transpower	OGW's answer to question 1 (relating to charges to individual customers under the AoB charge) has not been adequately addressed. Even if the Authority's shadow pricing theory held for interconnection assets, different customers would face different shadow prices for assets with the same LRMC. The CBA should recognise that the shadow price signal would vary amongst different customers. If OGW had modelled the Authority's actual proposal the estimated benefits of the shadow pricing would have been less than under LRMC pricing.

No.	Submitter	Submissions
98.	Transpower	<p>OGW's response to question 35 (relating to calculating the benefits of removing the HVDC SIMI charge), appears to support the view that AoB should not be charged to existing assets. The answer also highlights that there would be distortions from imposing AoB charges on generators, as it will result in recovery of sunk costs through variable (spot market) prices. OGW's answer also highlights that it overly relies on its own judgement, rather than quantitative evidence. That is, OGW's answer suggests that HAMI should have been retained over SIMI, when quantitative evidence shows the reverse to be true.</p> <p>The wholesale electricity market detriments of the AoB charge is a major omission from the CBA.</p> <p>OGW's comment that "everything else being equal, we believe it is entirely reasonable to assume that in isolation, the SIMI charge can only lead to inefficient outcomes" is incorrect. OGW neglects to consider how the SIMI charge compares against an LRMC signal. It also appears to miss the point of the question. The point is that if the current HVDC charges result in inefficiency, so will the replacement AoB charges.</p> <p>OGW have not accounted for the fact that the AoB HVDC charges could simply resemble a diluted version of the status quo allocation to South Island generators using SIMI, resulting in an overstatement of the benefits of changing the TPM.</p> <p>OGW's comments relating to replacement of the SIMI charge with another charge, are unclear. For example, if the current HVDC charge is statically inefficient, then scaling down the HVDC charge through the new AoB charge will not remove inefficiency, it will only reduce it. This is not reflected in OGW's CBA.</p>
99.	Transpower	<p>OGW's answer to question 10 (relating to allocation on the basis of average injection) appears to be an error. We assume the answer was to an entirely different question.</p> <p>Allocation to generators on the basis of average injection would impact on each generator's SRMC, resulting in static inefficiencies. The OGW CBA assumes the proposal does not have any adverse efficiency impacts, and so cannot quantify these effects.</p>

No.	Submitter	Submissions
100.	Transpower	<p>OGW's response to question 24 (relating to the benefits of sending network cost signals to investors in generation) highlights that OGW's CBA does not consider potential adverse effects or inefficiencies that could arise from the Authority's TPM proposals.</p> <p>The response was also inadequate, and did not address the question raised.</p> <p>The answer implies that AoB applies to many of the existing assets servicing generators, but this fails to acknowledge the point of the question. In some locations, potential new generators will incur higher transmission charges simply because of the age of the assets.</p> <p>The answer also alludes to the fact that the AoB charge is intended to be a lump sum tax, not an LRMC price, and therefore unavoidable.</p>
101.	Transpower	<p>OGW's answer to question 15 (relating to OGW's assumptions about the operation of Huntly) appears to suggest that OGW considers it acceptable for the modelling to be internally inconsistent, provided OGW does not consider the error to be material.</p>
102.	Entrust	<p>OGW was unable to comment on the impact that asset valuation decisions would have on the CBA. This is because OGW did not model the Authority's proposal adequately, and OGW should have been up front about this.</p>

4. Other comments

No.	Submitter	Submissions
103.	Entrust	<p>There has been a lot of comment that the Authority's proposed guidelines should be less prescriptive. As a general rule, the Authority should only remove discretion in the guidelines where this is supported by the CBA.</p>
104.	Transpower	<p>The Authority should further amend the proposed guidelines to reduce prescription and provide Transpower with greater flexibility to assess the full range of alternatives on critical design matters.</p>

No.	Submitter	Submissions
105.	Entrust	The Authority is engineering an outcome that enables Meridian and others to pay as little as possible for the transmission services it receives, which is not an appropriate basis on which to use a particular valuation method.