



The Review of the Independent Engineers' Reports on the Asset Adjustment Process of Electricity Distribution Businesses

Final Review Report
July 2011

Prepared for



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1. EXECUTIVE SUMMARY

1.1 INITIAL REVIEW OF EDBS' COMPLIANCE WITH INFORMATION REQUIREMENTS

The review conducted by Nel Consulting Limited (NCL) is an assessment of the Engineers' Reports submitted by the non-exempt electricity distribution businesses (EDBs) with particular focus on each of the EDB's compliance with the information requirements set out in Schedule C of the Commission's Information Request of 16 March 2011.

The tables below summarise the results of the review. Further details of the review assessment can be found in Section 3 and Appendix A of this report.

Table 1.1: Compliance with General Schedule C Information Requirements

SCHEDULE C - General Compliance					
EDB	The report must be completed by an 'engineer' as defined in clause 1.1.4 of the EDB Input Methodologies	The report must be in writing and accessible in electronic format	The report must include a copy of the written instructions provided to the engineer by the EDB	The report must include a table summarising the various asset value adjustments and corresponding to Schedule A4 of the Information Disclosure Notice Templates	The report must include a signed statement by the engineer
Alpine Energy Limited	Yes	Yes	Yes	Yes	Yes
Aurora Energy Limited	Yes	Yes	Yes	No	Yes
Eastland Network Limited	Yes	Yes	Yes	Yes	Yes
Horizon Energy Distribution Limited	Yes	Yes	Yes	No	Yes
Nelson Electricity Limited	Yes	Yes	Yes	Yes	Yes
Network Tasman Limited	Yes	Yes	Yes	Yes	Yes
OtagoNet Joint Venture	Yes	Yes	Yes	Yes	Yes
Powerco Limited	Yes	Yes	Yes	Yes	Yes
The Lines Company Limited	Yes	Yes	Yes	No	Yes
Top Energy Limited	Yes	Yes	No	Yes	No
Unison Networks Limited	Yes	Yes	Yes	Yes	Yes
Vector Limited	Yes	Yes	Yes	Yes	Yes
Wellington Electricity Lines Limited	Yes	Yes	Yes	No	Yes
Overall Compliance	100%	100%	92%	69%	92%

Note: 'Yes' means that the EDB has complied with the general Schedule C requirements set, whereas 'No' means that the EDB has not fully complied with a requirement.

It can be observed from the table above that the majority of the EDBs complied with the general requirements set out in Schedule C.

The succeeding table provides an overview of an EDB's compliance in terms of specific minimum information requirements set out in Table 1 in Schedule C of the Commission's Information Request for the following asset value adjustment categories:

- Inclusion of load control relays;

- Correction of asset register errors;
- Re-application of valuation multipliers; and
- Re-application of optimisation or economic value tests.

Table 1.2: Compliance with Specific Schedule C Information Requirements

SCHEDULE C - Table 1 Specific Compliance				
EDB	Category of Adjustment			
	Load Control Relay	Correct Asset Register Errors	Re-apply Multiplier	Re-apply Optimisation or Economic Value Test
Alpine Energy Limited	No	Yes	No	No
Aurora Energy Limited		Yes	No	Yes
Eastland Network Limited	Yes	No	No	
Horizon Energy Distribution Limited		Yes	No	No
Nelson Electricity Limited			No	
Network Tasman Limited		Yes	No	No
OtagoNet Joint Venture		Yes	No	
Powerco Limited		Yes	No	Yes
The Lines Company Limited	Yes	No	No	Yes
Top Energy Limited		No	No	No
Unison Networks Limited			No	
Vector Limited		Yes	Yes	
Wellington Electricity Lines Limited		Yes	No	No
Overall Compliance	67%	73%	8%	38%

Note: 'Yes' means that the EDB has complied with the specific requirements set out in Table 1 of Schedule C for particular categories of asset adjustment, whereas 'No' means that the EDB has not fully complied with a specific requirement. Blank cells found in the table means that these items are not applicable to the EDB.

The table above shows that EDBs who have proposed adjustments relating to the inclusion of load control relays and correction of asset register errors mostly complied with the requirements set out in Table 1 in Schedule C of the Commission's Information Request. On the other hand, EDBs who have opted to adjust their asset values by re-applying a multiplier and/or optimisation or economic value tests generally did not comply with the minimum information requirements.

1.2 DETAILED REVIEW OF SPECIFIC ASSET VALUE ADJUSTMENTS

From the prioritisation method applied to identify the more material asset value adjustments as detailed in Section 4, a total of seventeen (17) specific asset value adjustments were identified for a more in-depth review.

From this review it is clear that EDBs applied an extensive range of adjustments as permitted as part of the asset value adjustment process under the input methodologies applying to EDBs. The most material changes were observed for multiplier-related adjustments and secondly for asset register corrections.

Six (6) EDBs were reviewed in relation to asset register corrections and in general it would appear that due to better information systems, more accurate asset information is now available which was then used to better describe assets that existed at the time that the 2004 optimised deprival valuation (ODV) was performed. NCL notes that most of the proposed

asset value adjustments were based on data from information systems and/or Geographic Information Systems (GIS) used by the EDBs which to some extent is difficult for an independent engineer to verify. In some cases the Engineer's Report has indicated the conduct of limited field verifications¹, however this was not the case for all EDBs.

In the case of multiplier-related asset value adjustments, a total of ten (10) EDBs were reviewed. In general, the data presented in support of multiplier-related changes were presented in a way that shows the inputs used in calculating the resulting multiplier levels however the reports failed to explain in all cases why these variables were selected. For the cases where the selection of inputs is not well explained, it can be assumed that the independent engineer has reviewed such inputs in greater detail. However, NCL is of the view that in order for a reader of an Engineer's Report to fully understand and assess the adjustment, the selection of any input used should be explained in such a way that the data, assumptions and professional judgment applied in deriving these inputs to the resultant asset value adjustments are presented in more detail.

Another concern was the lack of availability of information in relation to the 2004 ODV for some EDBs, which made direct comparisons of modified asset values or asset category values difficult.

Furthermore, even though the Information Request and in particular Table 1 of Schedule C is clear on the specific information required and how this should be presented, most of the Engineers' Reports have failed to present the asset values as specifically required, e.g.

- a) The ODV and multiplier originally applied for each asset or asset type were not always presented;
- b) The calculation of the relevant modification to the ODV was not always clearly presented; and
- c) The resultant modified asset value at 2004 ODV value for each asset or asset type was not always presented.

1.3 ADDENDUM REVIEW

After taking account of the results of NCL's review of the submitted Engineers' Reports as discussed above, further information was requested from EDBs by the Commission in a form of a Notice² issued on 15 June 2011. The subsequent submissions from the EDBs in response to this Notice were reviewed by NCL in terms of the EDBs compliance with the original Schedule C requirements and the results are summarised in the table below.

¹ Field verifications in this context means comparing assets existing in the field with the data provided in the information system/asset register/GIS.

² Notice to Supply Information to the Commerce Commission Section 53ZD of the Commerce Act 1986, 15 June 2011.

Table 1.3: Addendum Review - Compliance with General Schedule C Requirements

SCHEDULE C - General Compliance					
EDB	The report must be completed by an 'engineer' as defined in clause 1.1.4 of the EDB Input Methodologies	The report must be in writing and accessible in electronic format	The report must include a copy of the written instructions provided to the engineer by the EDB	The report must include a table summarising the various asset value adjustments and corresponding to Schedule A4 of the Information Disclosure Notice Templates	The report must include a signed statement by the engineer
Alpine Energy Limited	Yes	Yes	Yes	Yes	Yes
Aurora Energy Limited	Yes	Yes	Yes	Yes	Yes
Eastland Network Limited	Yes	Yes	Yes	Yes	Yes
Horizon Energy Distribution Limited	Yes	Yes	Yes	Yes	Yes
Nelson Electricity Limited	Yes	Yes	Yes	Yes	Yes
Network Tasman Limited	Yes	Yes	Yes	Yes	Yes
OtagoNet Joint Venture	Yes	Yes	Yes	Yes	Yes
Powerco Limited	Yes	Yes	Yes	Yes	Yes
The Lines Company Limited	Yes	Yes	Yes	Yes	Yes
Top Energy Limited	Yes	Yes	Yes	Yes	Yes
Unison Networks Limited	Yes	Yes	Yes	Yes	Yes
Vector Limited	Yes	Yes	Yes	Yes	Yes
Wellington Electricity Lines Limited	Yes	Yes	Yes	Yes	Yes
Overall Compliance	100%	100%	100%	100%	100%

As can be seen from the table above, after the submission of additional information, the results from NCL's assessment show that all the EDBs have now complied with the requirements set out in Schedule C.

In addition, the additional information has led NCL to conclude that all of the EDBs have now complied with all of the specific minimum information requirements set out in Table 1 in Schedule C for the particular asset value adjustment categories.

The results of NCL's addendum review are presented in Section 6 and the tables for each EDB in Appendix A have also been updated to include the results of this review for compliance with both general and specific requirements of Schedule C.

Although some minor issues with the additional information submitted by the EDBs are identified in NCL's analysis set out in Appendix A, none of these issues were considered to warrant an overall finding of 'non-compliance' for any EDB with the general or specific requirements of Schedule C.

2. INTRODUCTION

2.1 OVERVIEW

NCL was contracted by the Commerce Commission (Commission) to undertake a review and provide advice on the Engineers' Reports received from EDBs by the Commission as part of statutory information requests made under the Commerce Act 1986 (the Act). These statutory information requests relate to the requirements under Part 4 of the Act for the Commission to set default price-quality paths (DPPs) for suppliers subject to default/customised price quality regulation.

In order to inform its decision on setting DPPs, the Commission requested information from the non-exempt EDBs by way of notice under 53ZD of the Act on 16 March 2011 (Information Request). Consistent with relevant input methodologies determined by the Commission in December 2010 – Commerce Act (Electricity Distribution Services Input Methodologies) Determination 2010 (EDB IMs), an EDB is permitted to undertake an 'asset adjustment process' in determining its initial regulatory asset base. Such process allows EDBs to modify the starting value of their asset base from the value disclosed as at 31 March 2009 under existing EDB information disclosure requirements.

The Commission's Information Request set out the minimum information requirements necessary to be disclosed by an EDB in relation to adjustments to asset values, and, among other things, required an Engineer's Report to be completed by an independent engineer in accordance with the requirements of Schedule C of the Information Request.

This report summarises NCL's review of the Engineers' Reports on the asset value adjustments including the additional information provided by the following EDBs:

1. Alpine Energy Limited (Alpine);
2. Aurora Energy Limited (Aurora);
3. Eastland Network Limited (Eastland);
4. Horizon Energy Distribution Limited (Horizon Energy);
5. Nelson Electricity Limited (NEL);
6. Network Tasman Limited (Network Tasman);
7. OtagoNet Joint Venture (OJV);
8. Powerco Limited (Powerco);
9. The Lines Company Limited (TLC);
10. Top Energy Limited (Top Energy);
11. Unison Networks Limited (Unison);
12. Vector Limited (Vector); and
13. Wellington Electricity Lines Limited (Wellington Electricity).

2.2 STATEMENT OF INDEPENDENCE

This review has been conducted under the terms and conditions as specified in the Agreement entered into by NCL for this project.

The review required NCL to rely extensively on data provided by the EDBs, including the Independent Engineers' Reports and other documents submitted during the course of this review.³ NCL was not required to independently verify the accuracy of this information, nor audit any financial information. It is for this reason that the accuracy of this review was highly dependent on the information provided to NCL. Where inconsistencies or conflicts were found in the data provided, NCL exercised its own best judgment to resolve the said inconsistencies or requested further clarification.

NCL confirms that, to the extent possible and with the information available, the review results have been determined in an independent and unbiased manner, by applying the methodology as set out in this report, and represent our best financial and technical judgments in support of the comments or recommendations made in this report.

³ The information provided includes Schedule A – A6 as well as the Engineer's Report (including any attachments submitted as part of the Engineer's Report). The information also includes the additional information provided by the EDBs in response to the Commission's Notice dated 15 June 2011.

3. COMPLIANCE WITH INFORMATION REQUIREMENTS

3.1 INTRODUCTION

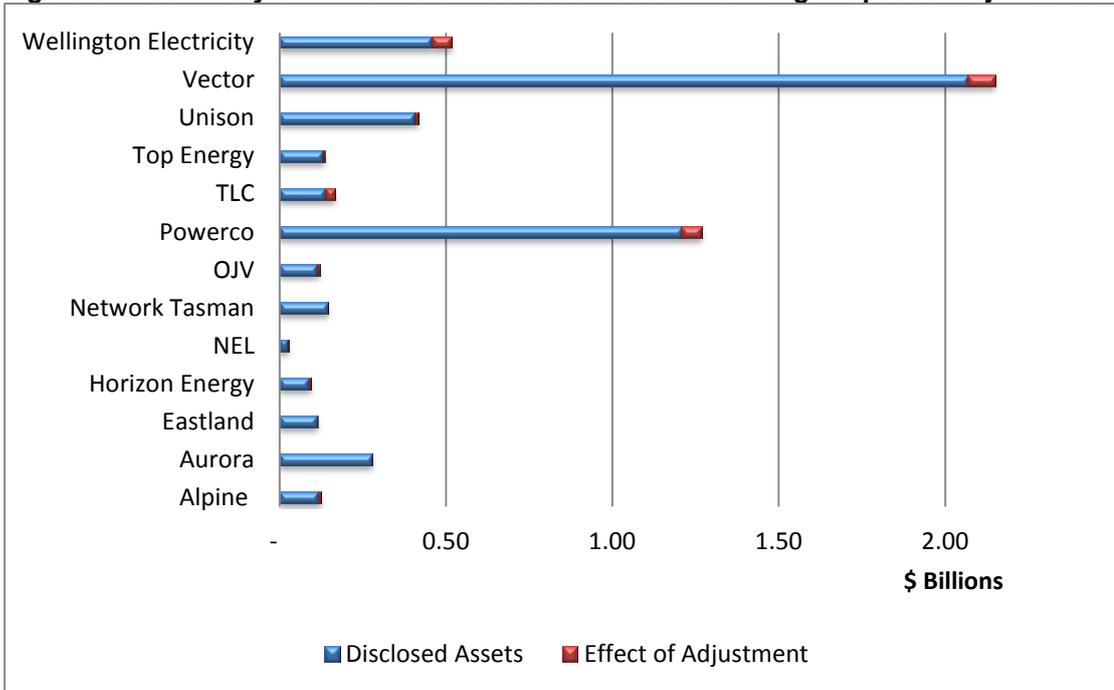
As per the EDB IMs, an EDB is permitted to adjust its initial regulatory asset base values from those previously disclosed as at 31 March 2009 (2009 disclosed assets). To be able to do this however, an EDB must comply with the minimum information requirements set out in Schedule C of the Commission's Information Request. The Information Request clearly specifies foremost compliance to the asset adjustment process as set out in clause 2.2.1 of the EDB IMs.

The adjustment process detailed in the EDB IMs stipulates that an EDB may choose to undertake none, some or all of the following adjustments:

1. Designate a load control relay asset owned by an EDB as an 'included asset', except where it is already included in 2009 disclosed assets;
2. Correct the following types of asset register errors where the error relates to 2009 disclosed assets;
 - a. Assets omitted in error;
 - b. Assets included in error; and
 - c. Assets allocated to an incorrect asset category, or given an estimation of quantity, age, category or location now known to be incorrect.
3. Re-apply a multiplier used to value a 2009 disclosed asset in a 2004 ODV where more accurate information relating to the application of the multiplier has subsequently become available;
4. Re-apply the following types of multiplier in the manner described below:
 - a. Rugged Terrain Multiplier may be amended to the range specified in the EDB IMs and may also be applied to non-standard designs of overhead line networks;
 - b. The Business District Multiplier may be amended to the range specified in the EDB IMs; and
 - c. The Rocky Ground Multiplier may be amended to the range specified in the EDB IMs and may also be applied to cables laid in loose rock or sand.
5. For a 2009 disclosed asset whose value was affected by the application of an optimisation or economic value test in a 2004 ODV, the asset may subsequently be included, excluded or its value modified from its value in 2009 disclosed assets.

The figure below summarises the proposed 2009 modified asset values (i.e., adjusted for the results of the asset adjustment process) per EDB broken down into the 2009 disclosed assets and the incremental effect of the proposed adjustments. A total of thirteen (13) EDBs submitted independent Engineer Reports detailing proposed adjustments for their initial regulatory asset base.

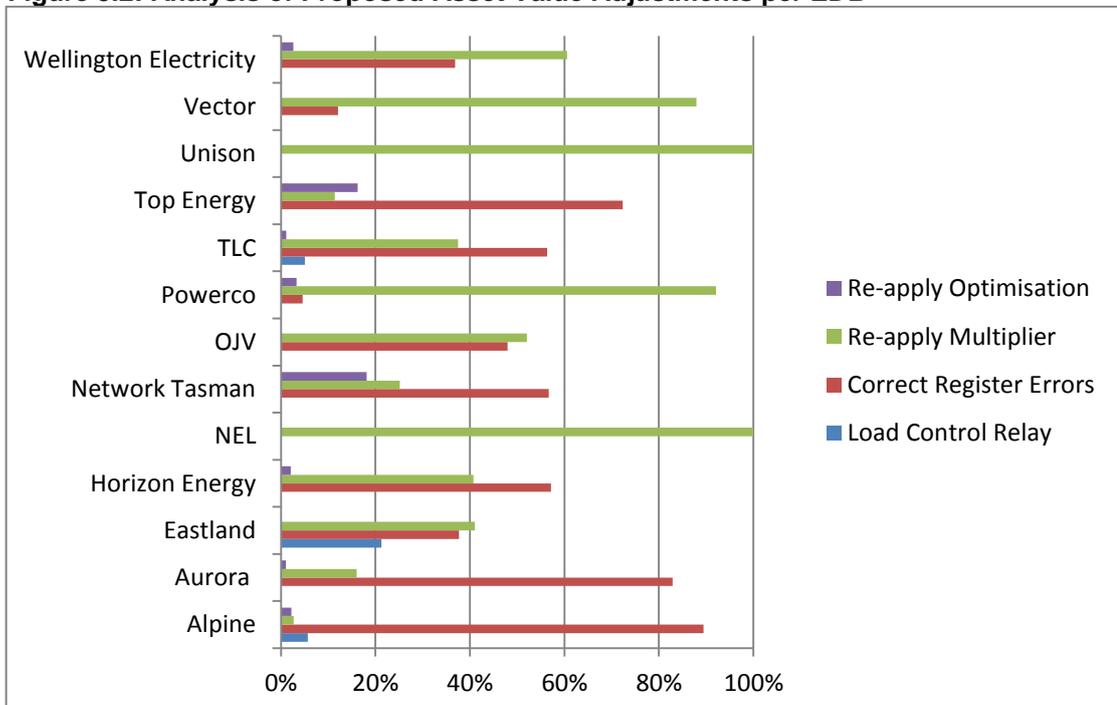
Figure 3.1: Summary of EDBs' 2009 Disclosed Assets Including Proposed Adjustment



As seen above, the proposed increase in asset values (refer to Effect of Adjustment in the figure) range from as low as \$866,000 to over \$81 million, or less than one percent (1%) to over twenty-one percent (21%) of the 2009 asset values (refer to Disclosed Assets in the figure) of an EDB.

Figure 3.2 provides a further breakdown of the different types of adjustments and the amount of each value change. As can be seen below, the majority of EDBs have elected to undertake adjustments in relation to the re-application of multipliers and the correction of register errors.

Figure 3.2: Analysis of Proposed Asset Value Adjustments per EDB



3.2 REVIEW METHODOLOGY AND RESULTS

NCL reviewed all of the EDBs' compliance submissions in respect of the asset adjustment process, focusing primarily on the content of the Engineers' Reports. NCL's review of each of the Engineers' Reports submitted by the EDBs is presented in Appendix A of this report. This portion of the review focuses on an EDB's compliance to the information requirements set out in Schedule C of the Commission's Information Request. A more comprehensive review for certain specific adjustments was then conducted by NCL which is discussed in more detail in the succeeding sections.

Appendix A lists the minimum general requirements for an Engineer's Report as well as the specific information requirements for each category of proposed adjustment. Where NCL believes a particular information submission is unclear, we have indicated in Appendix A the reason for uncertainty or specified additional information that might be required in order to ascertain the EDB's compliance with a specific requirement.

The following figure and tables summarise the results of NCL's review of the EDBs' compliance to Schedule C and Table 1 of the Commission's Information Request.

Table 3.1: Compliance with General Schedule C Information Requirements

SCHEDULE C - General Compliance					
EDB	The report must be completed by an 'engineer' as defined in clause 1.1.4 of the EDB Input Methodologies	The report must be in writing and accessible in electronic format	The report must include a copy of the written instructions provided to the engineer by the EDB	The report must include a table summarising the various asset value adjustments and corresponding to Schedule A4 of the Information Disclosure Notice Templates	The report must include a signed statement by the engineer
Alpine	Yes	Yes	Yes	Yes	Yes
Aurora	Yes	Yes	Yes	No	Yes
Eastland	Yes	Yes	Yes	Yes	Yes
Horizon Energy	Yes	Yes	Yes	No	Yes
NEL	Yes	Yes	Yes	Yes	Yes
Network Tasman	Yes	Yes	Yes	Yes	Yes
OJV	Yes	Yes	Yes	Yes	Yes
Powerco	Yes	Yes	Yes	Yes	Yes
TLC	Yes	Yes	Yes	No	Yes
Top Energy	Yes	Yes	No	Yes	No
Unison	Yes	Yes	Yes	Yes	Yes
Vector	Yes	Yes	Yes	Yes	Yes
Wellington Electricity	Yes	Yes	Yes	No	Yes
Overall Compliance	100%	100%	92%	69%	92%

Note: Refer to Appendix A for details regarding the analysis presented in Table 3.1.

'Yes' means that the EDB has complied with the requirements set, whereas 'No' means that the EDB has not fully complied with a requirement.

From the table above it can be observed that the general compliance to Schedule C is high except for some cases where the values presented do not correlate with Schedule A4 of the Information Disclosure Notice Templates. These errors are highlighted in Appendix A of this report.

As a general comment, it is worth noting that even though Schedule C clearly requires the Engineer's Report to be completed by an engineer⁴, this was not the case for some of the reports submitted. In some cases, the EDB themselves prepared the report (which the engineer reviewed and used as reference) or provided information for sections in the Engineer's Report.

Even so, NCL notes that the Engineer's Reports include a statement by the engineer specifying their support of the findings from these reports or additional information provided by the EDBs for purposes of the adjustment process. This method of review rather than preparing the entire report arguably appears to be contemplated by the discussion set out in the EDB IMs Reasons Paper, paragraph E2.6, wherein it is stated that the independent engineer must 'assess' all adjustments to the initial regulatory asset base value. However, NCL notes that the EDB IMs Reasons Paper was only a discussion document and is not the final Information Requirement.

Table 3.2: Compliance with Specific Schedule C Table 1 Information Requirements – Load Control Relays and Register Error Corrections

SCHEDULE C - Table 1 Compliance - Load Control Relays and Correction of Asset Register Errors								
EDB	Load Control Relay		Correct Asset Register Errors					
	Included		Included	Excluded	Value Modified			
	Number and Description	DHC or Depreciated Carrying Value	Description and Value	Description and Value	Description and Type of Error	Value of Each Asset	Calculation of Relevant Adjustment	Resultant Modified Value
Alpine	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Aurora			Yes	Yes	Yes	Yes	Yes	Yes
Eastland	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Horizon Energy			Yes					
NEL								
Network Tasman			Yes					
OJV			Yes					
Powerco			Yes	Yes	Yes	Yes	Yes	Yes
TLC	Yes	Yes			No	No	Yes	No
Top Energy			No		Yes	No	Yes	No
Unison								
Vector					Yes	Yes	Yes	Yes
Wellington Electricity			Yes					
Overall Compliance	67%	67%	89%	100%	86%	71%	100%	57%

Note: Refer to Appendix A for details regarding the analysis presented in the Table 3.2.

Blank cells found in the table means that these items are not applicable to the specific EDB.

'Yes' means that the EDB has complied with the requirements set, whereas 'No' means that the EDB has not fully complied with a specific requirement.

It is apparent from the table above that the majority of EDBs complied with the specific requirements set in Schedule C regarding adjustments for load control relays and correction of asset register errors.

During the conduct of the review, it was identified that a number of the Engineers' Reports highlighted the fact that the EDBs had major upgrades and updates to their GIS and related

⁴ As defined in clause 1.1.4 of the EDB IMs.

data from 2004 to date, which now provides much more robust asset information which is in some ways expected. This upgrade was one of the reasons why the EDBs proposed adjustments to the asset register.

With regards to the seemingly low compliance level for the category of corrections of 'value modified' asset register errors, and in particular the provision of providing the resultant modified value, in most cases the EDBs provided only the proposed adjustment value and failed to separately provide the resultant modified value and as well failed to clearly present the calculation of the relevant adjustment to value in order to correct for the error. This issue is highlighted in Appendix A.

Table 3.3: Compliance with Specific Schedule C Table 1 Information Requirements – Multipliers

SCHEDULE C - Table 1 Compliance - Multipliers							
EDB	Re-apply Existing Multiplier			Re-apply Modified Multiplier			
	Value Modified			Value Modified			
	Description and ODV Value for Each Asset	Description of More Accurate Information	Calculations Used and Resultant Modified Value	Description and ODV Value for Each Asset	New Multiplier and Reason for Selection	Supporting Facts and Reasons	Calculations Used and Resultant Modified Value
Alpine	Yes	Yes	No				
Aurora	Yes	Yes	No				
Eastland	Yes	Yes	No	Yes	Yes	Yes	No
Horizon Energy	No	Yes	No				
NEL				No	Yes	No	Yes
Network Tasman				Yes	Yes	Yes	No
OJV	No	Yes	No				
Powerco	Yes	Yes	Yes	Yes	Yes	No	Yes
TLC				No	Yes	No	No
Top Energy	No	Yes	No	No	Yes	No	No
Unison	No	Yes	No				
Vector	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wellington Electricity	No	Yes	No	Yes	Yes	Yes	No
Overall Compliance	50%	100%	20%	63%	100%	50%	38%

Note: Refer to Appendix A for details regarding the analysis presented in the Table 3.3.

Blank cells found in the table means that these items are not applicable to the specific EDB.

'Yes' means that the EDB has complied with the requirements set, whereas 'No' means that the EDB has not fully complied with a specific requirement.

From the table above and similar to previous comments, the seemingly low compliance level for the category of multiplier adjustments in particular the provision of the resultant modified value, is due to the fact that in most cases the EDBs did provide the proposed adjustment value but failed to separately provide the resultant modified value. It should be noted that in some cases the resultant modified value could be derived, however this was not possible for all instances. This issue is highlighted in Appendix A.

Table 3.4: Compliance with Specific Schedule C Table 1 Information Requirements – Optimisation or Economic Value Test

SCHEDULE C - Table 1 Compliance - Optimisation or Economic Value Test					
EDB	Re-apply Optimisation or Economic Value Test				
	Included or Value Modified				
	Description and ODV Value for Each Asset	Value of each asset in the ODV had the assets not been optimised or subject to the economic value test	Value after reapplying more up-to-date information	Details of supporting facts where relevant to support the reapplication	Resultant 'included value' at 2004 ODV value
Alpine	Yes	Yes	Yes	No	Yes
Aurora	Yes	Yes	Yes	Yes	Yes
Eastland					
Horizon Energy	No	No	No	Yes	No
NEL					
Network Tasman	No	No	Yes	Yes	No
OJV					
Powerco	Yes	Yes	Yes	Yes	Yes
TLC	Yes	Yes	Yes	Yes	Yes
Top Energy	No	No	No	Yes	No
Unison					
Vector					
Wellington Electricity	Yes	Yes	No	Yes	No
Overall Compliance	63%	63%	63%	88%	50%

Note: Refer to Appendix A for details regarding the analysis presented in the Table 3.4.

Blank cells found in the table means that these items are not applicable to the specific EDB.

'Yes' means that the EDB has complied with the requirements set, whereas 'No' means that the EDB has not fully complied with a specific requirement.

4. PRIORITISATION METHODOLOGY

4.1 INTRODUCTION

Section 3 of this report presents NCL's review of the EDBs' compliance with the information requirements set out in Schedule C of the Commission's Information Request. The review focused on whether the EDB has complied with the minimum required information in relation to the four different categories of adjustment namely: inclusion of load control relays; correction of asset register errors; re-application of multipliers; and re-application of optimisation or economic value tests.

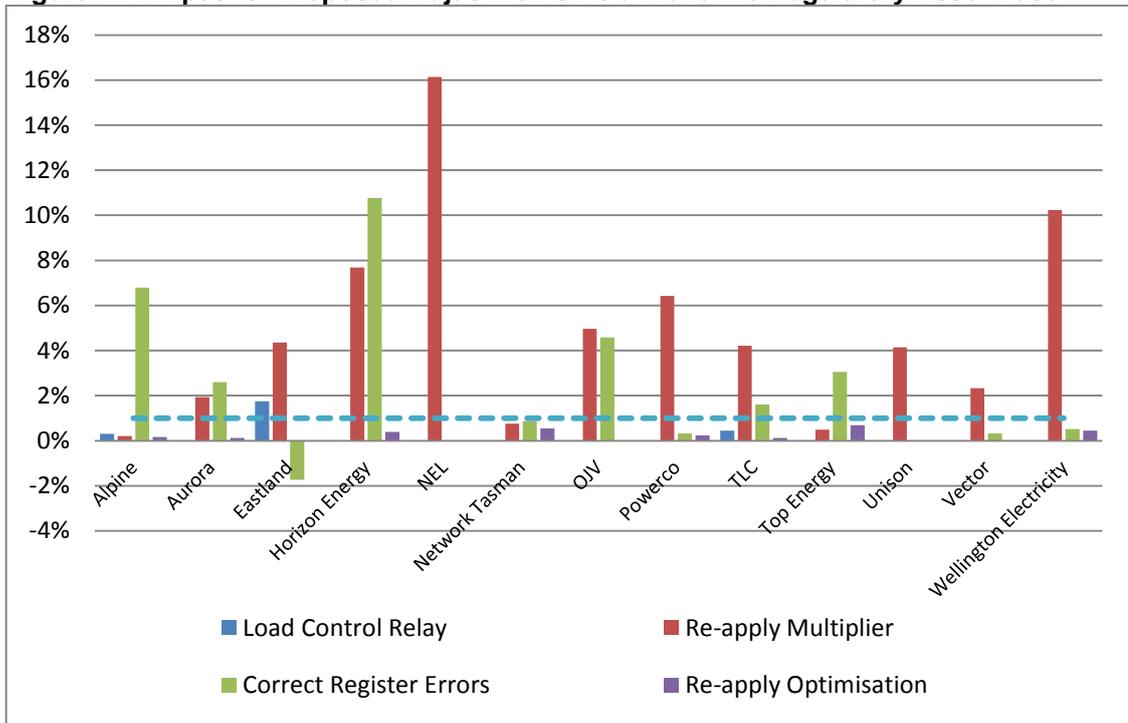
In addition to the compliance review, the Commission requested NCL to further investigate the more material proposed adjustments presented in the Engineers' Reports. For this reason, this section presents the methodology applied in order to prioritise which aspect of the Engineers' Reports should be assessed in greater detail. The methodology as presented in this section was reviewed and approved by the Commission.

4.2 METHODOLOGY

In prioritising the most critical areas for review from all the submissions received, NCL deemed it prudent to investigate the magnitude of each of the EDB's proposed individual adjustments in order to be able to assess the material impact of these adjustments to the overall regulatory asset base of the EDB. Figure 4.1 provides an overview of the relative impact to the regulatory asset base for each type of adjustment as described above. As can be seen in the figure below, one particular proposed adjustment contributes to as high as sixteen percent (16%) of the regulatory asset base. To be able to prioritise the areas to be reviewed in greater detail, NCL applied a threshold of one percent (1%)⁵ as being the material level for overall value impact (refer to blue line in Figure 4.1). Based on this materiality level, it can be observed that the adjustments in relation to the inclusion of load control relays, correction of asset register errors, and re-application of a multiplier for a total of twelve (12) EDBs have proposed asset value adjustments reaching or exceeding such materiality threshold. All material adjustments identified were reviewed in greater detail as presented in Section 5 of this report.

⁵ It should be noted that the 1% is more stringent than the 3% materiality threshold stipulated in clause 1.10 of the Handbook for ODV of System Fixed Assets of Electricity Lines Businesses dated 30 August 2004 issued by the Commission.

Figure 4.1: Impact of Proposed Adjustments Relative to the Regulatory Asset Base



5. DETAILED REVIEW OF SPECIFIC ASSET VALUE ADJUSTMENTS

5.1 INTRODUCTION

As presented in Section 4, NCL prioritised the review of proposed asset value adjustments in greater detail by assessing the impact of the proposed adjustments relative to the regulatory asset base of an EDB. Based on this analysis, it was determined that a total of seventeen (17) individual asset value adjustments for twelve (12) EDBs have an impact of more than 1%, which is the identified materiality threshold. The more detailed review of these asset value adjustments are discussed in this section.

5.2 LOAD CONTROL RELAY AND REGISTER ERROR CORRECTIONS

Based on the analysis presented in Figure 4.1 in the preceding section, it was identified that Eastland was the only EDB for which the proposed asset value adjustment for the inclusion of load control relays had an impact of more than 1% to its total regulatory asset base. NCL notes however that the asset value assigned to load control relays is due to a reclassification rather than an addition of value, which results in a net asset value adjustment of zero.

In terms of asset register error corrections, there were six (6) EDBs identified from Figure 4.1 that indicated asset value adjustments exceeding the materiality threshold of 1% of the regulatory asset base. The reviews conducted for the proposed register error corrections are discussed in more detail below.

5.2.1 Alpine

In the Engineer's Report for Alpine it was stated that at the time of the 2004 ODV Alpine did not have a GIS and therefore the EDB developed such system for its network assets in 2007. Based on the updated asset information, the Engineer's Report identified changes to the 2004 ODV and some limited checks were performed to compare assets in the GIS with those found in the field, and from this, it was indicated that the independent engineer is of the view that the proposed asset value adjustments are reasonable. Based on this, NCL is of the opinion that the process employed by the engineer to check the accuracy of the adjustments including the statement assuring its reasonableness is sufficient to justify the proposed adjustment.

5.2.2 Aurora

The Engineer's Report for Aurora indicated that the EDB has identified numerous errors in its registers used for the 2004 ODV. These errors range from lack of information, late data entry of assets and assets being incorrectly captured. Based on the Engineer's Report it is clear that the independent engineer examined the proposed register corrections and found each to be appropriate and NCL is therefore of the opinion that this is sufficient to justify the adjustment.

5.2.3 Horizon Energy

In reviewing Horizon Energy's proposed adjustments in relation to the correction of asset register errors, it should be noted that the three (3) main areas that prompted the adjustments include the addition of contestable assets, inclusion of cable risers and overall asset information updates due to the updating of its GIS. The Engineer's Report has indicated that limited field verifications were performed to compare the asset information presented by

Horizon Energy with that found in the field and noted that this verification did not highlight any significant errors.

NCL further notes that it is stated in the Engineer's Report that Horizon Energy was unable to perform an asset by asset reconciliation between the 2004 ODV and the latest GIS, and that more than 65% of the field capture/inspection data has been inputted into their information system as at April 2011. From the above, and assuming that the latest asset database was generated from the information system of the EDB, it is not clear how the 2004 ODV data could have been updated without knowing what portion to keep from the old data. In other words, it is uncertain how the remaining asset information, other than the 65%, was populated and presented. NCL is of the view that this is a point of concern and recommends that the independent engineer clarifies the reasonableness of the process employed and their concurrence to the same.

5.2.4 OJV

For the review of OJV, the Engineer's Report has stated that adjustments are proposed for two (2) asset categories namely: previously omitted distribution substation fuses as well as two (2) regulating transformers. The independent engineer reviewed the information presented by OJV and found the proposed adjustments to be reasonable and NCL is of the opinion that this is sufficient to justify the adjustment.

5.2.5 TLC

The Engineer's Report for TLC stated that at the time of the 2004 ODV TLC did not have a GIS and so since then the EDB developed such system for its network assets. From this updated asset information it was identified that changes should be made to the 2004 ODV asset information; however, it was indicated in the Engineer's Report that the assets in the GIS were not verified with that found in the field due to time constraints. The Engineer's Report further stated that the proposed adjustments were discussed with TLC; however, the outcome from these discussions or the position of the independent engineer on the validity of all the proposed changes to the asset register is not included.

It should also be noted that it is stated in the Engineer's Report that TLC was unable to perform an asset by asset reconciliation between the 2004 ODV and the latest GIS data which made comparing the impact from the proposed changes difficult.

Based on the discussion in the Engineer's Report, we have identified points of concern which include: firstly, that the asset data have been re-captured since the 2004 ODV and a new asset register was created which however cannot be reconciled with the previous 2004 ODV data; secondly, that the independent engineer could not verify the validity of the asset register by way of field audits due to time constraints. NCL notes that this implies that the validity of the proposed adjustment relies heavily on the accuracy of the data presented by TLC. For this reason, NCL is of the view that the latest asset register from TLC should have been discussed in more detail to provide the reader with insight into the level of confidence that TLC and the independent engineer have in the latest asset register data.

5.2.6 Top Energy

In the Engineer's Report for Top Energy, it was indicated that the adjustments in relation to the correction of asset register errors are proposed for three (3) asset categories namely medium voltage line age adjustment, distribution equipment age adjustment, and streetlight line and cable quantity adjustments. The independent engineer reviewed the information presented by

the EDB and found the proposed adjustments to be reasonable and NCL is of the opinion that this is sufficient to justify the adjustment.

5.3 MULTIPLIER-RELATED ASSET VALUE ADJUSTMENTS

It is apparent from the analysis presented in Section 4 that by far the most material adjustment proposed by most EDBs in terms of quantum relate to that of changes as a consequence of re-applying an existing or modified multiplier.

These proposed adjustments were based on the fact that the EDB IMs allow the EDBs to adjust the application of multipliers where better information has subsequently become available, and also adopt modified multiplier ranges from those set in the 2004 ODV Handbook to as follows:

- a. Rugged Terrain Multiplier now range from 1.2 to 1.8 times and may also be applied to non-standard designs of overhead line networks that accommodate difficult physical or climatic conditions involving swampy ground, high winds or snow;
- b. Business District (CBD) Multiplier now range from 1.15 to 2.5 times; and
- c. Rocky Ground Multiplier now range from 1.0 to 2.0 times and may also be applied to cables installed in loose rock or sand.

Another important point that we would like highlight for this review is that as per paragraph E2.18 of the Reasons Paper⁶, it is stated that adjustments to the initial regulatory asset base value must be undertaken by an independent engineer and that this will also apply to the judgment as to what level of multiplier within the range permitted by the EDB IMs should be used. Therefore this review will also try to assess the extent to which the independent engineer objectively assessed the proposed multiplier levels, and whether any further action is required in terms of verifying the proposed adjustment.

This section focuses on the review of proposed multiplier-related adjustments for ten (10) EDBs as identified from the prioritisation process presented in Section 4.

5.3.1 Aurora

For Aurora it is stated in the Engineer's Report that adjustments are proposed for both extending the application of multipliers for Rocky Ground and Traffic Management.

In the case of extending the application of multiplier for Rocky Grounds, Aurora continued to apply the same Rocky Ground Multiplier levels than that used in the 2004 ODV. However, Aurora updated their GIS with information in relation to the impact of rocky ground and boulders on construction which was based on feedback from staff and contractors. This new updated geographic information assisted Aurora in identifying wrongly assigned multipliers. The independent engineer confirmed that verifications were done to ascertain that the multipliers were assigned correctly and also compared the GIS output from Aurora with that of Landcare Research New Zealand's data on soil condition to confirm the presence of rock and boulders.

⁶ Input Methodologies (Electricity Distribution and Gas Pipeline Services) Reasons Paper, Commerce Commission, December 2010.

Based on the information presented and the verification done by the independent engineer, NCL recommends no further action for Aurora.

5.3.2 Eastland

In reviewing Eastland's proposed adjustment in relation to the re-application of multipliers, it is indicated that adjustments are for both redefining the boundary for remote assets and modification to the Rugged Terrain Multiplier.

Remote Area Multiplier

In the case of redefining the boundary for remote assets, the method applied appears fair and consistent with the ODV Handbook, and the intention of Schedule C, as confirmed by the independent engineer.

Rugged Terrain Multiplier

In relation to the modification to the Rugged Terrain Multiplier, the independent engineer reviewed several of Eastland's recent network pole replacements projects to assess the differences in projects implemented in easy conditions versus that of rugged terrain conditions. The analysis was based on numerous planned pole installation costs which appear robust. NCL notes that the Rugged Terrain Multiplier applied in the 2004 ODV was 1.2 and not 1.3 (the maximum allowed at that stage) which now appears too low based on the new analysis.

Based on the information presented and the analysis done by the independent engineer, NCL recommends no further action for Eastland.

5.3.3 Horizon Energy

For Horizon Energy, it is stated in the Engineer's Report that adjustments are proposed for re-application of existing multipliers.

Horizon Energy did not propose any changes to the multipliers used in the 2004 ODV, however based on their improved GIS, it was indicated that the information available in relation to asset location are now more robust than in 2004. From this updated asset information, Horizon Energy identified five (5) areas of proposed adjustments as listed below:

1. Remote Area Multiplier – Whereas a radius of 75km was used in the 2004 ODV, Horizon Energy now has the ability to better define the 75km remote area limit by using the GIS to measure the road system. This provided a more accurate view of the area defined as remote than in 2004 which meets with the intent of the ODV Handbook and Schedule C.
2. Rugged Terrain Multiplier – The Engineer's Report indicated that Horizon Energy applied a detailed approach in identifying and classifying rugged terrain areas. Furthermore, it would appear that even though there are different levels of ruggedness within Horizon Energy's definition of rugged terrain, the Rugged Terrain Multiplier applied (1.3) to all are viewed by the independent engineer as appropriate. NCL notes that there is no support provided on the multiplier level selected and it is assumed that this was not viewed to be required due to the fact that the multiplier level used in the adjustment process is the same as with that used in the 2004 ODV. However, due to the substantial change in the method used to identify rugged terrain areas and the changing nature of ruggedness now found in the newly identified area, NCL is of the view that it would have been prudent to provide some support for the use of the 1.3 multiplier level.

3. Rocky Ground Multiplier – Horizon Energy has improved data relating to the identification of rocky areas by using geology maps from the Institute of Geological and Nuclear Sciences Limited (GNS). The proposed asset value change for this adjustment category is not material.
4. Traffic Management Multiplier – With the improved GIS, Horizon Energy consulted Opus International Consultants Ltd to provide the necessary geographic information to identify different road type as defined by Transit NZ. As a consequence, the Traffic Management Multipliers were reapplied to the area which resulted in an increase in asset value for this adjustment category.
5. CBD Multiplier – The Engineer’s Report indicated that since 2004 Horizon Energy has reviewed all business districts and updated data relating to these areas in their GIS. The independent engineer indicated that sample checks were performed and is of the view that the approach that was taken by Horizon Energy is appropriate. NCL notes that it is not clear if the identified business district areas captured since 2004 necessarily existed in 2004 and assumes that these areas did not change significantly over time.

5.3.4 NEL

For NEL, the Engineer’s Report stated that adjustments are proposed for both re-applying and modifying the CBD and Rocky Ground Multipliers.

CBD Multiplier

In the case of the re-application and modification of CBD Multipliers, the Engineer’s Report has stated that NEL undertook an analysis of cable installation costs in past years and based on the result of this analysis now propose new CBD Multiplier levels. Even though it is stated in the Engineer’s Report that the information provided by NEL has been reviewed and that the independent engineer views the approach by NEL to be appropriate, NCL is of the view that more supporting information should have been included in the Engineer’s Report to clearly show how the analysis was done. Schedule C, 2(d), requires that the Engineer’s Report should have sufficient information to allow the reader of the report to understand the data, information, calculations and assumptions employed in respect of each category of asset adjustment and even be able to verify the arithmetical accuracy of the asset adjustment calculations.

Rocky Ground Multiplier

With regards to the Rocky Ground Multiplier modification proposed by NEL, it is worth noting that NEL previously did not apply a Rocky Ground Multiplier to cables in its 2004 ODV but since then have reassessed its franchise area for cable installation projects that have been challenging due to rocky conditions. Based on this reassessment, NEL has identified that the Brook Valley Region is an area with a rocky condition and has proposed a minimal adjustment to the valuation because of this change. It is recognized that the independent engineer has reviewed this adjustment including supporting information provided by the EDB and NCL therefore recommends no further action required from the EDB.

5.3.5 OJV

The Engineer’s Report for OJV has stated that adjustments are proposed for applying the Remote Area Multiplier to zone substation assets and redefining the boundary and region for remote assets and rugged terrain respectively.

Remote Area Multiplier

OJV is proposing to apply the Remote Area Multiplier to a wider range of zone substation equipment than those used in the 2004 ODV. The independent engineer reviewed the expansion of the Remote Area Multiplier and considers it to be appropriate. NCL notes that even though the level of multiplier applied to the wider range of equipment is similar to those used in the 2004 ODV (1.15), the reasons for applying the same multiplier could have been made clearer for this category of adjustment. Furthermore, OJV is proposing to extend the region classified as remote by identifying the 75km boundary for this area by road distance rather than straight line radius based identification. This is consistent with the intention of Schedule C and the ODV Handbook.

Rugged Terrain Multiplier

On the other hand, the Engineer's Report has indicated that since 2004 OJV improved their GIS in order to better define the areas identified by OJV as rugged terrain. NCL notes that the number of lines identified to be situated in rugged terrain is proposed to increase from 435km (as identified in 2004 ODV) to 1679km which is to some extent substantial. The independent engineer performed field audits in 2010⁷ as well as random checks as part of the current adjustment process to test the validity of the proposed rugged terrain expansion. Based on the review performed by the independent engineer, NCL recommends no further action in relation to the adjustment associated with the Rugged Terrain Multiplier.

5.3.6 Powerco

In reviewing the Engineer's Report for Powerco, it should be noted that the main report was developed by Powerco and was included as an attachment to the Engineer's Report. Both of these reports stated that adjustments are proposed for re-applying existing and modified multipliers for the CBD, Rocky Ground, Rugged Terrain and Remote Area Multiplier categories.

As a general observation, NCL notes that no optimisation component is visible in the presentation of asset values in the Powerco report which should be clarified by the independent engineer. In the event that there was optimisation in any of the asset categories now proposed to be adjusted, these optimisations should have an impact on the adjustments as well, which incidentally is not clear in the presented information.

CBD Multiplier

Powerco was unable to compare asset quantities and values, for assets for which CBD Multipliers were applied with that used in the 2004 ODV, due to errors in their original application. NCL notes that the impact of these previous errors is not clear and in our view should have been explained better.⁸

In relation to proposed changes to the CBD Multiplier, Powerco has suggested changes to the applicable areas as well as the multiplier levels for the different classifications of the business district areas. It should be noted that even though Powerco indicated that there were errors in

⁷ This formed part of OJV's financial and accounting valuation.

⁸ The Powerco report refers to a letter from Wilson Cook & Co, dated 19 October 2009, which may have assisted in improving the readers understanding of the errors and the role this may play on the proposed adjustments.

identifying different business district areas in the 2004 ODV and that these have now been updated, the extent to which these errors affect the ODV is unclear. Furthermore, NCL notes that it is uncertain if Powerco is proposing business district areas applicable as of the year 2004 and can only assume at this stage that changes to these identified business district areas since 2004 is minimal.

In assessing the appropriate multiplier levels, Powerco used the cost analysis method for the different types of business district areas including Arterial Route, Asphalt and Ornamental Paving. From this analysis, Powerco has proposed the following changes as shown in the table below.⁹

CBD Multiplier Category 2009 VIP*	Multiplier Level	CBD Multiplier Category Proposed 2004 RAB	Multiplier Level
Arterial Route	1.1 selected but not applied in 2004 ODV	Arterial Route	1.19
Asphalt	1.5	Asphalt	1.88
Shopping	1.4	Shopping	1.88
Ornamental Paving	2	Ornamental Paving	2.5

Note: VIP stands for Verification Integrity Project and was performed in 2009 for purposes of the 2009 disclosed assets.

From the Powerco report attached to the Engineer's Report, it would appear that an in-depth cost analysis was performed to establish a base or standard cable installation costs which was used to assess the level of multiplier expected for more onerous construction scenarios. NCL notes that there are numerous variables (or parameters) taken into account in developing the standard cost thus, assessing the validity of these cost variables should form part of the review of the independent engineer, as is required to be presented by Schedule C. It is assumed that Wilson Cook & Co Limited conducted the review of the relevant variables associated with establishing these estimated costs.

NCL further notes that there is minimal supporting information in relation to the details on how the standard and other cost estimations were derived or to what extent professional judgment was applied by the engineer as required by Schedule C.¹⁰ NCL is of the view that for compliance, even though a summary of key parameters was provided in the Powerco report, additional supporting information should have been provided e.g. reference to the specific project costs and a clear indication on why assumptions were made for these parameters.

Rocky Ground Multiplier

Powerco indicated that even though the Rocky Ground Multiplier levels and areas were identified to be implemented for the 2004 ODV, no Rocky Ground Multiplier was applied to any of its underground cables in the aforementioned valuation. Powerco has further stated that there was no detail on the calculation of the Rocky Ground Multiplier that was intended to be used in the 2004 ODV.

Powerco set out to identify the different rocky ground areas by using the data provided by GNS and relying on feedback from the three major drilling operators regarding the actual impact that GNS' identified areas will potentially have on construction methods and ultimately

⁹ Note that no information was provided in relation to the 2004 ODV due to errors in the application of CBD Multipliers.

¹⁰ For example, it is not clear why Powerco selected that 24% of the standard 1km 11kV installation cable route is assumed to be under driveways and includes four road crossings.

installation costs. NCL notes that no specific comments were included by the independent engineer on the extent of professional judgment applied by Powerco themselves in developing these Rocky Ground Multiplier levels for the different areas.

Similar to the method applied to develop the CBD Multipliers, Powerco set out to establish standard cable installation costs and then compare these with installation scenarios in different ground conditions. Comparable to the comment on CBD Multipliers, it should be noted that there was insufficient supporting information provided for this adjustment and it was also not possible to assess the extent of professional judgment applied by the independent engineer.¹¹ It is however stated in clause 40 of the Powerco report that the key parameters used in this evaluation are the same as the base-case except that the horizontal directional drilling (HDD) costs are increased by 15%. No further explanation was provided for this assumption which is just one example of an assumption and professional judgment that is neither clearly explained in the Powerco report nor in the Engineer's Report. Furthermore, the Engineer's Report has also failed to assist the reader to understand the effect of the decision made in deriving the resulting proposed adjustment.

Rugged Terrain Multiplier

Powerco indicated three (3) proposed adjustments as part of this multiplier category including: changes due to the increase in the upper limit; correcting the application of the geology multiplier; and introduction of new multipliers relating to specific design, wind and snow.

Powerco has indicated that the Rugged Terrain Multiplier was previously based on a combination of multipliers called geology and topography multipliers. The Powerco report has provided a summary of the asset values per high level asset category for 2009 as well as the for the corrected 2004 ODV valuation, however it is not clear what the actual values were for the 2004 ODV.

The first adjustment proposed by Powerco is to update the existing multipliers for topography which, from the limited information provided appear to have been two (2) levels of multiplier factors (1.2 and 1.3 based on Table 2 of the Powerco report). It is however not certain if these two (2) levels were applied in the 2004 ODV. What Powerco has now proposed for the asset adjustment process is increasing the multiplier levels for topography from a factor of 1.2 to 1.27 and from 1.3 to 1.64. Similar to previous comments, there was insufficient supporting information to justify the proposed increase of these factors. Apart from providing a list of assumptions, there is no discussion on why these assumptions are deemed to be appropriate. It is therefore not possible for the reader to have an in-depth understanding of the extent to which professional judgment was exercised by either Powerco or the independent engineer as required in Schedule C.

With regards to the multiplier for geology, Powerco has proposed no change in the level but instead proposed value adjustments for assets applicable under this category based on updated information provided by the GNS on ground condition.

In addition to the two (2) multipliers discussed above, Powerco has proposed to introduce new multipliers for wind and soil condition as well as snow and ice. For these new multipliers, the selection of the level of multiplying factors is discussed in the Powerco report. However, even

¹¹ One example of the need for more supporting information is the fact that it is not clear why Powerco selected that 50% of the trench material is removed and dumped and replaced with imported fill.

though it is clear that assumptions were made, the extent to which engineering judgment was exercised by either Powerco or the engineer was uncertain in the report.

Furthermore, when looking at the asset values presented for the Rugged Terrain Multiplier adjustments, the following questions require clarification:

1. With reference to Table 15 of the Powerco report, explain why the “Base RC” value for the “Net effect of Rugged Terrain Multipliers” is lower than the “Base RC” value for the “2009 VIP1 Corrected 2004 Figures”.
2. Why is subtracting the total RCs in Table 15 not similar to the value when subtracting the total RC increases and compensating for the effect of the upper limit cap of 1.8? The same issue is identified for the total DRC asset values.

Remote Area Multiplier

Powerco was unable to compare asset quantities and values for assets for which the Remote Area Multiplier was applied with that used in the 2004 ODV, due to errors in their original application. NCL notes that the impact from these previous errors was not explained adequately in the report and in our view should have been made clearer.¹² It should however be noted that the proposed asset value adjustment for this category is not material.

5.3.7 TLC

The Engineer’s Report for TLC has indicated that adjustments are proposed for increasing both the Rugged Terrain and the CBD Multiplier factors and that there were some minor changes to the asset areas to which these multipliers were assigned.

TLC has proposed to increase the Rugged Terrain Multiplier from 1.3 to 1.8 and increase the CBD Multiplier from 1.2 to 2.0. In support of these changes, the Engineer’s Report has stated that TLC provided bottom up cost estimates for installations in order to assess the multiplier level for each of the relevant factors. It should be noted that the independent engineer compared the proposed estimates from TLC with that of other EDBs and found the estimations and resulting multiplier levels to be reasonable. This information however, as well as the details regarding the bottom up cost estimates were not provided to the Commission.

Although it is recognized that professional judgment was applied in comparing the cost estimates presented by TLC to that of other EDBs, NCL notes that there are a number of variables (or parameters) forming part of the process of assessing the prudent multiplier level for the above two multipliers which are not discussed in detail in the Engineer’s Report.

5.3.8 Unison

For Unison, the Engineer’s Report stated that adjustments are proposed for both re-applying the existing multiplier for Rocky Ground and Rugged Terrain.

Rocky Ground Multiplier

In the case of the re-application of existing multiplier for Rocky Ground, it is stated in the Engineer’s Report that apart from the areas originally identified as rocky, Unison now also identified the area referred to as Ahuriri region north of Napier as being an area in which

¹² It is noted that the Powerco report refers to a letter from Wilson Cook & Co, dated 19 October 2009.

significant construction difficulties are experienced. Even though the Engineer's Report has discussed the probable reasons for the Ahuriri region to have the characteristic to provide construction challenges, it did not provide evidence in the form of cost increases for installations in this region versus other regions which could have assisted in supporting the proposed change. The independent engineer indicated that they are of the view that the Rocky Ground Multiplier to this area is appropriate, but did not discuss why a Rocky Ground Multiplier level of 2.0 was selected which could have provided insight into the extent to which professional judgment was exercised in making this decision.

Rugged Terrain Multiplier

In the case of the re-application of the existing multiplier for Rugged Terrain, it is stated in the Engineer's Report that Unison has improved their information management system since 2004 which then now appears to be more robust than what was applied in the 2004 ODV. NCL notes that the independent engineer stated that they have not audited or reviewed the database information presented to them by the EDB, which was the basis for the proposed adjustment, and further stated that they relied on previous analysis undertaken by PriceWaterhouseCoopers (PwC) which they understand to have been audited or reviewed. From the above, NCL recommends that proof of, or results from, the audit or review performed by PwC should form part of the Engineer's Report for purposes of completeness.

5.3.9 Vector

In reviewing the Engineer's Report for Vector, we note that adjustments in relation to the re-application for multipliers are proposed for the CBD and Rocky Ground Multipliers. NCL further notes that the EDB has proposed asset value adjustments relating to the classification of low voltage (LV) cables which impacts assets allocated under the Traffic and CBD Multipliers. These adjustments were classified under the adjustment category of register error corrections (asset re-classification) rather than multiplier-related adjustments. The classification of adjustments done by Vector is not inconsistent with the requirement set out in Schedule C and described in the Reasons Paper and it should be noted that these asset value adjustments are also not material compared to the proposed multiplier-related adjustments.

Vector's proposed change to the multiplier level for the CBD and Rocky Ground Multipliers are described below.

CBD Multiplier

For the 2004 ODV, Vector used two (2) categories of multipliers to define assets allocated under the business district areas namely CBD and Urban. Given the change in the range of the CBD Multiplier as allowed by the Commission for this adjustment process, Vector is now proposing to introduce an additional category of multiplier for the business district areas namely 'business district'. This new multiplier level is proposed to be the same as that previously applied to the business district areas (2.0) whereas the new CBD Multiplier level is proposed to be 2.5.

Vector submitted supporting information in the form of actual installation costs in the business district areas to justify their selection of the CBD Multiplier level. NCL is of the view that assessing the validity of these cost estimates is critical in supporting the increased multiplier level for the business district areas and it is therefore assumed that Wilson Cook & Co Limited

undertook the review of these costs.¹³ From Schedule C it is a requirement that the reader of the report should be able to understand the extent to which professional judgment was exercised by the engineer and the effect of that judgment in deriving the resultant asset values. As a reader of the report, NCL is of the view that such exercise of judgment was not presented clearly in the report which therefore puts some uncertainty as to the validity of the proposed adjustment to the CDB Multiplier level.¹⁴

Furthermore, NCL notes that it is not clear if Vector recognised the CBD and business district areas as of year 2004, for purposes of the adjustment process in establishing the latest 2004 regulatory asset base, and can only assume at this stage that changes to these areas since 2004 is minimal.

Moreover, even though the magnitude of the actual adjustment values is provided per multiplier classification (refer to page 13 of the Vector Report¹⁵), it is difficult for the reader to instantly assess the actual impact on the original 2004 ODV.

Rocky Ground Multiplier

Vector engaged the services of the GNS to provide improved classification of ground condition, and from this, the information available to be used in the setting of multiplier levels is now believed to be more robust than those used in the 2004 ODV. A new drillability index was used by Vector to re-classify all cables based on this improved information. NCL notes that this re-classification process forms a critical part of the development of the proposed asset value adjustment therefore the extent to which the professional judgment was exercised by the engineer should be clear in the report, however this was not the case.

Even though Vector did not propose changes to the multiplier level relating to Rocky Ground and apart from the statement by Vector that comparing the old mapping units with that of the new had a good correlation, there is limited supporting information to show why Vector, or the independent engineer, is of the view that the same multipliers should be applied. Similar to NCL's previous comments, there should have been some indication from the independent engineer regarding the professional judgment applied in making these comparisons and conclusions.

Furthermore, even though the magnitude of the actual adjustment values is provided per multiplier classification and even the map resolution (see page 18 of the Vector Report¹⁶), it is difficult for the reader to immediately assess the actual impact on the original 2004 ODV.

5.3.10 Wellington Electricity

For Wellington Electricity, the Engineer's Report stated that adjustments are proposed for both re-applying existing and modified multipliers.

Rugged Terrain Multiplier

¹³ For example, supporting information may have been improved by comparing the projects costs presented by Vector with that of similar project of other EDBs, if possible.

¹⁴ Please refer to item 3 in the statement made by Wilson Cook & Co where it is stated: "For reasons of practicality, no attempt has been made by us to quantify the impact of the exercise of professional judgement in your calculations, as the exercise of professional judgement is implicit in (and an integral part of) the calculations and the calculations would not be valid without the assumptions so made."

¹⁵ Adjustments to Vector Electricity Networks ODV (as at 31 March 2004) Auckland, Northern & Lichfield Excluding Wellington, dated April 2011.

¹⁶ Adjustments to Vector ODV (as at 31 March 2004) Auckland, Northern & Lichfield Excluding Wellington, dated April 2011.

In the case of the re-application of existing multipliers and in particular the Rugged Terrain Multiplier, the Engineer's Report has included a memorandum from Ferranti Consulting Limited which stated that local knowledge and engineering judgment was applied to identify sections of overhead lines that had no, or the wrong, multiplier assigned to it in the 2004 ODV. The memorandum and Engineer's Report provided details with regards to what overhead lines were affected by the re-application of the Rugged Terrain Multiplier and also provided the level of multiplier for each overhead line.

Even though the Engineer's Report stated that it considers the recommendations from Ferranti Consulting Limited to be reflective of the rugged conditions of the six (6) feeder areas reviewed, it did not comment on the level of multipliers proposed or the extent to which professional judgment was exercised by the engineer and the effect of the recommendation made in deriving the resultant asset values as required in Schedule C, 2(d). Even so, NCL notes that the proposed asset value adjustment for the Rugged Terrain Multiplier is not material to the overall proposed multiplier adjustments and therefore proposes no further action in this regard.

CBD Multiplier

By far the material proposed adjustment for Wellington Electricity is related to the increase of the CBD multiplier.

Similar to the approach taken by Vector for the 2004 ODV valuation, Wellington Electricity used the road classification data obtained for determining the Traffic Management Multiplier as the basis to identify roads eligible for the application of the CBD multiplier. Therefore, the method used for identification of different road types or classifications is the same as with that approved for the 2004 ODV valuation.

The Engineer's Report provided information in the form of an attached memorandum from Ferranti Consulting Limited wherein an analysis regarding the selection of the newly proposed level for multipliers was provided as identified in the table below.

Table 5.1: Wellington Electricity Proposed Multiplier Changes

2004 ODV Classification		New Proposed Classification	
Main CBD	2.0	Wellington City's main CBD	2.5
		All other Main CBDs	2.0
Dense Urban Subtransmission	1.8	Dense Urban Subtransmission	2.2
Dense Urban Distribution	1.15	Dense Urban Distribution	1.8

It is clear that Ferranti Consulting Limited based their analysis for the above proposed new multipliers on recent, or escalated, cost analysis. Ferranti Consulting Limited also requested costs from contracting companies for fictitious cabling projects in support of the financial comparisons.

With regards to the proposed increase in the CBD Multiplier level from 2.0 to 2.5, the memorandum from Ferranti Consulting Limited used cost information from three (3) actual projects which produced a inferred CBD Multiplier that ranged from 2.5 to as high as 5.03. Even though only a few project cost samples were used for this analysis, it is recognised that the Commission increased the CBD related multiplier based on numerous inputs from the industry on this matter which shows that for these relevant CBD areas, the multiplier level should potentially increase from the level set in the 2004 ODV. The impact from the suggested multiplier level change for the CBD multiplier is not material and therefore no further action is suggested.

In relation to the proposed increased Urban Dense Subtransmission Multiplier level from 1.8 to 2.2, the memorandum from Ferranti Consulting Limited used the cost from a single recently priced project. Ferranti Consulting Limited has recognised that the proposed multiplier level change is based on a single project, however they are of the view that the single project used is recent and relevant enough therefore need no further support. NCL is of the view that due to the more material¹⁷ impact (RC change of \$11,1million, 2004 real terms) of the proposed multiplier level change from 1.8 to 2.2, more relevant supporting cost estimations should be provided in support of the suggested asset value adjustment.

With regards to the proposed increased Urban Dense Distribution Multiplier level from 1.15 to 1.8, the memorandum from Ferranti Consulting Limited used the cost from a single actual and one fictitious priced project. This estimated project cost was then used as input to a calculation of an effective Urban Dense Distribution Multiplier level. NCL notes that there are a few assumptions in the said calculation which may have an impact on the validity of the suggested multiplier level change. One concern is in relation to the fictitious project cost estimates, NCL notes that the sample project is installed in an area with relatively high rock multiplier which may perversely impact the cost estimation outcome from the suppliers even if the Rocky Ground Multiplier is taken into account in the calculation. Furthermore, also in relation to the fictitious project cost estimates, the level of confidence in the cost estimations provided by the suppliers is not clear; however, there is some provision made in the assumption around the economies of scale as well as the impact from competitive tendering. NCL is of the view that due to the more material impact (RC change of \$57,6million, 2004 real terms) of the proposed multiplier level changes from 1.15 to 1.8; more relevant project cost estimations could assist in improving the justification for this major suggested asset value adjustment.

The Engineer's Report further presents information in relation to the extension of the Wellington CBD Multiplier region. After reviewing the 2004 ODV database, Wellington Electricity identified that the CBD Multiplier was not applied to large portions of underground cables believed to be in the CBD area. NCL notes that there appears to be no mention in the Engineer's Report on the fact that the analysis around the location of cables in CBD areas is based on the area as of year 2004 rather than as of today.

¹⁷ It is recognised that the proposed change in overall RC is less than the 3% materiality level stipulated in the 2004 ODV Handbook, however the proposed change is noticeably higher compared with resultant asset value adjustments where multiplier level changes are proposed.

6. ADDENDUM REVIEW

In June 2011, the Commission issued a Notice requesting additional information from the EDBs to address the issues identified in NCL's review of the Engineers' Reports set out in Sections 3 and 5 of this report. The additional information provided by the EDBs was reviewed by NCL and the results are summarised in the table below.

Table 6.1: Addendum Review - Compliance with General Schedule C Requirements

SCHEDULE C - General Compliance					
EDB	The report must be completed by an 'engineer' as defined in clause 1.1.4 of the EDB Input Methodologies	The report must be in writing and accessible in electronic format	The report must include a copy of the written instructions provided to the engineer by the EDB	The report must include a table summarising the various asset value adjustments and corresponding to Schedule A4 of the Information Disclosure Notice Templates	The report must include a signed statement by the engineer
Alpine	Yes	Yes	Yes	Yes	Yes
Aurora	Yes	Yes	Yes	Yes	Yes
Eastland	Yes	Yes	Yes	Yes	Yes
Horizon Energy	Yes	Yes	Yes	Yes	Yes
NEL	Yes	Yes	Yes	Yes	Yes
Network Tasman	Yes	Yes	Yes	Yes	Yes
OJV	Yes	Yes	Yes	Yes	Yes
Powerco	Yes	Yes	Yes	Yes	Yes
TLC	Yes	Yes	Yes	Yes	Yes
Top Energy	Yes	Yes	Yes	Yes	Yes
Unison	Yes	Yes	Yes	Yes	Yes
Vector	Yes	Yes	Yes	Yes	Yes
Wellington Electricity	Yes	Yes	Yes	Yes	Yes
Overall Compliance	100%	100%	100%	100%	100%

As can be seen from the table above, after the submission of additional information, the results from NCL's assessment show that all the EDBs have now complied with the general information requirements set out in Schedule C.

In addition, the additional information has led NCL to conclude that all of the EDBs have now complied with all of the specific minimum information requirements set out in Table 1 in Schedule C for the particular asset value adjustment categories.

The results of NCL's addendum review are presented in Section 6 and the tables for each EDB in Appendix A have also been updated to include the results of this review for compliance with both general and specific requirements of Schedule C.

Although some minor issues with the additional information submitted by the EDBs are identified in NCL's analysis set out in Appendix A, none of these issues were considered to warrant an overall finding of 'non-compliance' for any EDB with the general or specific requirements of Schedule C.

APPENDIX A: COMPLIANCE WITH INFORMATION REQUIREMENTS

This Appendix presents NCL's assessment in relation to the compliance review for the requirements set out in Schedule C of the Information Request. The Appendix consists of a maximum of three tables for each EDB, as applicable, of which the first shows the results and comments for the review of the general requirements set out in Schedule C, the second showing the results and comments for the assessment of specific requirements set out in Schedule C – Table 1, and the third provides analysis of the additional information requests as required in Schedule C 2(d). The tables have also been updated to include the results of the addendum review conducted by NCL as discussed in Section 6 of this report.

The Appendix provides the review results in the following sequence:

1. Alpine
2. Aurora
3. Eastland
4. Horizon Energy
5. NEL
6. Network Tasman
7. OJV
8. Powerco
9. TLC
10. Top Energy
11. Unison
12. Vector
13. Wellington Electricity

ALPINE – Schedule C General Requirements

SCHEDULE C INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
	YES	NO		YES	NO	
1. The report must be completed by an 'engineer' as defined in clause 1.1.4 of the EDB IMs	✓			✓		
2. The report must:						
a. be in writing and accessible in electronic format;	✓			✓		
b. include a copy of the written instructions provided to the engineer by the EDB;	✓			✓		
c. include a table summarising the various asset value adjustments and corresponding to Schedule A4 of the Information Disclosure Notice Templates;	✓			✓		
d. provide the minimum information for each category of asset adjustment outlined in Table 1.	See Schedule C Table 1 Review below.			✓		
e. include a signed statement by the engineer.	✓			✓		

ALPINE – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ¹⁸	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
1. Load Control Relay	Included	<ul style="list-style-type: none"> Number and description 		✓	The Engineer's Report state that the register data provided by Alpine in support of load relays could not be disaggregated to identify individual relays as required by Schedule C. However, Alpine confirmed the total depreciated historic cost for these relays. NCL further notes that the total proposed depreciated value for load control relays is not material when compared to other asset value adjustments or the overall regulatory asset base value and amounts to \$354,361.	✓		Although the total number of individual relays could not be readily identified by the independent engineer, it is indicated in the re-issued report how many items in the register relate to the load control relays that are proposed to be included.
		<ul style="list-style-type: none"> Relevant depreciated historic cost or depreciated carrying value 		✓	Similar to the comment above, the depreciated historic cost was not provided per asset, rather confirmed as a total depreciated value by Alpine.	✓		The depreciated carrying value was derived based on the date of purchase and purchase value of the items identified in the register relating to load control relays.
2. Correct Asset Register	Included	<ul style="list-style-type: none"> Description and value of the asset 	✓			✓		

¹⁸ The categories of adjustments presented in the table include only the categories where adjustments have been proposed by the EDB.

ALPINE – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ¹⁸	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
Errors								
	Excluded	<ul style="list-style-type: none"> Description and value of the asset 	✓			✓		
	Value modified	<ul style="list-style-type: none"> Description and type of error 	✓			✓		
		<ul style="list-style-type: none"> Value of each asset 	✓			✓		
		<ul style="list-style-type: none"> Calculation of relevant adjustment 	✓			✓		
		<ul style="list-style-type: none"> Resultant modified value 	✓			✓		
3. Re-apply existing multiplier	Value modified	<ul style="list-style-type: none"> Description and ODV valuation for each asset 	✓			✓		
		<ul style="list-style-type: none"> Description of the more accurate information (including supporting facts where relevant) 	✓			✓		
		<ul style="list-style-type: none"> Calculation to the relevant modification to 		✓	The Engineer's Report has clearly presented the proposed adjustments but did not present	✓		

ALPINE – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ¹⁸	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
		the ODV and the resultant 'modified value' at 2004 ODV value			the opening asset values or the resultant modified values at 2004 ODV value.			
4. Re-apply optimisation or economic value test	Value modified	<ul style="list-style-type: none"> Description and value of each asset in the 2004 ODV valuation 	✓			✓		
		<ul style="list-style-type: none"> Value of each asset in the ODV valuation had the assets not been optimised or subject to the economic value test 	✓			✓		
		<ul style="list-style-type: none"> Value after reapplying more up-to-date information 	✓			✓		
		<ul style="list-style-type: none"> Details of supporting facts where relevant to 		✓	From the Engineer's Report it is indicated that Alpine re-valued the optimised depreciated replacement cost (ODRC) for a	✓		

ALPINE – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ¹⁸	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
		support the reapplication			<p>portion of the distribution network which were subject to economic value write downs. The independent engineer notes that the ODRC only includes lines and cables and does not include other distribution equipment.</p> <p>From the Engineer's Report it is not clear how or why the ODRC value for this portion of the network reduced.</p> <p>However, NCL notes that the proposed value adjustment is not material when compared to other asset value adjustments or the overall regulatory asset base value.</p>			
		<ul style="list-style-type: none"> Resultant 'modified value' at 2004 ODV value 	✓			✓		

AURORA – Schedule C General Requirements

SCHEDULE C INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
	YES	NO		YES	NO	
1. The report must be completed by an 'engineer' as defined in clause 1.1.4 of the EDB IMs	✓			✓		
2. The report must:						
a. be in writing and accessible in electronic format;	✓			✓		
b. include a copy of the written instructions provided to the engineer by the EDB;	✓			✓		
c. include a table summarising the various asset value adjustments and corresponding to Schedule A4 of the Information Disclosure Notice Templates;		✓	Even though the table A4 presented in the Engineers' Report in Appendix A correlate with that provided separate from the Engineer's Report, the summary tables found in the Engineer's Report do not correlate with both versions of the A4 table. NCL notes that the units used in populating table A4 appear to have been wrongly applied.	✓		
d. provide the minimum information for each category of asset adjustment outlined in Table 1.	See Schedule C Table 1 Review below.			✓		

AURORA – Schedule C General Requirements

SCHEDULE C INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
	YES	NO		YES	NO	
e. include a signed statement by the engineer.	✓			✓		

AURORA – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ¹⁹	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS	
			YES	NO		YES	NO		
1. Correct Asset Register Errors	Included	<ul style="list-style-type: none"> Description and value of the asset 	✓			✓			
	Excluded	<ul style="list-style-type: none"> Description and value of the asset 	✓			✓			
	Value modified	<ul style="list-style-type: none"> Description and type of error 	✓			✓			
			<ul style="list-style-type: none"> Value of each asset 	✓			✓		
			<ul style="list-style-type: none"> Calculation of relevant adjustment 	✓			✓		
		<ul style="list-style-type: none"> Resultant modified value 	✓			✓			
2. Re-apply existing multiplier	Value modified	<ul style="list-style-type: none"> Description and ODV valuation for each asset 	✓			✓			
		<ul style="list-style-type: none"> Description of the more accurate information 	✓			✓			

¹⁹ The categories of adjustments presented in the table include only the categories where adjustments have been proposed by the EDB.

AURORA – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ¹⁹	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
		(including supporting facts where relevant)						
		<ul style="list-style-type: none"> Calculation to the relevant modification to the ODV and the resultant 'modified value' at 2004 ODV value 		✓	The Engineer's Report has clearly presented the proposed adjustments but did not present the resultant modified values at 2004 ODV value.	✓		
3. Re-apply optimisation	Included	<ul style="list-style-type: none"> Description and value of each asset in the 2004 ODV valuation 	✓			✓		
		<ul style="list-style-type: none"> Value of each asset in the ODV valuation had the assets not been optimised or subject to the economic value test 	✓			✓		
		<ul style="list-style-type: none"> Value after reapplying more up-to- 	✓			✓		

AURORA – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ¹⁹	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
		date information						
		<ul style="list-style-type: none"> Details of supporting facts where relevant to support the reapplication 	✓			✓		
		<ul style="list-style-type: none"> Resultant 'included value' at 2004 ODV value 	✓		It would appear that the resultant included value could be derived from the data presented in the Engineer's Report.	✓		

Eastland – Schedule C General Requirements

SCHEDULE C INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
	YES	NO		YES	NO	
1. The report must be completed by an 'engineer' as defined in clause 1.1.4 of the EDB IMs	✓			✓		
2. The report must:						
a. be in writing and accessible in electronic format;	✓			✓		
b. include a copy of the written instructions provided to the engineer by the EDB;	✓			✓		
c. include a table summarising the various asset value adjustments and corresponding to Schedule A4 of the Information Disclosure Notice Templates;	✓			✓		
d. provide the minimum information for each category of asset adjustment outlined in Table 1.	See Schedule C Table 1 Review below.			✓		
e. include a signed statement by the engineer.	✓			✓		

EASTLAND – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²⁰	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
1. Load Control Relay	Included	<ul style="list-style-type: none"> Number and description 	✓			✓		
		<ul style="list-style-type: none"> Relevant depreciated historic cost or depreciated carrying value 	✓			✓		
2. Correct Asset Register Errors	Excluded	<ul style="list-style-type: none"> Description and value of the asset 	✓			✓		
	Value modified	<ul style="list-style-type: none"> Description and type of error 	✓			✓		
		<ul style="list-style-type: none"> Value of each asset 	✓			✓		
		<ul style="list-style-type: none"> Calculation of relevant adjustment 	✓		It should be noted that the report presents results rather than showing clear calculations.	✓		
		<ul style="list-style-type: none"> Resultant modified value 		✓	The Engineer's Report has clearly presented the proposed adjustments but did not present the resultant modified values at 2004 ODV value.	✓		

²⁰ The categories of adjustments presented in the table include only the categories where adjustments have been proposed by the EDB.

EASTLAND – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²⁰	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
3. Re-apply existing multiplier	Value modified	<ul style="list-style-type: none"> Description and ODV valuation for each asset 	✓			✓		
		<ul style="list-style-type: none"> Description of the more accurate information (including supporting facts where relevant) 	✓		Table 6 of the Engineer's Report highlight assets affected by the proposed multiplier boundary change. However, the meaning of the values under the column 'No. of items' for the lines asset categories as presented in Table 6 is unclear.	✓		
		<ul style="list-style-type: none"> Calculation to the relevant modification to the ODV and the resultant 'modified value' at 2004 ODV value 		✓	Although the Engineer's Report presents the adjustments proposed, it did not specify in the report the resulting modified value for all the assets proposed to be adjusted as well as the calculation of the relevant modification.	✓		
4. Re-apply a modified multiplier	Value modified	<ul style="list-style-type: none"> Description and ODV valuation for each asset 	✓			✓		
		<ul style="list-style-type: none"> Specification of the alternative multiplier and the reason for 	✓			✓		

EASTLAND – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²⁰	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
		selecting the value within the range						
		<ul style="list-style-type: none"> Details of supporting facts where relevant to support the reason 	✓		Table 10 of the Engineer's Report highlight assets affected by the proposed multiplier boundary change. However the meaning of the values under the column 'No. of items' for the lines asset categories as presented in Table 10 is unclear.	✓		
		<ul style="list-style-type: none"> Calculation to the relevant modification to the ODV and the resultant 'modified value' at 2004 ODV value 		✓	Although the Engineer's Report presents the adjustments proposed, it did not specify in the report the resulting modified value for all the assets proposed to be adjusted as well as did not clearly provide the calculation to the relevant modification.	✓		

EASTLAND – Additional Information Requests as Required in Schedule C 2(d)

NO	ADDITIONAL INFORMATION REQUEST TO ASSIST READER AS PER SCHEDULE C 2(d)	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
		YES	NO	
1.	When looking at the RC values in Table 12 of the Engineer's Report versus that presented in Table 11, it is not clear how the Rugged Terrain Multiplier was applied to each of the asset categories. It would appear that the multiplier is different for each asset category which may be due to the impact of the previous 1.2 multiplier applied in the 2004 ODV. The multipliers applied should be identified more clearly per asset or asset category in order to be sufficient to allow a reader of the report to understand the data, information, calculations and assumptions employed in respect of each category of asset adjustment.			

HORIZON ENERGY – Schedule C General Requirements

SCHEDULE C INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
	YES	NO		YES	NO	
1. The report must be completed by an 'engineer' as defined in clause 1.1.4 of the EDB IMs	✓			✓		
2. The report must:						
a. be in writing and accessible in electronic format;	✓			✓		
b. include a copy of the written instructions provided to the engineer by the EDB;	✓			✓		
c. include a table summarising the various asset value adjustments and corresponding to Schedule A4 of the Information Disclosure Notice Templates;		✓	Schedule A4 did not correlate with Appendix A (potential unit error) as well as with Table 7 of the Engineer's Report which should be reconciled and updated.	✓		
d. provide the minimum information for each category of asset adjustment outlined in Table 1.	See Schedule C Table 1 Review below.			✓		
e. include a signed statement by the engineer.	✓			✓		

HORIZON ENERGY – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²¹	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
1. Correct Asset Register Errors	Included	<ul style="list-style-type: none"> Description and value of the asset 	✓			✓		
2. Re-apply existing multiplier	Value modified	<ul style="list-style-type: none"> Description and ODV valuation for each asset 		✓	Although the multiplier originally applied was indicated in the Engineer's Report, it did not present the 2004 ODV for the assets proposed to be adjusted.	✓		
		<ul style="list-style-type: none"> Description of the more accurate information (including supporting facts where relevant) 	✓			✓		
		<ul style="list-style-type: none"> Calculation to the relevant modification to the ODV and the resultant 'modified value' at 2004 ODV value 		✓	<p>Although the Engineer's Report presents the adjustments proposed, it did not specify in the report the resultant modified value for the assets proposed to be adjusted.</p> <p>It should be noted as well that the report presents results rather than</p>	✓		

²¹ The categories of adjustments presented in the table include only the categories where adjustments have been proposed by the EDB.

HORIZON ENERGY – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²¹	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
					showing clear calculations to arrive at the resultant modified value.			
3. Re-apply optimisation or economic value test	Value modified	<ul style="list-style-type: none"> Description and value of each asset in the 2004 ODV valuation 		✓	The Engineer's Report only presented the value of the proposed adjustments and did not present the value of each asset in the 2004 ODV.	✓		
		<ul style="list-style-type: none"> Value of each asset in the ODV valuation had the assets not been optimised or subject to the economic value test 		✓	As indicated above, the report only presented the value of the proposed adjustments. No clear reference was presented as to the asset values in the 2004 ODV.	✓		
		<ul style="list-style-type: none"> Value after reapplying more up-to-date information 		✓	The report did not present the value of each asset (or asset types) after reapplying the optimisation test. The report presentation was limited to the proposed value adjustment.	✓		
		<ul style="list-style-type: none"> Details of supporting facts where relevant to 	✓			✓		

HORIZON ENERGY – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²¹	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
		support the reapplication						
		<ul style="list-style-type: none"> Resultant 'modified value' at 2004 ODV value 		✓	The Engineer's Report did not present the resultant modified value at 2004 ODV value.	✓		

HORIZON ENERGY – Additional Information Requests as Required in Schedule C 2(d)

NO	ADDITIONAL INFORMATION REQUEST TO ASSIST READER AS PER SCHEDULE C 2(d)	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
		YES	NO	
1.	Assuming that the latest asset database was generated from the current information system of Horizon Energy, it is not clear how the 2004 ODV data could have been updated without knowing what portion to keep from the old data. In other words, it is uncertain how the remaining asset information, other than the 65% (more than 65% indicated by Horizon Energy) now captured in the new information system was populated and presented. Clarification on this is required as well as a comment from the independent engineer on the reasonableness of the process employed.	✓		The original Engineer's Report was updated with a more comprehensive explanation of the 65% update to the information system.

NEL – Schedule C General Requirements

SCHEDULE C INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
	YES	NO		YES	NO	
1. The report must be completed by an 'engineer' as defined in clause 1.1.4 of the EDB IMs	✓			✓		
2. The report must:						
a. be in writing and accessible in electronic format;	✓			✓		
b. include a copy of the written instructions provided to the engineer by the EDB;	✓			✓		
c. include a table summarising the various asset value adjustments and corresponding to Schedule A4 of the Information Disclosure Notice Templates;	✓			✓		
d. provide the minimum information for each category of asset adjustment outlined in Table 1.	See Schedule C Table 1 Review below.			✓		
e. include a signed statement by the engineer.	✓			✓		

NEL – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²²	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
1. Re-apply a modified multiplier	Value modified	<ul style="list-style-type: none"> Description and ODV valuation for each asset 		✓	The report did not clearly present the 2004 ODV for the assets proposed to be adjusted in a way that it can be easily correlated to the assets proposed to be adjusted. This is true for the instances where the asset was included in the 2004 valuation although no multiplier was previously applied, and the 2004 ODV value presented in the report is zero.	✓		
		<ul style="list-style-type: none"> Specification of the alternative multiplier and the reason for selecting the value within the range 	✓			✓		
		<ul style="list-style-type: none"> Details of supporting facts where relevant to support the reason 		✓	The report includes discussions and indicated that supporting information was provided by the EDB. However, some if not all of this supporting information should have been provided as part of the	✓		

²² The categories of adjustments presented in the table include only the categories where adjustments have been proposed by the EDB.

NEL – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²²	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
					report in order to completely justify the proposed asset value adjustment.			
		<ul style="list-style-type: none"> Calculation to the relevant modification to the ODV and the resultant 'modified value' at 2004 ODV value 	✓		It should be noted that the report presents results rather than showing clear calculations to arrive at the resultant modified value.	✓		

NETWORK TASMAN – Schedule C General Requirements

SCHEDULE C INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
	YES	NO		YES	NO	
1. The report must be completed by an 'engineer' as defined in clause 1.1.4 of the EDB IMs	✓		General Comment: NCL notes that even though the engineer, as defined in clause 1.14 of the EDB IMs, provided a signed letter in summary of the proposed adjustments. The supporting tables and main report were developed by Network Tasman and not by the engineer.	✓		
2. The report must:						
a. be in writing and accessible in electronic format;	✓			✓		
b. include a copy of the written instructions provided to the engineer by the EDB;	✓			✓		
c. include a table summarising the various asset value adjustments and corresponding to Schedule A4 of the Information Disclosure Notice Templates;	✓			✓		
d. provide the minimum information for each	See Schedule C Table 1 Review below.			✓		

NETWORK TASMAN – Schedule C General Requirements

SCHEDULE C INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
	YES	NO		YES	NO	
category of asset adjustment outlined in Table 1.						
e. include a signed statement by the engineer.	✓		<p>General Comments:</p> <p>Schedule C clearly requires the Engineer's Report to include a signed statement by the independent engineer and the Report did include this requirement. However, the following statements by the independent engineer should be noted:</p> <ul style="list-style-type: none"> • "We note that, as a matter of practicality, neither the table nor its supporting documents contains enough information for a reader to verify the arithmetical accuracy of the asset adjustment calculations as the calculations are made, in the main, in a computerised GIS or in other such systems operated by your staff. However, we further 	✓		

NETWORK TASMAN – Schedule C General Requirements

SCHEDULE C INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
	YES	NO		YES	NO	
			<p>note that those systems are of a type commonly used by electricity lines businesses for undertaking analyses and making calculations of the type concerned in relation to the present matter.”</p> <p>NCL would like to highlight that from Schedule C, in 2(d), it is required that the Engineer's Report should include information sufficient to allow the reader of the report to be able to verify the arithmetical accuracy of the asset adjustment calculations.</p> <ul style="list-style-type: none"> • “For reasons of practicality, no attempt has been made by us to quantify the impact of the exercise of professional judgement in your calculations, as the exercise of professional judgement is implicit in (and 			

NETWORK TASMAN – Schedule C General Requirements

SCHEDULE C INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
	YES	NO		YES	NO	
			<p>an integral part of) the calculations and the calculations would not be valid without the assumptions so made.”</p> <p>NCL would like to highlight that Schedule C 2(d) requires that the Engineer's Report should include information sufficient to allow the reader of the report to be able to understand the extent to which professional judgement was exercised by the engineer and the effect of the judgement in deriving the resultant asset values.</p>			

NETWORK TASMAN – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²³	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
1. Correct Asset Register Errors	Included	<ul style="list-style-type: none"> Description and value of the asset 	✓		NCL notes that for the proposed adjustments to asset values from 2005 to 2009, there appears to be very little supporting information. However, these proposed adjustments are not material when compared with the overall regulatory asset base value.	✓		
2. Re-apply a modified multiplier	Value modified	<ul style="list-style-type: none"> Description and ODV valuation for each asset 	✓			✓		
		<ul style="list-style-type: none"> Specification of the alternative multiplier and the reason for selecting the value within the range 	✓			✓		
		<ul style="list-style-type: none"> Details of supporting facts where relevant to support the reason 	✓			✓		

²³ The categories of adjustments presented in the table include only the categories where adjustments have been proposed by the EDB.

NETWORK TASMAN – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²³	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
		<ul style="list-style-type: none"> Calculation to the relevant modification to the ODV and the resultant 'modified value' at 2004 ODV value 		✓	<p>The Engineer's Report or its attachments, has clearly presented the opening asset values as well as the proposed adjustments but did not present the resultant modified values at 2004 ODV value.</p> <p>It would however appear that the resultant modified value can be derived from the values presented in the report.</p>	✓		Network Tasman provided additional data which did not form part of the Engineer's Report. The data presents the summary of the 2004 ODV value, proposed adjustment values and the resultant modified values.
3. Re-apply optimisation or economic value test	Included or Value Modified	<ul style="list-style-type: none"> Description and value of each asset in the 2004 ODV valuation 		✓	The Engineer's Report or its attachments, has clearly presented the proposed adjustments but did not present the opening asset values from the 2004 ODV.	✓		Same comment as above.
		<ul style="list-style-type: none"> Value of each asset in the ODV valuation had the assets not been optimised or subject to the economic value test 		✓	The Engineer's Report or its attachments, has clearly presented the proposed adjustments but did not present the opening asset values from the 2004 ODV or the resultant modified values at 2004 ODV value.	✓		Same comment as above.

NETWORK TASMAN – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²³	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
		<ul style="list-style-type: none"> Value after reapplying more up-to-date information 	✓			✓		
		<ul style="list-style-type: none"> Details of supporting facts where relevant to support the reapplication 	✓			✓		
		<ul style="list-style-type: none"> Resultant 'included value' at 2004 ODV value 		✓	The Engineer's Report or its attachments, has clearly presented the proposed adjustments but did not present the opening asset values from the 2004 OD or the resultant modified values at 2004 ODV value.	✓		Network Tasman provided additional data which did not form part of the Engineer's Report. The data presents the summary of the 2004 ODV value, proposed adjustment values and the resultant modified values.

OJV – Schedule C General Requirements

SCHEDULE C INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
	YES	NO		YES	NO	
1. The report must be completed by an 'engineer' as defined in clause 1.1.4 of the EDB IMs	✓			✓		
2. The report must:						
a. be in writing and accessible in electronic format;	✓			✓		
b. include a copy of the written instructions provided to the engineer by the EDB;	✓			✓		
c. include a table summarising the various asset value adjustments and corresponding to Schedule A4 of the Information Disclosure Notice Templates;	✓			✓		
d. provide the minimum information for each category of asset adjustment outlined in Table 1.	See Schedule C Table 1 Review below.			✓		
e. include a signed statement by the engineer.	✓			✓		

OJV – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²⁴	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
1. Correct Asset Register Errors	Included	<ul style="list-style-type: none"> Description and value of the asset 	✓			✓		
2. Re-apply existing multiplier	Value modified	<ul style="list-style-type: none"> Description and ODV valuation for each asset 		✓	Although the multiplier originally applied was indicated in the Engineer's Report, it did not present the 2004 ODV for all the assets proposed to be adjusted.	✓		
		<ul style="list-style-type: none"> Description of the more accurate information (including supporting facts where relevant) 	✓			✓		
		<ul style="list-style-type: none"> Calculation to the relevant modification to the ODV and the resultant 'modified value' at 2004 ODV value 		✓	<p>Although the Engineer's Report presents the adjustments proposed, it did not specify in the report the resultant modified value for all the assets proposed to be adjusted.</p> <p>It is also worth noting that the report presents results rather than</p>	✓		

²⁴ The categories of adjustments presented in the table include only the categories where adjustments have been proposed by the EDB.

OJV – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²⁴	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
					showing clear calculations to arrive at the resultant modified value.			

POWERCO – Schedule C General Requirements

SCHEDULE C INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
	YES	NO		YES	NO	
1. The report must be completed by an 'engineer' as defined in clause 1.1.4 of the EDB IMs	✓		General Comment: NCL notes that even though the engineer, as defined in clause 1.14 of the EDB IMs, provided a signed letter and tables (similar format to that of Schedule C, Table 1) in summary of the proposed adjustments. The supporting report was developed by Powerco and not by the engineer.	✓		
2. The report must:						
a. be in writing and accessible in electronic format;	✓			✓		
b. include a copy of the written instructions provided to the engineer by the EDB;	✓			✓		
c. include a table summarising the various asset value adjustments and corresponding to Schedule A4 of the Information Disclosure Notice Templates;	✓		Provided in similar format as that required by Schedule C, Table 1.	✓		

POWERCO – Schedule C General Requirements

SCHEDULE C INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
	YES	NO		YES	NO	
d. provide the minimum information for each category of asset adjustment outlined in Table 1.	See Schedule C Table 1 Review below.			✓		
e. include a signed statement by the engineer.	✓		<p>General Comments:</p> <p>Schedule C clearly requires the Engineer's Report to include a signed statement by the Engineer and the Report did include this requirement; however, the following statements by the Engineer should be noted:</p> <ul style="list-style-type: none"> • "We note that, as a matter of practicality, neither the table nor its supporting documents contains enough information for a reader to verify the arithmetical accuracy of the asset adjustment calculations as the calculations are made, in the main, in a computerised GIS or in other such systems operated by your 	✓		

POWERCO – Schedule C General Requirements

SCHEDULE C INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
	YES	NO		YES	NO	
			<p>staff. However, we further note that those systems are of a type commonly used by electricity lines businesses for undertaking analyses and making calculations of the type concerned in relation to the present matter.”</p> <p>NCL would like to highlight that from Schedule C, in 2(d), it is required that the Engineer's Report should include information sufficient to allow the reader of the report to be able to verify the arithmetical accuracy of the asset adjustment calculations.</p> <ul style="list-style-type: none"> • “For reasons of practicality, no attempt has been made by us to quantify the impact of the exercise of professional judgement in your calculations, as the exercise of professional judgement is implicit in (and 			

POWERCO – Schedule C General Requirements

SCHEDULE C INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
	YES	NO		YES	NO	
			<p>an integral part of) the calculations and the calculations would not be valid without the assumptions so made.”</p> <p>NCL would like to highlight that Schedule C 2(d) requires that the Engineer's Report should include information sufficient to allow the reader of the report to be able to understand the extent to which professional judgement was exercised by the engineer and the effect of the judgement in deriving the resultant asset values.</p>			

POWERCO – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²⁵	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
1. Correct Asset Register Errors	Included	<ul style="list-style-type: none"> Description and value of the asset 	✓			✓		
	Excluded	<ul style="list-style-type: none"> Description and value of the asset 	✓			✓		
	Value modified	<ul style="list-style-type: none"> Description and type of error 	✓			✓		
		<ul style="list-style-type: none"> Value of each asset 	✓			✓		
		<ul style="list-style-type: none"> Calculation of relevant adjustment 	✓			✓		
		<ul style="list-style-type: none"> Resultant modified value 	✓		Although the Engineer's Report presents the adjustments proposed, it did not always specify in the report the resultant modified value for all the assets proposed to be adjusted.	✓		
2. Re-apply existing multiplier	Value modified	<ul style="list-style-type: none"> Description and ODV valuation for each asset 	✓			✓		

²⁵ The categories of adjustments presented in the table include only the categories where adjustments have been proposed by the EDB.

POWERCO – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²⁵	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
		<ul style="list-style-type: none"> Description of the more accurate information (including supporting facts where relevant) 	✓			✓		
		<ul style="list-style-type: none"> Calculation to the relevant modification to the ODV and the resultant 'modified value' at 2004 ODV value 	✓		Although the Engineer's Report presents the adjustments proposed including the resultant modified value mostly based on a base case without multiplier and a scenario with the proposed multiplier, it is not clear how the multipliers applied in the initial 2004 ODV, if any, influences these new proposed adjustments.	✓		
3. Re-apply a modified multiplier	Value modified	<ul style="list-style-type: none"> Description and ODV valuation for each asset 	✓			✓		
		<ul style="list-style-type: none"> Specification of the alternative multiplier and the reason for selecting the value within 	✓			✓		

POWERCO – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²⁵	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
		the range						
		<ul style="list-style-type: none"> Details of supporting facts where relevant to support the reason 		✓	<p>There appears to be little supporting information in relation to the details on how the standard and other cost estimations were derived or to what extent professional judgment was applied by the engineer as required in Schedule C.</p> <p>Even though a summary of key parameters was provided in the Powerco report, additional supporting information should have been provided e.g. reference to the specific project costs and a clear indication on why assumptions were made for these parameters. This will allow the reader to better understand the proposed adjustment as required in Schedule C 2(d).</p>	✓		
		<ul style="list-style-type: none"> Calculation to the relevant modification to the ODV and the resultant 'modified value' at 2004 	✓		<p>Although the Engineer's Report presents the adjustments proposed including the resultant modified value mostly based on a base case without multiplier and a scenario with the proposed multiplier, it is not clear how the</p>	✓		

POWERCO – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²⁵	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
		ODV value			multipliers applied in the initial 2004 ODV, if any, influences these new proposed adjustments.			
4. Re-apply optimisation or economic value test	Included	<ul style="list-style-type: none"> Description and value of each asset in the 2004 ODV valuation 	✓			✓		
		<ul style="list-style-type: none"> Value of each asset in the ODV valuation had the assets not been optimised or subject to the economic value test 	✓			✓		
		<ul style="list-style-type: none"> Value after reapplying more up-to-date information 	✓			✓		
		<ul style="list-style-type: none"> Details of supporting facts where relevant to support the reapplication 	✓			✓		

POWERCO – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²⁵	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
		<ul style="list-style-type: none"> Resultant 'included value' at 2004 ODV value 	✓			✓		

POWERCO – Additional Information Requests as Required in Schedule C 2(d)

NO	ADDITIONAL INFORMATION REQUEST TO ASSIST READER AS PER SCHEDULE C 2(d)	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
		YES	NO	
1.	For the application of the newly identified Rocky Ground Multiplier, how were the assets in the field classified under these new multiplier categories? How was table 3 in clause 42 of the Powerco Report ²⁶ populated? Explain the method used.	✓		Powerco submitted an addendum to the Engineer's Report which now sufficiently addresses the matter(s) raised.
2.	It is noted that no optimisation (as applied in 2004 ODV) was applied to the proposed adjustments in relation to multipliers. Provide the reason(s) for this.	✓		Powerco submitted an addendum to the Engineer's Report which now sufficiently addresses the matter(s) raised.

²⁶ Powerco Information Disclosure Following Notice to Supply Information to the Commission Section 53ZD of the Commerce Act 1986 Asset Adjustment Process, dated 9 May 2011.

POWERCO – Additional Information Requests as Required in Schedule C 2(d)

NO	ADDITIONAL INFORMATION REQUEST TO ASSIST READER AS PER SCHEDULE C 2(d)	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
		YES	NO	
3.	Confirm in what dollar terms is the asset values presented in Table 3 and Table 15 of the Powerco Report.	✓		Powerco submitted an addendum to the Engineer's Report which now sufficiently addresses the matter(s) raised.
4.	Explain why the "Base RC" value for the "Net effect of Rugged Terrain Multipliers" in Table 15 of the Powerco Report is lower than the "Base RC" value for the "2009 VIP1 Corrected 2004 Figures".	✓		Powerco submitted an addendum to the Engineer's Report which explains the reason for the value differences.
5.	Explain why subtracting the total RCs in Table 15 of the Powerco Report is not similar to the value when subtracting the total RC increases and compensating for the effect of the upper limit cap of 1.8. The same issue should be clarified in relation to the total DRC asset values.	✓		Powerco submitted an addendum to the Engineer's Report which sufficiently explains how the tables were populated.
6.	In order to better compare changes in applying the Rugged Terrain multiplier, provide tables similar to Table 1 and Table 2 on page 70 of the Powerco Report to replace Table 10 and 11 on page 76 which only shows percentages rather than quantities.	✓		The requested tables were provided in the addendum to the Engineer's Report.
7.	For purposes of clarification, explain the relationship between the 2009 VIP1 Corrected 2004 Figures in Table 15 of the Power Report with that of the 2004 ODV. Could it be assumed that these corrected figures in 2009 can be of an overall higher asset value than in the 2004 ODV? The answer to the question should explain why the proposed asset value adjustment for the category of Rugged Terrain Multiplier was calculated from the difference between the 2009 VIP1 Corrected Value and the Net effect of the Rugged Terrain Multiplier Resultant Value.	✓		Powerco submitted an addendum to the Engineer's Report which explains the need for using the 2009 VIP1 Corrected Value.

TLC – Schedule C General Requirements

SCHEDULE C INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
	YES	NO		YES	NO	
1. The report must be completed by an 'engineer' as defined in clause 1.1.4 of the EDB IMs	✓		Although the Engineer's Report was completed by an engineer as required in Schedule C, it should be noted that for some proposed adjustments, the Engineer's Report stated that the independent engineer has relied on the EDB to provide and collate the data presented in the Engineer's Report. Thus it is unclear to what extent the Engineer's Report was completed by the engineer as defined in clause 1.1.4 of the EDB IMs.	✓		
2. The report must:						
a. be in writing and accessible in electronic format;	✓			✓		
b. include a copy of the written instructions provided to the engineer by the EDB;	✓			✓		
c. include a table summarising the various asset value adjustments and corresponding to		✓	The separately submitted Schedule A4 did not correlate with Table A4 in Appendix A of the Engineer's Report which should be reconciled and	✓		It should however be noted that there is a minimal difference between the 2009 adjustment value in Appendix A and Schedule

TLC – Schedule C General Requirements

SCHEDULE C INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
	YES	NO		YES	NO	
Schedule A4 of the Information Disclosure Notice Templates;			updated.			A4.
d. provide the minimum information for each category of asset adjustment outlined in Table 1.	See Schedule C Table 1 Review below.			✓		
e. include a signed statement by the engineer.	✓			✓		

TLC – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²⁷	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
1. Load Control Relay	Included	<ul style="list-style-type: none"> Number and description 	✓			✓		
		<ul style="list-style-type: none"> Relevant depreciated historic cost or depreciated carrying value 	✓			✓		
2. Correct Asset Register Errors	Included, Excluded and Value modified	<ul style="list-style-type: none"> Description and value of the asset 		✓	<p>The Engineer's Report states that during the review of the asset adjustment process it became apparent that TLC did not have access to the original 2004 ODV database which meant that direct reconciliation between the 2004 ODV asset values and that now proposed as the resulting modified asset values was not possible.</p> <p>Included in the Engineer's Report is a table, Table 1, which shows the impact per asset category of the latest proposed modified asset values using TLC's new GIS.</p>	✓		<p>NCL notes that the re-issued Engineer's Report includes additional information regarding the systems and data used for purposes of this adjustment process.</p> <p>The additional information was reviewed by the independent engineer and it is stated that the system and information is supported by an independent company and used as an operational tool.</p> <p>From the above, even</p>

²⁷ The category of adjustments presented in the table include only the categories where adjustments have been proposed by the EDB.

TLC – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²⁷	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
					It is further noted that the Engineer's Report state that the independent engineer has relied on TLC to provide and collate the data presented in the Engineer's Report and that even though changes to asset values were discussed, no field audits were conducted to confirm the validity of proposed changes.			though information from the 2004 ODV is no longer readily available, it would appear that the latest updated system is the best source of asset information that could be used for purposes of this adjustment process.
		<ul style="list-style-type: none"> Calculation of relevant adjustment 	✓		<p>As stated above, due to the fact that the original 2004 ODV database was not available for the adjustment process, it was not possible to clearly show how the proposed adjustments were calculated from the original asset values.</p> <p>However, the Engineer's Report provided some insight into the reasons for changes in values at an asset category level and includes a table, Table 1, with a summary of the proposed adjustment values per asset category.</p>	✓		
		<ul style="list-style-type: none"> Resultant modified value 		✓	The Engineer's Report has clearly presented the proposed	✓		

TLC – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²⁷	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
					<p>adjustments but did not present the resultant modified value for this category of asset value adjustment.</p> <p>However, NCL notes that the Engineer's Report provides a summary table showing the original overall 2004 ODV value, resulting proposed adjustments per adjustment type and the overall proposed new 2004 regulatory asset base value.</p>			
3. Re-apply a modified multiplier	Value modified	<ul style="list-style-type: none"> Description and ODV valuation for each asset 		✓	Although the multiplier originally applied was indicated in the Engineer's Report, it did not present the 2004 ODV for the assets proposed to be adjusted.	✓		
		<ul style="list-style-type: none"> Specification of the alternative multiplier and the reason for selecting the value within the range 	✓			✓		
		<ul style="list-style-type: none"> Details of supporting facts where 		✓	Even though it is noted that the independent engineer compared the proposed estimates from TLC	✓		Appendix D of the re-issued Engineer's Report includes additional cost-

TLC – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²⁷	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
		relevant to support the reason			<p>with that of other EDBs and found the estimations and resulting multiplier levels to be reasonable. In NCL's view, this information as well as the details regarding the bottom up cost estimates could have been presented in more detail in the Engineer's Report.</p> <p>Although it is recognised that professional judgment was applied in comparing the cost estimates presented by TLC to that of other EDBs, NCL notes that there are a number of variables (or parameters) forming part of the process of assessing the prudent multiplier level which in our view could have been discussed in more detail in the Engineer's Report.</p>			related information.
		<ul style="list-style-type: none"> Calculation to the relevant modification to the ODV and the resultant 'modified value' at 2004 ODV value 		✓	<p>Although the Engineer's Report presents the adjustments proposed, it did not specify in the report the resultant modified value for the assets proposed to be adjusted.</p> <p>It is also worth noting that the</p>	✓		

TLC – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²⁷	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
					report presents results rather than showing clear calculations to arrive at the resultant modified value.			
4. Re-apply optimisation or economic value test	Included	<ul style="list-style-type: none"> Description and value of each asset in the 2004 ODV valuation 	✓			✓		
		<ul style="list-style-type: none"> Value of each asset in the ODV valuation had the assets not been optimised or subject to the economic value test 	✓			✓		
		<ul style="list-style-type: none"> Value after reapplying more up-to-date information 	✓			✓		
		<ul style="list-style-type: none"> Details of supporting facts where relevant to support the 	✓			✓		

TLC – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²⁷	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
		reapplication						
		<ul style="list-style-type: none"> Resultant 'included value' at 2004 ODV value 	✓			✓		

TLC – Additional Information Requests as Required in Schedule C 2(d)

NO	ADDITIONAL INFORMATION REQUEST TO ASSIST READER AS PER SCHEDULE C 2(d)	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
		YES	NO	
1.	Discuss briefly the confidence level TLC has in the data quality found in the latest GIS and related asset register as used in the asset value adjustment process. Indicate as well to what extent all network assets have been captured in the new system.	✓		Even though TLC did not explicitly discuss the confidence level they have for their latest GIS, it would appear that TLC has been working on improving data in their information systems since 2004 and are of the opinion that the latest captured data should supersede that used in the 2004 ODV.

TOP ENERGY – Schedule C General Requirements

SCHEDULE C INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
	YES	NO		YES	NO	
1. The report must be completed by an 'engineer' as defined in clause 1.1.4 of the EDB IMs	✓			✓		
2. The report must:						
a. be in writing and accessible in electronic format;	✓			✓		
b. include a copy of the written instructions provided to the engineer by the EDB;		✓	Appendix B of the Engineer's Report did not include the EDB's written instructions to the Engineer.	✓		
c. include a table summarising the various asset value adjustments and corresponding to Schedule A4 of the Information Disclosure Notice Templates;	✓			✓		
d. provide the minimum information for each category of asset adjustment outlined in Table 1.	See Schedule C Table 1 Review below.			✓		
e. include a signed statement by the engineer.		✓	The Engineer's Report did not include a signed statement.	✓		

TOP ENERGY – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²⁸	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
1. Correct Asset Register Errors	Included	<ul style="list-style-type: none"> Description and value of the asset 		✓	The Engineer's Report presented the change to the adjusted 2004 regulatory asset base however did not present the value of the asset as of the day the asset enters the regulatory asset register.	✓		
	Value modified	<ul style="list-style-type: none"> Description and type of error 	✓			✓		
		<ul style="list-style-type: none"> Value of each asset 		✓	The Engineer's Report did not indicate the value of each asset proposed to be adjusted as of the day the asset entered the regulatory asset register.	✓		
		<ul style="list-style-type: none"> Calculation of relevant adjustment 	✓		It is worth noting that the report presents results of the adjustment rather than showing clear calculations to correct the register error.	✓		
		<ul style="list-style-type: none"> Resultant modified value 		✓	The Engineer's Report presented the change to the adjusted 2004 regulatory asset base, however did not present the resultant modified value for this asset value adjustment category.	✓		

²⁸ The categories of adjustments presented in the table include only the categories where adjustments have been proposed by the EDB.

TOP ENERGY – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²⁸	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
2. Re-apply existing multiplier	Value modified	<ul style="list-style-type: none"> Description and ODV valuation for each asset 		✓	Although the multiplier originally applied was indicated in the Engineer's Report, it did not present the 2004 ODV for the assets proposed to be adjusted.	✓		
		<ul style="list-style-type: none"> Description of the more accurate information (including supporting facts where relevant) 	✓			✓		
		<ul style="list-style-type: none"> Calculation to the relevant modification to the ODV and the resultant 'modified value' at 2004 ODV value 		✓	<p>Although the Engineer's Report presents the adjustments proposed, it did not specify in the report the resultant modified value for the assets proposed to be adjusted.</p> <p>It is also worth noting that the report presents results rather than showing clear calculations to arrive at the resultant modified value.</p>	✓		
3. Re-apply a modified multiplier	Value modified	<ul style="list-style-type: none"> Description and ODV valuation for each asset 		✓	The Engineer's Report did not include the 2004 ODV valuation for the assets proposed to be adjusted.	✓		

TOP ENERGY – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²⁸	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
		<ul style="list-style-type: none"> Specification of the alternative multiplier and the reason for selecting the value within the range 	✓			✓		
		<ul style="list-style-type: none"> Details of supporting facts where relevant to support the reason 		✓	It should be noted that the report includes discussions and indication that supporting information was provided by the EDB. However, for purposes of compliance, this supporting information should have been provided as part of the report in order to completely justify the proposed adjustment.	✓		
		<ul style="list-style-type: none"> Calculation to the relevant modification to the ODV and the resultant 'modified value' at 2004 ODV value 		✓	<p>Although the Engineer's Report presents the adjustments proposed, it did not specify in the report the resultant modified value for the assets proposed to be adjusted.</p> <p>Also, the report presents results rather than showing clear calculations to arrive at the resultant modified value.</p>	✓		

TOP ENERGY – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²⁸	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
4. Re-apply optimisation or economic value test	Value modified	<ul style="list-style-type: none"> Description and value of each asset in the 2004 ODV valuation 		✓	The Engineer's Report did not include the 2004 ODV for the assets proposed to be adjusted for this asset value adjustment category.	✓		
		<ul style="list-style-type: none"> Value of each asset in the ODV valuation had the assets not been optimised or subject to the economic value test 		✓	As indicated above, the Engineer's Report did not include the 2004 ODV for the assets proposed to be adjusted nor did it include the value of <u>all</u> proposed assets to be adjusted had the assets not been optimised.	✓		
		<ul style="list-style-type: none"> Value after reapplying more up-to-date information 		✓	The Engineer's Report has clearly presented the proposed adjustments but did not present the value of the assets after re-applying the optimisation.	✓		
		<ul style="list-style-type: none"> Details of supporting facts where relevant to support the reapplication 	✓			✓		
		<ul style="list-style-type: none"> Resultant 'modified value' at 2004 		✓	Similar to the comment above, the Engineer's Report only presented the proposed	✓		

TOP ENERGY – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²⁸	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
		ODV value			adjustment but not the resultant modified value for this asset value adjustment category.			

UNISON – Schedule C General Requirements

SCHEDULE C INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
	YES	NO		YES	NO	
1. The report must be completed by an 'engineer' as defined in clause 1.1.4 of the EDB IMs	✓			✓		
2. The report must:						
a. be in writing and accessible in electronic format;	✓			✓		
b. include a copy of the written instructions provided to the engineer by the EDB;	✓			✓		
c. include a table summarising the various asset value adjustments and corresponding to Schedule A4 of the Information Disclosure Notice Templates;	✓			✓		
d. provide the minimum information for each category of asset adjustment outlined in Table 1.	See Schedule C Table 1 Review below.			✓		
e. include a signed statement by the engineer.	✓			✓		

UNISON – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ²⁹	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
1. Re-apply existing multiplier	Value modified	<ul style="list-style-type: none"> Description and ODV valuation for each asset 		✓	Although the multiplier originally applied was indicated in the Engineer's Report, it did not present the 2004 ODV for the assets proposed to be adjusted.	✓		
		<ul style="list-style-type: none"> Description of the more accurate information (including supporting facts where relevant) 	✓			✓		
		<ul style="list-style-type: none"> Calculation to the relevant modification to the ODV and the resultant 'modified value' at 2004 ODV value 		✓	<p>Although the Engineer's Report presents the adjustments proposed, it did not specify in the report the resultant modified value for the assets proposed to be adjusted for this asset value adjustment category.</p> <p>It is also worth noting that the report presents results rather than showing clear calculations to arrive at the resultant modified value.</p>	✓		

²⁹ The categories of adjustments presented in the table include only the categories where adjustments have been proposed by the EDB.

VECTOR – Schedule C General Requirements

SCHEDULE C INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
	YES	NO		YES	NO	
1. The report must be completed by an 'engineer' as defined in clause 1.1.4 of the EDB IMs	✓		General Comment: NCL notes that even though the engineer, as defined in clause 1.14 of the EDB IMs, provided a signed letter in summary of the proposed adjustments. The supporting tables and report were developed by Vector themselves and not by the engineer.	✓		
2. The report must:						
a. be in writing and accessible in electronic format;	✓			✓		
b. include a copy of the written instructions provided to the engineer by the EDB;	✓			✓		
c. include a table summarising the various asset value adjustments and corresponding to Schedule A4 of the Information Disclosure Notice Templates;	✓			✓		
d. provide the minimum information for each	See Schedule C Table 1 Review below.			✓		

VECTOR – Schedule C General Requirements

SCHEDULE C INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
	YES	NO		YES	NO	
category of asset adjustment outlined in Table 1.						
e. include a signed statement by the engineer.	✓		<p>General Comments:</p> <p>Schedule C clearly requires the Engineer's Report to include a signed statement by the Engineer and the Report did include this requirement; however, the following statements by the Engineer should be noted:</p> <ul style="list-style-type: none"> “We note that, as a matter of practicality, neither the table nor its supporting documents contains enough information for a reader to verify the arithmetical accuracy of the asset adjustment calculations as the calculations are made, in the main, in a computerised GIS or in other such systems operated by your staff. However, we further note that those systems are 	✓		

VECTOR – Schedule C General Requirements

SCHEDULE C INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
	YES	NO		YES	NO	
			<p>of a type commonly used by electricity lines businesses for undertaking analyses and making calculations of the type concerned in relation to the present matter.”</p> <p>NCL would like to highlight that from Schedule C, in 2(d), it is required that the Engineer's Report should include information sufficient to allow the reader of the report to be able to verify the arithmetical accuracy of the asset adjustment calculations.</p> <ul style="list-style-type: none"> • “For reasons of practicality, no attempt has been made by us to quantify the impact of the exercise of professional judgement in your calculations, as the exercise of professional judgement is implicit in (and an integral part of) the calculations and the 			

VECTOR – Schedule C General Requirements

SCHEDULE C INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
	YES	NO		YES	NO	
			<p>calculations would not be valid without the assumptions so made.”</p> <p>NCL would like to highlight that Schedule C 2(d) requires that the Engineer's Report should include information sufficient to allow the reader of the report to be able to understand the extent to which professional judgement was exercised by the engineer and the effect of the judgement in deriving the resultant asset values.</p>			

VECTOR – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ³⁰	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
1. Correct Asset Register Errors	Value modified	• Description and type of error	✓			✓		
		• Value of each asset	✓			✓		
		• Calculation of relevant adjustment	✓			✓		
		• Resultant modified value	✓		Refer to Appendix A of the Engineer's Report.	✓		
2. Re-apply existing multiplier	Value modified	• Description and ODV valuation for each asset	✓			✓		
		• Description of the more accurate information (including supporting facts where relevant)	✓			✓		
		• Calculation to the relevant	✓		Refer to Appendix A of the Engineer's Report.	✓		

³⁰ The categories of adjustments presented in the table include only the categories where adjustments have been proposed by the EDB.

VECTOR – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ³⁰	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
		modification to the ODV and the resultant 'modified value' at 2004 ODV value						
3. Re-apply a modified multiplier	Value modified	<ul style="list-style-type: none"> Description and ODV valuation for each asset 	✓			✓		
		<ul style="list-style-type: none"> Specification of the alternative multiplier and the reason for selecting the value within the range 	✓			✓		
		<ul style="list-style-type: none"> Details of supporting facts where relevant to support the reason 	✓			✓		
		<ul style="list-style-type: none"> Calculation to the relevant modification to the ODV and the resultant 	✓		Refer to Appendix A of the Engineer's Report.	✓		

VECTOR – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ³⁰	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
		'modified value' at 2004 ODV value						

VECTOR – Additional Information Requests as Required in Schedule C 2(d)

NO	ADDITIONAL INFORMATION REQUEST TO ASSIST READER AS PER SCHEDULE C 2(d)	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
		YES	NO	
1.	With regards to the cost estimates used in developing the new CBD Multiplier level, the extent to which professional judgment was exercised by the engineer and the effect of that judgment in deriving the resultant asset values are not clear and should be clarified.	✓		<p>Vector is of the view that, based on the relevant and appropriate cost information used with some modifications to the values to make them more comparable, the application of professional judgement was made simpler.</p> <p>NCL notes that it would appear that professional judgement in this particular case played a lesser role</p>

VECTOR – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ³⁰	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
								to that of the related project estimated costs used to assess the level of the CBD Multiplier.
2.					Even though the magnitude of the actual adjustment values is provided per multiplier classification (refer to page 13 of the Vector Report ³¹), it is difficult for the reader to easily assess the actual impact on the original 2004 ODV and these comparisons should be made clear by providing the 2004 ODV asset or asset category value as well as the new modified resultant asset or asset category value.	✓		Vector provided a new table as part of a supplementary report which allows the reader to better assess the impact on the original 2004 ODV values.
3.					Even though Vector did not propose changes to the multiplier level relating to Rocky Ground and apart from the statement by Vector that comparing the old mapping units with that of the new had a good correlation, there is limited supporting information to show why Vector, or the independent engineer, is of the view that the same multipliers should be applied. It would appear that some form of professional judgment may have been applied as part of this assessment which is not made clear in the report and this should be clarified as required in Schedule C 2(d).	✓		Vector indicated that even though they have not proposed any changes to the existing Rocky Ground Multiplier due to the very tight timeframe for the asset adjustment process, they have applied the more updated ground condition classification as established by GNS in 2007. Vector is of the view that by establishing a

³¹ Supra Note 8

VECTOR – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ³⁰	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
								relationship between the 2004 ground condition classification and the revised ground condition classification (as discussed in the Engineer's Report), this ensures that the multipliers from 2004 are still applicable. NCL notes that the independent engineer in its review of the proposed application of the Rocky Ground Multiplier appears to be in agreement with the method applied by Vector.
4.							✓	Vector provided a new table as part of a supplementary report which allows the reader better to assess the impact on the original 2004 ODV values.

³² Supra Note 8

WELLINGTON ELECTRICITY – Schedule C General Requirements

SCHEDULE C INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
	YES	NO		YES	NO	
1. The report must be completed by an 'engineer' as defined in clause 1.1.4 of the EDB IMs	✓			✓		
2. The report must:						
a. be in writing and accessible in electronic format;	✓			✓		
b. include a copy of the written instructions provided to the engineer by the EDB;	✓			✓		
c. include a table summarising the various asset value adjustments and corresponding to Schedule A4 of the Information Disclosure Notice Templates;		✓	Schedule A4 did not correlate with Appendix A as well as with Table 28 of the Engineer's Report. The EDB should reconcile the tables and make the necessary corrections where required.	✓		It is recognized that Appendix A now correlates with Schedule A4. However we note that there is a new item now added relating to depreciation correction which is neither discussed in the report nor included in the Executive Summary table and Table 43. Nonetheless, the difference is not material to the overall regulatory asset base.
d. provide the minimum information for each category of asset adjustment outlined in Table 1.	See Schedule C Table 1 Review below.			✓		

WELLINGTON ELECTRICITY – Schedule C General Requirements

SCHEDULE C INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
	YES	NO		YES	NO	
e. include a signed statement by the engineer.	✓			✓		

WELLINGTON ELECTRICITY – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ³³	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
1. Correct Asset Register Errors	Included	<ul style="list-style-type: none"> Description and value of the asset 	✓			✓		
2. Re-apply existing multiplier	Value modified	<ul style="list-style-type: none"> Description and ODV valuation for each asset 		✓	Although the multiplier originally applied was indicated in the Engineer's Report, it did not present the 2004 ODV valuation for <u>all</u> the assets proposed to be adjusted.	✓		
		<ul style="list-style-type: none"> Description of the more accurate information (including supporting facts where relevant) 	✓			✓		
		<ul style="list-style-type: none"> Calculation to the relevant modification to the ODV and the resultant 'modified value' at 2004 ODV value 		✓	Although the Engineer's Report presents the adjustments proposed, it did not specify in the report the resultant modified value for <u>all</u> the assets proposed to be adjusted as well as a clear illustration of the calculation to the relevant modification.	✓		

³³ The categories of adjustments presented in the table include only the categories where adjustments have been proposed by the EDB.

WELLINGTON ELECTRICITY – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ³³	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
3. Re-apply a modified multiplier	Value modified	<ul style="list-style-type: none"> Description and ODV valuation for each asset 	✓			✓		
		<ul style="list-style-type: none"> Specification of the alternative multiplier and the reason for selecting the value within the range 	✓			✓		
		<ul style="list-style-type: none"> Details of supporting facts where relevant to support the reason 	✓			✓		
		<ul style="list-style-type: none"> Calculation to the relevant modification to the ODV and the resultant 'modified value' at 2004 ODV value 		✓	The Engineer's Report has clearly presented the opening asset values as well as the proposed adjustments but did not present the resultant modified values at 2004 ODV value as well as a clear illustration of the calculation to the relevant modification.	✓		
4. Re-apply optimisation or economic	Included	<ul style="list-style-type: none"> Description and value of each asset in 	✓			✓		

WELLINGTON ELECTRICITY – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ³³	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
value test		the 2004 ODV valuation						
		<ul style="list-style-type: none"> Value of each asset in the ODV valuation had the assets not been optimised or subject to the economic value test 	✓			✓		
		<ul style="list-style-type: none"> Value after reapplying more up-to-date information 		✓	The Engineer's Report has clearly presented the opening asset values as well as the proposed adjustments but did not present the value of the assets after re-applying the optimisation.	✓		
		<ul style="list-style-type: none"> Details of supporting facts where relevant to support the reapplication 	✓			✓		
		<ul style="list-style-type: none"> Resultant 'included value' at 2004 ODV value 		✓	Similar to the comment above, the Engineer's Report only presented the values in the 2004 ODV as well as the proposed adjustment but not the resultant	✓		

WELLINGTON ELECTRICITY – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ³³	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
					included value.			
	Value modified	<ul style="list-style-type: none"> Description and value of each asset in the 2004 ODV valuation 	✓			✓		
		<ul style="list-style-type: none"> Value of each asset in the ODV valuation had the assets not been optimised or subject to the economic value test 	✓			✓		
		<ul style="list-style-type: none"> Value after reapplying more up-to-date information 		✓	The Engineer's Report has clearly presented the opening asset values as well as the proposed adjustments but did not present the value of the assets after re-applying the optimisation.	✓		
		<ul style="list-style-type: none"> Details of supporting facts where relevant to support the reapplication 	✓			✓		

WELLINGTON ELECTRICITY – Schedule C Table 1 Requirements

CATEGORY OF ADJUSTMENT ³³	DESIGNATED ASSET TYPE	TABLE 1 INFORMATION REQUIREMENTS	COMPLIANCE (Engineer's Report)		NCL COMMENTS	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
			YES	NO		YES	NO	
		<ul style="list-style-type: none"> Resultant 'modified value' at 2004 ODV value 		✓	Similar to the comment above, the Engineer's Report only presented the values in the 2004 ODV as well as the proposed adjustment but not the resultant modified value.	✓		

WELLINGTON ELECTRICITY – Additional Information Requests as Required in Schedule C 2(d)

NO	ADDITIONAL INFORMATION REQUEST TO ASSIST READER AS PER SCHEDULE C 2(d)	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
		YES	NO	
1.	With reference to Table 22 and 23 of the Engineer's Report, it is not clear why the ORC in Table 23 exceeds the RC presented (similarly DRC versus ODRC), or how Table 22 relates to Table 23 in general. These tables should be reconciled and the relationship between these tables should be clearly stated.	✓		The tables referred to in this request are now referred to as Tables 34 and 35 in the latest updated report. It is worth noting that in Table 35 of the re-issued Engineer's Report, it is still unclear why the ORC for Waitangirua feeder is higher than the RC. NCL however notes that the

WELLINGTON ELECTRICITY – Additional Information Requests as Required in Schedule C 2(d)

NO	ADDITIONAL INFORMATION REQUEST TO ASSIST READER AS PER SCHEDULE C 2(d)	COMPLIANCE (Re-issued Engineer's Report)		NCL COMMENTS
		YES	NO	
				<p>difference between the ORC and RC is minimal and that it can also be that the reason for the difference is the same as the reason provided by the independent engineer for Porirua feeder.</p> <p>On another matter, NCL notes that the asset descriptions and values appear to be inconsistent when comparing the descriptions and values from Tables 34 and 35 with that of the new Table 36 which shows the resulting 2004 regulatory asset base value. However, the correct description and values for each feeder could be derived from Tables 34 and 35.</p>