Company Name Vector

For Year Ended 31 March 2014

# Schedule 14 Mandatory Explanatory Notes

*(In this Schedule, clause references are to the Electricity Distribution Information Disclosure Determination 2012)*

1. This Schedule requires EDBs to provide explanatory notes to information provided in accordance with clauses 2.3.1, 2.4.21, 2.4.22, and 2.5.2.

2. This Schedule is mandatory—EDBs must provide the explanatory comment specified below, in accordance with clause 2.7.1. Information provided in boxes 1 to 12 of this schedule is part of the audited disclosure information, and so is subject to the assurance requirements specified in section 2.8.

3. Schedule 15 (Voluntary Explanatory Notes to Schedules) provides for EDBs to give additional explanation of disclosed information should they elect to do so.

*Return on Investment (Schedule 2)*

4. In the box below, comment on return on investment as disclosed in Schedule 2. This comment must include information on reclassified items in accordance with clause 2.7.1(2).

**Box 1: Explanatory comment on return on investment**

The Disclosure IRR calculation is not compatible with IRR calculation included in the Commerce Commission's draft 2015 electricity distribution price path reset decision released on 4 July 2014. The Commission's draft decision IRR calculation has been demonstrated to be consistent with the basis of setting starting revenues. Therefore, the disclosure ROI of 7.19% is not comparable to the 75$^{th}$ percentile vanilla WACC of 8.77% used for the first price reset or the 2014 disclosure year 75$^{th}$ percentile vanilla WACC of 6.83%.

The 2014 ROI, using the new IRR calculation, is ~7.52%. This is still lower than the 75$^{th}$ percentile vanilla WACC used for the price reset due to the following two key reasons:

1. The actual asset revaluation rate (1.53%) for 2014 is lower than the forecast revaluation rate (2.14%) used in the price reset model. If the 7.52% IRR is restated using the forecast revaluation rate, the IRR for 2014 would increase to 8.02%. (the revaluation impact variance is larger in 2013); and
2. The constant price revenue growth (1.672%) projected in the Commission's price reset model did not materialise. This means that the starting price in 2012 was set lower than would have been the case if the Commission had a "better" forecast and our actual revenue has tracked a lower path than the assumed leading to a lower ROI being achieved.

There has been no re-classification of items in the disclosure year.

*Regulatory Profit (Schedule 3)*

5. In the box below, comment on regulatory profit for the disclosure year as disclosed in Schedule 3. This comment must include-

    5.1 a description of material items included in ‘other regulatory line income’ other than gains and losses on asset sales, as disclosed in 3(i) of Schedule 3

    5.2 information on reclassified items in accordance with clause 2.7.1(2).

| **Box 2: Explanatory comment on regulatory profit** |
| --- |
| There has been no re-classification of items in the disclosure year.<br><br>The other regulated income relates to recovery of voltage support charges. |

*Merger and acquisition expenses (3(iv) of Schedule 3)*

6. If the EDB incurred merger and acquisitions expenditure during the disclosure year, provide the following information in the box below-

    6.1 information on reclassified items in accordance with clause 2.7.1(2)

    6.2 any other commentary on the benefits of the merger and acquisition expenditure to the EDB.

| **Box 3: Explanatory comment on merger and acquisition expenditure** |
| --- |
| No merger and acquisition expenditure has been incurred during the disclosure year. |

*Value of the Regulatory Asset Base (Schedule 4)*

7. In the box below, comment on the value of the regulatory asset base (rolled forward) in Schedule 4. This comment must include information on reclassified items in accordance with clause 2.7.1(2).

| **Box 4: Explanatory comment on the value of the regulatory asset based (rolled forward)** |
|---|
| There has been no re-classification of items in the disclosure year.<br><br>RAB indexation is carried out in accordance with the information disclosure IMs using actual inflation rates. The revaluation rate that Vector has used for rolling forward the RAB is 1.53%.<br><br>In determining the starting price adjustment at the beginning of the regulatory period, the Commission assumed a revaluation rate of 2.14% in the 2014 year.<br><br>If the RAB had been rolled forward from 1/4/12 using the Commission's forecast revaluation rates for 2013 and 2014 (the 2013 forecast revaluation rate was 2.29% compared with the revaluation required to be used under the input methodology of 0.86%) the 2014 closing RAB would be $2,669m, an increase of $50m.<br><br>Variations between the Commission's forecast indexation rate and actual CPI (applied to revalue the RAB for information disclosure purposes) results in revenue adjustments not being matched by changes in RAB. On this basis the value of financial capital is not maintained in the way it would be if the RAB was not subject to indexation for either information disclosure or price setting purposes. Inflation is outside the control or influence of EDBs, and in our view there is no reason for EDBs to be exposed to this risk as they cannot take steps to mitigate it. |

*Regulatory tax allowance: disclosure of permanent differences (5a(i) of Schedule 5a)*

8. In the box below, provide descriptions and workings of the following items, as recorded in the asterisked categories in 5a(i) of Schedule 5a-

    8.1 income not included in regulatory profit / (loss) before tax but taxable;

    8.2 expenditure or loss in regulatory profit / (loss) before tax but not deductible;

    8.3 income included in regulatory profit / (loss) before tax but not taxable;

    8.4 expenditure or loss deductible but not in regulatory profit / (loss) before tax.

**Box 5: Regulatory tax allowance: permanent differences**

| | | |
|---|---|---|
| | 5a(ii) Disclosure of Permanent Differences | ***($000s)*** |
| | **Positive permanent differences** | |
| Row 10 | ***Income not included in regulatory profit /(loss) before tax but taxable*** | |
| | Income under section EI 7 of the Income Tax Act 2007 | 8,852 |
| Row 11 | ***Expenditure or loss in regulatory profit /(loss) before tax but not deductible*** | |
| | Non-deductible entertainment | 65 |
| | Non-deductible legal & professional fees | 85 |
| | Other non-deductible items | 7 |
| | | 157 |
| | **Negative permanent differences** | |
| Row 16 | ***Income included in regulatory profit /(loss) before tax but not taxable*** | |
| | Revaluation | 38,684 |
| | Lease incentive | 22 |
| | | 38,706 |
| Row 18 | ***Expenditure or loss deductible but not in regulatory profit /(loss) before tax*** | 0 |

*Regulatory tax allowance: disclosure of temporary differences (5a(vi) of Schedule 5a)*

9. In the box below, provide descriptions and workings of items recorded in the asterisked category ‘Tax effect of other temporary differences’ in 5a(vi) of Schedule 5a.

**Box 6: Temporary differences / Tax effect of other temporary differences (current disclosure year)**

| | $000s | Tax effect 28% |
|---|---|---|
| **Positive Temporary Differences** | | |
| Provision & accruals: | | |
| Accrued employee entitlements & related expenses | 385 | 108 |
| Accruals -General | 404 | 113 |
| Accruals-Operating expenses (O&M) | 1,105 | 309 |
| | 1,894 | 530 |
| **Negative Temporary differences** | | |
| Provision & accruals: | | |
| Provision for doubtful debts | 337 | 94 |
| Accrued ACC levy | 59 | 17 |
| | 396 | 111 |
| Net of positive less negative temporary differences | 1,498 | 419 |

*Related party transactions: disclosure of related party transactions (Schedule 5b)*

10. In the box below, provide descriptions of related party transactions beyond those disclosed on schedule 5b including identification and descriptions as to the nature of directly attributable costs disclosed under clause 2.3.6(1)(b).

**Box 7: Related party transactions**

A detailed description of related party transactions has been disclosed on Schedule 5b.

There have been no related party transactions within the disclosure year that require disclosure under clause 2.3.6 (1) (b).

*Cost allocation (Schedule 5d)*

11. In the box below, comment on cost allocation as disclosed in Schedule 5d. This comment must include information on reclassified items in accordance with clause 2.7.1(2).

| **Box 8: Cost allocation** |
|---|
| There has been no re-classification of items in the disclosure year.<br><br>ABAA (accounting-based allocation approach) has been applied to allocate not directly attributable costs in the disclosure year in accordance with the IM determination. |

*Asset allocation (Schedule 5e)*

12. In the box below, comment on asset allocation as disclosed in Schedule 5e. This comment must include information on reclassified items in accordance with clause 2.7.1(2).

| **Box 9: Commentary on asset allocation** |
|---|
| There has been no re-classification of items in the disclosure year.<br><br>Vector satisfies the thresholds in the IM determination to enable the application of ACAM to allocate not directly attributable fixed assets. |

*Capital Expenditure for the Disclosure Year (Schedule 6a)*

13. In the box below, comment on capital expenditure for the disclosure year, as disclosed in Schedule 6a. This comment must include-

    13.1 a description of the materiality threshold applied to identify material projects and programmes described in Schedule 6a;

    13.2 information on reclassified items in accordance with clause 2.7.1(2),

| **Box 10: Explanation of capital expenditure for the disclosure year** |
|---|
| The materiality threshold applied to identify material projects and programmes is >$1m.<br><br>There have been no reclassified items. |

*Operational Expenditure for the Disclosure Year (Schedule 6b)*

14. In the box below, comment on operational expenditure for the disclosure year, as disclosed in Schedule 6b. This comment must include-

14.1 commentary on assets replaced or renewed with asset replacement and renewal operating expenditure, as reported in 6b(i) of Schedule 6b;

14.2 information on reclassified items in accordance with clause 2.7.1(2);

14.3 commentary on any material atypical expenditure included in operational expenditure disclosed in Schedule 6b, a including the value of the expenditure the purpose of the expenditure, and the operational expenditure categories the expenditure relates to.

**Box 11: Explanation of operational expenditure for the disclosure year**

Vector has not replaced any assets under operational expenditure in the disclosure year (excludes replacement of components of assets that do extend the life of the asset). All asset replacement and renewal of assets has been classified as capital expenditure.

There has been one re-classification in the disclosure year. The 2013 disclosure classified costs incurred from issue of materials consumed as ‘system operations and network support’ on the basis that the costs related to "logistics (procurement) and stores". On further analysis, it became apparent that all such issues related to reactive work undertaken in the short term in response to an unplanned event. As such, these costs have been reclassified as ‘service interruptions and emergencies’.

There has been no material atypical expenditure recognised in the disclosure year.

*Variance between forecast and actual expenditure (Schedule 7)*

15. In the box below, comment on variance in actual to forecast expenditure for the disclosure year, as reported in Schedule 7. This comment must include information on reclassified items in accordance with clause 2.7.1(2).

**Box 12: Explanatory comment on variance in actual to forecast expenditure**

Consumer connection spend increased 36% vs forecast , due to an increase in residential connections particularly subdivision reticulation activities there are a number of large developments underway in Auckland e.g. Hobsonville, Flatbush and Millwater.

Reliability, safety and environment expenditure increased by 6% as a result of the following:

- Quality of supply sub-category increased by 253% mainly due to installation of batteries to manage power quality issues. Installing batteries in conjunction with solar panels has been assigned to maintaining quality of supply as the batteries mitigate network effects as result of intermiitent generation and uncontrolled reverse flows on the network
- Legislative and regulatory sub-category reduced by 25% mainly due to further cost optimisation during the implementation of seismic strengthening projects.
- Other reliability, safety and environment sub-category is $1.7m lower due to re-prioritisation and deferment of long term reliability improvement projects based on additional risk analysis.

Non network capex is lower by 15% due to lower than planned spend on non network projects.

Operating Expenditure is largely in line with the prior forecast.

7(v) Insurance

The forecasts were predicated on advice provided by our brokers on the potential impact of the Natural Disasters including the Christchurch earthquake on property insurance capacity and premiums. These forecast increases in premiums did not eventuate and as a result the actual cost of insurance is under the target.

*Information relating to revenue and quantities for the disclosure year*

16. In the box below provide-

    16.1 a comparison of the target revenue disclosed before the start of the disclosure year, in accordance with clauses 2.4.1 and 2.4.3(3) to total billed line charge revenue for the disclosure year, as disclosed in Schedule 8; and

    16.2 explanatory comment on reasons for any material differences between target revenue and total billed line charge revenue.

| **Box 13: Explanatory comment relating to revenue for the disclosure year** |
|---|
| Vector’s target revenue for the year ended on 31 March 2014, as included in our pricing methodology disclosure pursuant to clause 2.4.1(1) and 2.4.3(3) of the electricity Distribution Information Disclosure Determination 2012, was $639m. Total billed line charge revenue for the disclosure year ended on 31 March 2014 was $592m, as disclosed in schedule 8 of this disclosure. The variance between target revenue and total billed line charge is $47m.<br><br>The material sources of variance arise from lower observed growth than forecast. As a result of the declining trend in consumption per consumer actual revenue billed was significantly less than the target. |

*Network Reliability for the Disclosure Year (Schedule 10)*

17. In the box below, comment on network reliability for the disclosure year, as disclosed in Schedule 10.

**Box 14: Commentary on network reliability for the disclosure year**

Vector exceeded the RY14 regulatory SAIDI reliability limit. This is the first time Vector has exceeded the current SAIDI reliability limit in the last 7 years. It is acknowledged that network reliability is a combination of many factors, however, Vector believe that the high SAIDI values seen in RY14 are primarily attributable to a combination of higher than average wind loading induced faults and a one-off asset failure at Hepburn Rd. These factors are discussed below;

**<u>Hepburn Rd Circuit Breaker Failure</u>**

This single point asset failure occurred on 7/11/13 when a Vector-owned 33kV oil circuit breaker, located at Transpower's Hepburn Rd Grid Exit Point, exploded. The resulting outage affected 47,000 downstream customers, some experiencing a nearly five-hour outage. The network-level SAIDI impact of this single event was 17.3 minutes, the associated SAIFI impact was 0.09.

This event exceeded Vector's Major Event Day (MED) SAIDI boundary value of 8.9 minutes. As part of the normalisation process Vector's SAIDI value for 07/11/13 was capped at 8.9 minutes with the remaining 9.6 minutes being removed from the SAIDI total.

After a thorough investigation, the Hepburn Rd event was considered by Vector to be a one-off incident, very unlikely to reoccur and not indicative of any deterioration in the underlying integrity or ongoing quality of the network. A number of mitigating actions that will further reduce the likelihood of a similar event (on this equipment type) reoccurring have been implemented.

Further details surrounding this event can be sourced from the publically available Annual Compliance Statement 30 May 2014, reference Appendix 7 – Major Event Day Explanation.

**<u>High levels of damaging wind</u>**

The most volatile causal factor impacting the achievement of annual quality standards continues to be the impact of high wind speed weather events. With the exception of the Circuit Breaker failure discussed above, all of Vector's previous MED's over the past decade have been due to high wind speed weather events.

Vector's network is designed to withstand 'normal' wind speed weather conditions. Past experience has shown that Vector's network performs well when exposed to sustained wind speeds of up to 60km/hr but performance deteriorates significantly when higher wind speeds are experienced. During the 2014 regulatory year, Vector's network was exposed to an unusually high number of periods where wind reached potentially damaging (>60 km/hr) speeds. Few of these periods reached extreme levels (which might trigger MED relief) but cumulatively a very high proportion of Vector's SAIDI was accrued on these windy days.

This is the first time Vector has exceeded the current SAIDI reliability limit in the last 7 years. As this limit is set one standard deviation above the average, statistically speaking (assuming a normal distribution around the average), Vector would expect to exceed this limit 16% of the time (once every 6 years).

Further explanation regarding the network impact of high winds is presented in the publically available Annual Compliance Statement 30 May 2014, reference Appendix 8 – Explanation for exceeding 2014 reliability limit.

Vector believe that the high SAIDI values (and elevated equipment failure rates) seen in RY14 are primarily attributable to a combination of higher than average wind loading induced faults and the single point circuit breaker failure event at Hepburn Rd. This result does not reflect a general deterioration in network quality.

Vector has a comprehensive preventative maintenance program. In light of the low consumer appetite for improved reliability (given the associated cost implications) and the fact that network wind resilience has not deteriorated, no material changes to maintenance practices or design standards are currently planned. Ongoing network performance will continue to be monitored closely and remedial action will be taken should statistically meaningful trends be measured around network performance and quality.

When reviewing the metrics presented in Schedule 10, the following points should also be noted:

Vector has elected to report normalised SAIFI and SAIDI values for each sub-network based on normalised assessment datasets for each sub-network, with boundary values calculated using the reference data set for the sub-networks. This is one of two options the Commission provided for EDBs to report on sub-network reliability (ref: External Issues Register response #231). Vector has chosen this option on the basis that this methodology provides more meaningful analysis of the actual performance of each sub-network.

*Insurance cover*

18. In the box below provide details of any insurance cover for the assets used to provide electricity distribution services, including-

    18.1 the EDB's approaches and practices in regard to the insurance of assets used to provide electricity distribution services, including the level of insurance;

    18.2 in respect of any self insurance, the level of reserves, details of how reserves are managed and invested, and details of any reinsurance.

**Box 15: Explanation of insurance cover**

Insurance costs are allocated to the electricity segment through an assessment of the proportion of assets insured for property insurance.

The types of cover purchased for these assets include material damage, business interruption and contract works insurance.

In respect of the insurance cover the information reflects "insurance years" running from 1 September to 30 August each year and premium costs are allocated to the appropriate regulatory years to derive the premium values.

| | |
|---|---|
| Company Name | Vector |
| For Year Ended | 31 March 2014 |

## Schedule 14a Mandatory Explanatory Notes on Forecast Information

*(In this Schedule, clause references are to the Electricity Distribution Information Disclosure Determination 2012)*

1. This Schedule provides for EDBs to provide explanatory notes to reports prepared in accordance with clause 2.6.5.

2. This Schedule is mandatory—EDBs must provide the explanatory comment specified below, in accordance with clause 2.7.2. This information is not part of the audited disclosure information, and so is not subject to the assurance requirements specified in section 2.8.

*Commentary on difference between nominal and constant price capital expenditure forecasts (Schedule 11a)*

3. In the box below, comment on the difference between nominal and constant price capital expenditure for the disclosure year, as disclosed in Schedule 11a.

**Box 1: Commentary on difference between nominal and constant price capital expenditure forecasts**

Vector has used the NZIER (New Zealand Institute of Economic Research) December 2013 PPI (Producer Price Index-outputs) forecast from 2014 to 2018. Thereafter we have assumed a longterm inflation rate of 2.5%. The constant price capital expenditure forecast is then inflated by the above mentioned PPI forecast to nominal price capital expenditure forecasts.

*Commentary on difference between nominal and constant price operational expenditure forecasts (Schedule 11b)*

4. In the box below, comment on the difference between nominal and constant price operational expenditure for the disclosure year, as disclosed in Schedule 11b.

**Box 2: Commentary on difference between nominal and constant price operational expenditure forecasts**

Vector has used the NZIER (New Zealand Institute of Economic Research) December 2013 PPI (Producer Price Index-outputs) forecast from 2014 to 2018. Thereafter we have assumed a longterm inflation rate of 2.5%. The constant price operating expenditure forecast is then inflated by the above mentioned PPI forecast to nominal price operating expenditure forecasts.

| | |
|---|---|
| Company Name | Vector |
| For Year Ended | 31 March 2014 |

## Schedule 15 Voluntary Explanatory Notes

*(In this Schedule, clause references are to the Electricity Distribution Information Disclosure Determination 2012)*

1. This Schedule enable EDBs to provide, should they wish to-

    1.1 additional explanatory comment to reports prepared in accordance with clauses 2.3.1, 2.4.21, 2.4.22, 2.5.1, 2.5.2, and 2.6.5;

    1.2 information on any substantial changes to information disclosed in relation to a prior disclosure year, as a result of final wash-ups.

2. Information in this Schedule is not part of the audited disclosure information, and so is not subject to the assurance requirements specified in section 2.8.

3. Provide additional explanatory comment in the box below.

**Box 1: Voluntary explanatory comment on disclosed information**

**Schedules 9a and 9b – Asset Categorisation:** In reference to response #249 on the Commission's Issues Register for Electricity and Gas Information Disclosure, Vector can confirm that it has been unable to align the following assets to any of the Commerce Commission provided categories in Schedules 9a and 9b:

| Asset Class |
|---|
| LV Pits and Pillars (network boxes and cabinets) |
| LV Switch Board |
| LV Switch |
| LV Overhead Switch |

No category was found that these assets could even be closely aligned to, and as such we have not disclosed any of these assets in Schedules 9a or 9b.

**Schedules 9a and 9b – Asset Quantities:** A number of data quality improvements to the information in these schedules have been made since the previous 2013 disclosure. This means that for a number of asset classes, the quantity and age profile information of assets installed pre-2014 may not be identical to that disclosed last year.

**Schedule 9b – Asset Age Profile:** Last year, Vector reported installation date of equipment in this schedule (as implied by the Schedule sub-titles). However, in our ERP system the installation date field may reflect the date an asset was put into service following a relocation. This means that the installation date is not representative of the actual age of the asset. This year we have revised our approach and have used 'capitalised date' as the primary source of information for this schedule rather than 'installation date'. We believe this better meets the intent of the schedule.

**Schedule 9c – Circuit in Sensitive Areas:** Vector's interpretation of this requirement (based on guidance provided in response #10 of the Commission's Issues Register for Electricity and Gas Information Disclosure) is not just to identify circuit length that is routed through generic sensitive areas (e.g. conservation areas), but to specifically identify those areas where Vector's costs or normal practices must be adjusted for sensitivity reasons.

We have taken into account the Heritage New Zealand Act 2014, the Waitakere Ranges Heritage Area Protection Act 2008, as well as Auckland Council's draft Unitary Plan. The latter provides definitive "overlays" which highlight areas where Vector's normal practices need to change based on Council's preference, or where additional costs will be incurred to manage the Council's requirements. This includes areas such as the following, which we have incorporated into our analysis:

- CBD (requiring night-works or additional traffic management)
- Notable trees
- Outstanding Natural Features
- Outstanding Natural Landscapes
- Volcanic viewshafts & height sensitive areas (requiring undergrounding)
- Ridgeline protection
- Indicative roads and open space
- Special character areas
- Sites and places of significance or value to mana whenua
- Historic heritage place
- Auckland museum viewshaft

**Schedule 9c – Circuit requiring Vegetation Management:** Vector actively inspects 100% of our subtransmission overhead lines on an annual basis, and 100% of our distribution overhead lines over a 3 year rolling cycle (33% per year) for vegetation growth. We then execute trimming work within the cut-zone, as prescribed by the Electricity (Hazards from Trees) Regulations 2003.

**Schedule 9e and 12b – Transformer Capacity:** As with previous Vector disclosures (and in line with the guidance provided in response #264 on the Commission's Issues Register for Electricity and Gas Information Disclosure), the non-EDB owned distribution transformer capacity reported in Schedule 9e (and Schedule 12b) is an estimated figure only. This dataset is known to be incomplete, as Vector has no mechanism (or authority) to collect data on non-EDB owned transformers, and relies primarily on voluntary disclosures from customers.

**Schedule 11a – Capex Forecast and Schedule 12c – Demand Forecast:** Vector has made a correction to the forecast 2014 value of commissioned assets in Schedule 11a, and the forecast distributed generation – number of connections in Schedule 12c, both of which were disclosed in March 2014 in the Electricity Asset Management Plan Update.