EDB Information Disclosure Requirements

Information Templates

for

Schedules 1–10

Company Name	Vector
Disclosure Date	30 August 2019
Disclosure Year (year ended)	31 March 2019

Templates for Schedules 1–10 excluding 5f–5g

Template Version 4.1. Prepared 21 December 2017

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Disclosure Template Instructions

These templates have been prepared for use by EDBs when making disclosures under clauses 2.3.1, 2.4.21, 2.4.22, 2.5.1, and 2.5.2 of the Electricity Distribution Information Disclosure Determination 2012.

Company Name and Dates

To prepare the templates for disclosure, the supplier's company name should be entered in cell C8, the date of the last day of the current (disclosure) year should be entered in cell C12, and the date on which the information is disclosed should be entered in cell C10 of the CoverSheet worksheet.
The cell C12 entry (current year) is used to calculate disclosure years in the column headings that show above some of the tables and in labels adjacent to some entry cells. It is also used to calculate the 'For year ended' date in the template title blocks (the title blocks are the light green shaded areas at the top of each template).
The cell C8 entry (company name) is used in the template title blocks.
Dates should be entered in day/month/year order (Example -"1 April 2013").

Data Entry Cells and Calculated Cells

Data entered into this workbook may be entered only into the data entry cells. Data entry cells are the bordered, unshaded areas (white cells) in each template. Under no circumstances should data be entered into the workbook outside a data entry cell.
In some cases, where the information for disclosure is able to be ascertained from disclosures elsewhere in the workbook, such information is disclosed in a calculated cell.

Validation Settings on Data Entry Cells

To maintain a consistency of format and to help guard against errors in data entry, some data entry cells test keyboard entries for validity and accept only a limited range of values. For example, entries may be limited to a list of category names, to values between 0% and 100%, or either a numeric entry or the text entry "N/A". Where this occurs, a validation message will appear when data is being entered. These checks are applied to keyboard entries only and not, for example, to entries made using Excel's copy and paste facility.

Conditional Formatting Settings on Data Entry Cells

Schedule 2 cells G79 and I79:L79 will change colour if the total cashflows do not equal the corresponding values in table 2(ii).
Schedule 4 cells P99:P105 and P107 will change colour if the RAB values do not equal the corresponding values in table 4(ii).
Schedule 9b columns AA to AE (2013 to 2017) contain conditional formatting. The data entry cells for future years are hidden (are changed from white to yellow).
Schedule 9b cells AG10 to AG60 will change colour if the total assets at year end for each asset class does not equal the corresponding values in column I in Schedule 9a.
Schedule 9c cell G30 will change colour if G30 (overhead circuit length by terrain) does not equal G18 (overhead circuit length by operating voltage).

Inserting Additional Rows and Columns

The templates for schedules 4, 5b, 5c, 5d, 5e, 6a, 8, 9d, and 9e may require additional rows to be inserted in tables marked 'include additional rows if needed' or similar. Column A schedule references should not be entered in additional rows, and should be deleted from additional rows that are created by copying and pasting rows that have schedule references.
Additional rows in schedules 5c, 6a, and 9e must not be inserted directly above the first row or below the last row of a table. This is to ensure that entries made in the new row are included in the totals.
Schedules 5d and 5e may require new cost or asset category rows to be inserted in allocation change tables 5d(iii) and 5e(ii). Accordingly, cell protection has been removed from rows 77 and 78 of the respective templates to allow blocks of rows to be copied. The four steps to add new cost category rows to table 5d(iii) are: Select Excel rows 69:77, copy, select Excel row 78, insert copied cells. Similarly, for table 5e(ii): Select Excel rows 70:78, copy, select Excel row 79, then insert copied cells.
The template for schedule 8 may require additional columns to be inserted between column P and U. To avoid interfering with the title block entries, these should be inserted to the left of column S. If inserting additional columns, the formulas for standard consumers total, non-standard consumers totals and total for all consumers will need to be copied into the cells of the added columns. The formulas can be found in the equivalent cells of the existing columns.

Disclosures by Sub-Network

If the supplier has sub-networks, schedules 8, 9a, 9b, 9c, 9e, and 10 must be completed for the network and for each sub-network. A copy of the schedule worksheet(s) must be made for each sub-network and named accordingly.

Schedule References

The references labelled 'sch ref' in the leftmost column of each template are consistent with the row references in the Electricity Distribution ID Determination 2012 (as issued on 21 December 2017). They provide a common reference between the rows in the determination and the template.

Description of Calculation References

Calculation cell formulas contain links to other cells within the same template or elsewhere in the workbook. Key cell references are described in a column to the right of each template. These descriptions are provided to assist data entry. Cell references refer to the row of the template and not the schedule reference.

Worksheet Completion Sequence

Calculation cells may show an incorrect value until precedent cell entries have been completed. Data entry may be assisted by completing the schedules in the following order:

1. Coversheet
2. Schedules 5a–5e
3. Schedules 6a–6b
4. Schedule 8
5. Schedule 3
6. Schedule 4
7. Schedule 2
8. Schedule 7
9. Schedules 9a–9e
10. Schedule 10

Company Name	**Vector**
For Year Ended	**31 March 2019**

SCHEDULE 1: ANALYTICAL RATIOS

This schedule calculates expenditure, revenue and service ratios from the information disclosed. The disclosed ratios may vary for reasons that are company specific and, as a result, must be interpreted with care. The Commerce Commission will publish a summary and analysis of information disclosed in accordance with the ID determination. This will include information disclosed in accordance with this and other schedules, and information disclosed under the other requirements of the determination.
This information is part of audited disclosure information (as defined in section 1.4 of the ID determination), and so is subject to the assurance report required by section 2.8.

sch ref

1(i): Expenditure metrics

		Expenditure per GWh energy delivered to ICPs ($/GWh)	Expenditure per average no. of ICPs ($/ICP)	Expenditure per MW maximum coincident system demand ($/MW)	Expenditure per km circuit length ($/km)	Expenditure per MVA of capacity from EDB-owned distribution transformers ($/MVA)
9	**Operational expenditure**	14,356	216	66,987	6,519	27,126
10	Network	5,413	81	25,260	2,458	10,229
11	Non-network	8,942	134	41,727	4,061	16,897
12						
13	**Expenditure on assets**	30,411	457	141,907	13,811	57,464
14	Network	27,138	408	126,632	12,324	51,279
15	Non-network	3,273	49	15,275	1,487	6,185

1(ii): Revenue metrics

		Revenue per GWh energy delivered to ICPs ($/GWh)	Revenue per average no. of ICPs ($/ICP)
19	**Total consumer line charge revenue**	74,403	1,118
20	Standard consumer line charge revenue	77,785	1,084
21	Non-standard consumer line charge revenue	31,684	658,167

1(iii): Service intensity measures

25	Demand density	97	*Maximum coincident system demand per km of circuit length (for supply) (kW/km)*
26	Volume density	454	*Total energy delivered to ICPs per km of circuit length (for supply) (MWh/km)*
27	Connection point density	30	*Average number of ICPs per km of circuit length (for supply) (ICPs/km)*
28	Energy intensity	15,031	*Total energy delivered to ICPs per average number of ICPs (kWh/ICP)*

1(iv): Composition of regulatory income

		($000)	% of revenue
32	Operational expenditure	121,961	19.51%
33	Pass-through and recoverable costs excluding financial incentives and wash-ups	221,496	35.44%
34	Total depreciation	108,729	17.40%
35	Total revaluations	44,091	7.05%
36	Regulatory tax allowance	46,418	7.43%
37	Regulatory profit/(loss) including financial incentives and wash-ups	166,526	26.64%
38	**Total regulatory income**	625,022	

1(v): Reliability

42	Interruption rate	20.40	*Interruptions per 100 circuit km*

Company Name	**Vector**
For Year Ended	**31 March 2019**

SCHEDULE 2: REPORT ON RETURN ON INVESTMENT

This schedule requires information on the Return on Investment (ROI) for the EDB relative to the Commerce Commission's estimates of post tax WACC and vanilla WACC. EDBs must calculate their ROI based on a monthly basis if required by clause 2.3.3 of the ID Determination or if they elect to. If an EDB makes this election, information supporting this calculation must be provided in 2(iii).
EDBs must provide explanatory comment on their ROI in Schedule 14 (Mandatory Explanatory Notes).
This information is part of audited disclosure information (as defined in section 1.4 of the ID determination), and so is subject to the assurance report required by section 2.8.

sch ref		CY-2	CY-1	Current Year CY
7	**2(i): Return on Investment**			
8		31 Mar 17	31 Mar 18	31 Mar 19
9	**ROI – comparable to a post tax WACC**	%	%	%
10	Reflecting all revenue earned	6.47%	4.90%	5.23%
11	Excluding revenue earned from financial incentives	6.47%	4.90%	5.34%
12	Excluding revenue earned from financial incentives and wash-ups	6.54%	4.97%	5.41%
13				
14	**Mid-point estimate of post tax WACC**	4.77%	5.04%	4.75%
15	25th percentile estimate	4.05%	4.36%	4.07%
16	75th percentile estimate	5.48%	5.72%	5.43%
17				
18				
19	**ROI – comparable to a vanilla WACC**			
20	Reflecting all revenue earned	7.01%	5.49%	5.74%
21	Excluding revenue earned from financial incentives	7.01%	5.49%	5.85%
22	Excluding revenue earned from financial incentives and wash-ups	7.08%	5.56%	5.92%
23				
24	**WACC rate used to set regulatory price path**	7.19%	7.19%	7.19%
25				
26	**Mid-point estimate of vanilla WACC**	5.31%	5.60%	5.26%
27	25th percentile estimate	4.59%	4.92%	4.58%
28	75th percentile estimate	6.03%	6.29%	5.94%
29				

30	**2(ii): Information Supporting the ROI**		**($000)**	
31				
32	Total opening RAB value	2,951,716		
33	*plus* Opening deferred tax	(83,664)		
34	**Opening RIV**		2,868,052	
35				
36	**Line charge revenue**		632,109	
37				
38	Expenses cash outflow	343,457		
39	*add* Assets commissioned	203,460		
40	*less* Asset disposals	7,412		
41	*add* Tax payments	37,221		
42	*less* Other regulated income	(7,087)		
43	**Mid-year net cash outflows**		583,813	
44				
45	**Term credit spread differential allowance**		3,984	
46				
47	Total closing RAB value	3,075,471		
48	*less* Adjustment resulting from asset allocation	(7,655)		
49	*less* Lost and found assets adjustment	–		
50	*plus* Closing deferred tax	(92,861)		
51	**Closing RIV**		2,990,265	
52				
53	**ROI – comparable to a vanilla WACC**			5.74%
54				
55	Leverage (%)			42%
56	Cost of debt assumption (%)			4.33%
57	Corporate tax rate (%)			28%
58				
59	**ROI – comparable to a post tax WACC**			5.23%
60				

Company Name	**Vector**
For Year Ended	**31 March 2019**

SCHEDULE 2: REPORT ON RETURN ON INVESTMENT

This schedule requires information on the Return on Investment (ROI) for the EDB relative to the Commerce Commission's estimates of post tax WACC and vanilla WACC. EDBs must calculate their ROI based on a monthly basis if required by clause 2.3.3 of the ID Determination or if they elect to. If an EDB makes this election, information supporting this calculation must be provided in 2(iii).
EDBs must provide explanatory comment on their ROI in Schedule 14 (Mandatory Explanatory Notes).
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sch ref

2(iii): Information Supporting the Monthly ROI

Opening RIV — N/A

	Line charge revenue	Expenses cash outflow	Assets commissioned	Asset disposals	Other regulated income	Monthly net cash outflows
April						–
May						–
June						–
July						–
August						–
September						–
October						–
November						–
December						–
January						–
February						–
March						–
Total	–	–	–	–	–	–

Tax payments — N/A

Term credit spread differential allowance — N/A

Closing RIV — N/A

Monthly ROI – comparable to a vanilla WACC — N/A

Monthly ROI – comparable to a post tax WACC — N/A

2(iv): Year-End ROI Rates for Comparison Purposes

Year-end ROI – comparable to a vanilla WACC — 5.85%

Year-end ROI – comparable to a post tax WACC — 5.34%

** these year-end ROI values are comparable to the ROI reported in pre 2012 disclosures by EDBs and do not represent the Commission's current view on ROI.*

2(v): Financial Incentives and Wash-Ups

Net recoverable costs allowed under incremental rolling incentive scheme	–	
Purchased assets – avoided transmission charge	–	
Energy efficiency and demand incentive allowance	–	
Quality incentive adjustment	(4,449)	
Other financial incentives	–	
Financial incentives		(4,449)

Impact of financial incentives on ROI — –0.11%

Input methodology claw-back	–	
CPP application recoverable costs	–	
Catastrophic event allowance	–	
Capex wash-up adjustment	(2,616)	
Transmission asset wash-up adjustment	–	
2013–15 NPV wash-up allowance	–	
Reconsideration event allowance	–	
Other wash-ups	–	
Wash-up costs		(2,616)

Impact of wash-up costs on ROI — –0.07%

Company Name	**Vector**
For Year Ended	**31 March 2019**

SCHEDULE 3: REPORT ON REGULATORY PROFIT

This schedule requires information on the calculation of regulatory profit for the EDB for the disclosure year. All EDBs must complete all sections and provide explanatory comment on their regulatory profit in Schedule 14 (Mandatory Explanatory Notes).
This information is part of audited disclosure information (as defined in section 1.4 of the ID determination), and so is subject to the assurance report required by section 2.8.

sch ref

3(i): Regulatory Profit

			($000)
		Income	
		Line charge revenue	632,109
	plus	Gains / (losses) on asset disposals	(7,087)
	plus	Other regulated income (other than gains / (losses) on asset disposals)	–
		Total regulatory income	625,022
		Expenses	
	less	Operational expenditure	121,961
	less	Pass-through and recoverable costs excluding financial incentives and wash-ups	221,496
		Operating surplus / (deficit)	281,565
	less	Total depreciation	108,729
	plus	Total revaluations	44,091
		Regulatory profit / (loss) before tax	216,927
	less	Term credit spread differential allowance	3,984
	less	Regulatory tax allowance	46,418
		Regulatory profit/(loss) including financial incentives and wash-ups	166,526

3(ii): Pass-through and Recoverable Costs excluding Financial Incentives and Wash-Ups

		($000)
	Pass through costs	
	Rates	8,085
	Commerce Act levies	1,187
	Industry levies	1,914
	CPP specified pass through costs	–
	Recoverable costs excluding financial incentives and wash-ups	
	Electricity lines service charge payable to Transpower	197,097
	Transpower new investment contract charges	12,084
	System operator services	–
	Distributed generation allowance	1,129
	Extended reserves allowance	–
	Other recoverable costs excluding financial incentives and wash-ups	–
	Pass-through and recoverable costs excluding financial incentives and wash-ups	221,496

3(iii): Incremental Rolling Incentive Scheme

			($000)	
			CY-1 31 Mar 18	**CY 31 Mar 19**
		Allowed controllable opex	–	–
		Actual controllable opex	–	–
		Incremental change in year		–

			Previous years' incremental change	**Previous years' incremental change adjusted for inflation**
	CY-5	31 Mar 14	–	–
	CY-4	31 Mar 15	–	–
	CY-3	31 Mar 16	–	–
	CY-2	31 Mar 17	–	–
	CY-1	31 Mar 18	–	–
	Net incremental rolling incentive scheme			–
	Net recoverable costs allowed under incremental rolling incentive scheme			–

3(iv): Merger and Acquisition Expenditure

		($000)
	Merger and acquisition expenditure	–

Provide commentary on the benefits of merger and acquisition expenditure to the electricity distribution business, including required disclosures in accordance with section 2.7, in Schedule 14 (Mandatory Explanatory Notes)

3(v): Other Disclosures

		($000)
	Self-insurance allowance	–

Company Name	**Vector**
For Year Ended	**31 March 2019**

SCHEDULE 4: REPORT ON VALUE OF THE REGULATORY ASSET BASE (ROLLED FORWARD)

This schedule requires information on the calculation of the Regulatory Asset Base (RAB) value to the end of this disclosure year. This informs the ROI calculation in Schedule 2.
EDBs must provide explanatory comment on the value of their RAB in Schedule 14 (Mandatory Explanatory Notes). This information is part of audited disclosure information (as defined in section 1.4 of the ID determination), and so is subject to the assurance report required by section 2.8.

sch ref

4(i): Regulatory Asset Base Value (Rolled Forward)

		for year ended	RAB 31 Mar 15 ($000)	RAB 31 Mar 16 ($000)	RAB 31 Mar 17 ($000)	RAB 31 Mar 18 ($000)	RAB 31 Mar 19 ($000)	
	Total opening RAB value		2,618,855	2,660,795	2,682,398	2,879,136	2,951,716	-
less	**Total depreciation**		92,306	94,495	96,289	108,316	108,729	-
plus	**Total revaluations**		6,565	11,077	57,761	31,561	44,091	-
plus	**Assets commissioned**		137,234	116,194	249,121	156,889	203,460	-
less	**Asset disposals**		9,358	11,139	15,950	7,540	7,412	-
plus	**Lost and found assets adjustment**		–	–	–	–	–	
plus	**Adjustment resulting from asset allocation**		(195)	(34)	2,095	(14)	(7,655)	
	Total closing RAB value		2,660,795	2,682,398	2,879,136	2,951,716	3,075,471	

4(ii): Unallocated Regulatory Asset Base

		Unallocated RAB * ($000)	Unallocated RAB * ($000)	RAB ($000)	RAB ($000)
	Total opening RAB value		2,962,194		2,951,716
less					
	Total depreciation		111,860		108,729
plus					
	Total revaluations		44,230		44,091
plus					
	Assets commissioned (other than below)	203,278		193,578	
	Assets acquired from a regulated supplier	–		–	
	Assets acquired from a related party	9,882		9,882	
	Assets commissioned		213,160		203,460
less					
	Asset disposals (other than below)	7,417		7,412	
	Asset disposals to a regulated supplier	–		–	
	Asset disposals to a related party	–		–	
	Asset disposals		7,417		7,412
plus	**Lost and found assets adjustment**		–		–
plus	**Adjustment resulting from asset allocation**				(7,655)
	Total closing RAB value		3,100,307		3,075,471

** The 'unallocated RAB' is the total value of those assets used wholly or partially to provide electricity distribution services without any allowance being made for the allocation of costs to services provided by the supplier that are not electricity distribution services. The RAB value represents the value of these assets after applying this cost allocation. Neither value includes works under construction.*

4(iii): Calculation of Revaluation Rate and Revaluation of Assets

	CPI_4	1,026
	$CPI_4{}^{-4}$	1,011
	Revaluation rate (%)	1.50%

		Unallocated RAB * ($000)	Unallocated RAB * ($000)	RAB ($000)	RAB ($000)
	Total opening RAB value	2,962,194		2,951,716	
less	Opening value of fully depreciated, disposed and lost assets	13,008		11,797	
	Total opening RAB value subject to revaluation	2,949,186		2,939,919	
	Total revaluations		44,230		44,091

4(iv): Roll Forward of Works Under Construction

		Unallocated works under construction	Unallocated works under construction	Allocated works under construction	Allocated works under construction
	Works under construction—preceding disclosure year		61,212		60,728
plus	Capital expenditure	190,518		187,928	
less	Assets acquired from a related party	–		–	
less	Assets commissioned	213,160		203,460	
plus	Adjustment resulting from asset allocation			78	
	Works under construction - current disclosure year		38,570		45,274
	Highest rate of capitalised finance applied				5.72%

4(v): Regulatory Depreciation

		Unallocated RAB * ($000)	Unallocated RAB * ($000)	RAB ($000)	RAB ($000)
	Depreciation - standard	80,451		80,451	
	Depreciation - no standard life assets	31,409		28,278	
	Depreciation - modified life assets				
	Depreciation - alternative depreciation in accordance with CPP				
	Total depreciation		111,860		108,729

4(vi): Disclosure of Changes to Depreciation Profiles

($000 unless otherwise specified)

Asset or assets with changes to depreciation*	Reason for non-standard depreciation (text entry)	Depreciation charge for the period (RAB)	Closing RAB value under 'non-standard' depreciation	Closing RAB value under 'standard' depreciation

** include additional rows if needed*

Company Name	**Vector**
For Year Ended	**31 March 2019**

SCHEDULE 4: REPORT ON VALUE OF THE REGULATORY ASSET BASE (ROLLED FORWARD)

This schedule requires information on the calculation of the Regulatory Asset Base (RAB) value to the end of this disclosure year. This informs the ROI calculation in Schedule 2.
EDBs must provide explanatory comment on the value of their RAB in Schedule 14 (Mandatory Explanatory Notes). This information is part of audited disclosure information (as defined in section 1.4 of the ID determination), and so is subject to the assurance report required by section 2.8.

sch ref

4(vii): Disclosure by Asset Category

($000 unless otherwise specified)

			Subtransmission lines	Subtransmission cables	Zone substations	Distribution and LV lines	Distribution and LV cables	Distribution substations and transformers	Distribution switchgear	Other network assets	Non-network assets	Total	
99		**Total opening RAB value**	76,450	365,309	272,345	323,167	780,707	269,915	185,496	636,816	41,511	2,951,716	
100	*less*	Total depreciation	2,145	10,960	10,408	9,716	26,146	9,166	8,059	21,970	10,159	108,729	
101	*plus*	Total revaluations	1,145	5,477	4,072	4,819	11,694	4,031	2,745	9,536	572	44,091	
102	*plus*	Assets commissioned	(521)	1,497	12,838	18,963	38,922	16,409	31,715	57,269	26,368	203,460	
103	*less*	Asset disposals	104	72	727	1,840	616	1,046	2,447	560	–	7,412	
104	*plus*	Lost and found assets adjustment	–	–	–	–	–	–	–	–	–	–	
105	*plus*	Adjustment resulting from asset allocation	(135)	–	–	(3,538)	(2,185)	–	–	(1,852)	55	(7,655)	
106	*plus*	Asset category transfers	–	–	–	–	–	–	–	–	–	–	
107		**Total closing RAB value**	74,690	361,251	278,120	331,855	802,376	280,143	209,450	679,239	58,347	3,075,471	
108													
109		**Asset Life**											
110		Weighted average remaining asset life	43	46	32	42	36	34	27	31	11	(years)	
111		Weighted average expected total asset life	59	72	43	58	61	45	37	40	16	(years)	

Company Name	**Vector**
For Year Ended	**31 March 2019**

SCHEDULE 5a: REPORT ON REGULATORY TAX ALLOWANCE

This schedule requires information on the calculation of the regulatory tax allowance. This information is used to calculate regulatory profit/loss in Schedule 3 (regulatory profit). EDBs must provide explanatory commentary on the information disclosed in this schedule, in Schedule 14 (Mandatory Explanatory Notes).
This information is part of audited disclosure information (as defined in section 1.4 of the ID determination), and so is subject to the assurance report required by section 2.8.

sch ref					
7	**5a(i): Regulatory Tax Allowance**				**($000)**
8		**Regulatory profit / (loss) before tax**			216,927
9					
10	*plus*	Income not included in regulatory profit / (loss) before tax but taxable	–	*	
11		Expenditure or loss in regulatory profit / (loss) before tax but not deductible	5,557	*	
12		Amortisation of initial differences in asset values	34,301		
13		Amortisation of revaluations	9,519		
14					49,377
15					
16	*less*	Total revaluations	44,091		
17		Income included in regulatory profit / (loss) before tax but not taxable	–	*	
18		Discretionary discounts and customer rebates	–		
19		Expenditure or loss deductible but not in regulatory profit / (loss) before tax	1,471	*	
20		Notional deductible interest	54,965		
21					100,527
22					
23		**Regulatory taxable income**			165,777
24					
25	*less*	Utilised tax losses	–		
26		Regulatory net taxable income			165,777
27					
28		Corporate tax rate (%)	28%		
29		**Regulatory tax allowance**			46,418
30					
31	* Workings to be provided in Schedule 14				
32	**5a(ii): Disclosure of Permanent Differences**				
33		In Schedule 14, Box 5, provide descriptions and workings of items recorded in the asterisked categories in Schedule 5a(i).			
34	**5a(iii): Amortisation of Initial Difference in Asset Values**				**($000)**
35					
36		Opening unamortised initial differences in asset values	1,063,321		
37	*less*	Amortisation of initial differences in asset values	34,301		
38	*plus*	Adjustment for unamortised initial differences in assets acquired	–		
39	*less*	Adjustment for unamortised initial differences in assets disposed	1,486		
40		Closing unamortised initial differences in asset values			1,027,534
41					
42		Opening weighted average remaining useful life of relevant assets (years)			31
43					

Company Name	**Vector**
For Year Ended	**31 March 2019**

SCHEDULE 5a: REPORT ON REGULATORY TAX ALLOWANCE

This schedule requires information on the calculation of the regulatory tax allowance. This information is used to calculate regulatory profit/loss in Schedule 3 (regulatory profit). EDBs must provide explanatory commentary on the information disclosed in this schedule, in Schedule 14 (Mandatory Explanatory Notes).
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sch ref				
44	**5a(iv): Amortisation of Revaluations**			**($000)**
45				
46		Opening sum of RAB values without revaluations	2,695,210	
47				
48		Adjusted depreciation	99,210	
49		Total depreciation	108,729	
50		Amortisation of revaluations		9,519
51				
52	**5a(v): Reconciliation of Tax Losses**			**($000)**
53				
54		**Opening tax losses**	–	
55	*plus*	Current period tax losses	–	
56	*less*	Utilised tax losses	–	
57		**Closing tax losses**		–
58	**5a(vi): Calculation of Deferred Tax Balance**			**($000)**
59				
60		**Opening deferred tax**	(83,664)	
61				
62	*plus*	Tax effect of adjusted depreciation	27,779	
63				
64	*less*	Tax effect of tax depreciation	28,976	
65				
66	*plus*	Tax effect of other temporary differences*	592	
67				
68	*less*	Tax effect of amortisation of initial differences in asset values	9,604	
69				
70	*plus*	Deferred tax balance relating to assets acquired in the disclosure year	–	
71				
72	*less*	Deferred tax balance relating to assets disposed in the disclosure year	(269)	
73				
74	*plus*	Deferred tax cost allocation adjustment	744	
75				
76		**Closing deferred tax**		(92,861)
77				
78	**5a(vii): Disclosure of Temporary Differences**			
79		*In Schedule 14, Box 6, provide descriptions and workings of items recorded in the asterisked category in Schedule 5a(vi) (Tax effect of other temporary differences).*		
80				
81	**5a(viii): Regulatory Tax Asset Base Roll-Forward**			
82				**($000)**
83		**Opening sum of regulatory tax asset values**	1,224,826	
84	*less*	Tax depreciation	103,486	
85	*plus*	Regulatory tax asset value of assets commissioned	192,580	
86	*less*	Regulatory tax asset value of asset disposals	4,346	
87	*plus*	Lost and found assets adjustment	–	
88	*plus*	Adjustment resulting from asset allocation	(4,999)	
89	*plus*	Other adjustments to the RAB tax value	–	
90		**Closing sum of regulatory tax asset values**		1,304,575

Company Name	**Vector**
For Year Ended	**31 March 2019**

SCHEDULE 5b: REPORT ON RELATED PARTY TRANSACTIONS

This schedule provides information on the valuation of related party transactions, in accordance with clause 2.3.6 of the ID determination.
This information is part of audited disclosure information (as defined in clause 1.4 of the ID determination), and so is subject to the assurance report required by clause 2.8.

sch ref

5b(i): Summary—Related Party Transactions

	($000)	($000)
Total regulatory income		–
Market value of asset disposals		–
Service interruptions and emergencies	–	
Vegetation management	7,461	
Routine and corrective maintenance and inspection	175	
Asset replacement and renewal (opex)	–	
Network opex		7,636
Business support	–	
System operations and network support	2,845	
Operational expenditure		10,481
Consumer connection	–	
System growth	8,979	
Asset replacement and renewal (capex)	1,507	
Asset relocations	–	
Quality of supply	–	
Legislative and regulatory	–	
Other reliability, safety and environment	3,898	
Expenditure on non-network assets		–
Expenditure on assets		14,384
Cost of financing		457
Value of capital contributions		–
Value of vested assets		–
Capital Expenditure		14,841
Total expenditure		25,322
Other related party transactions		–

5b(iii): Total Opex and Capex Related Party Transactions

Name of related party	Nature of opex or capex service provided	Total value of transactions ($000)
Vector Energy Solutions Limited	System growth	8,979
PowerSmart NZ Limited	Other reliability, safety and environment	3,898
Vector Communications Limited	Asset replacement and renewal (capex)	593
Vector Communications Limited	System operations and network support	2,845
Tree Scape Limited	Vegetation management	7,461
Tree Scape Limited	Routine and corrective maintenance and inspection	175
Tree Scape Limited	Asset replacement and renewal (capex)	914
Total value of related party transactions		24,865

In accordance with clause 2.3.8(1) and (2) of the ID determination, a description showing the connection between Vector and the related parties with which it has had related party transactions in the disclosure year and the principal activities of the related party is disclosed below:

(1) Vector energy solutions limited:
- Relationship: a wholly owned subsidiary of Vector limited
- Principal activities: energy solutions services

(2) Vector communications limited:
- Relationship: a wholly owned subsidiary of Vector limited
- Principal activities: network communications services

(3) TreeScape limited:
- Relationship: an associate in which Vector limited holds a 50% interest
- Principal activities: vegetation management services

(4) PowerSmart NZ limited:
- Relationship: a wholly owned subsidiary of Vector limited
- Principal activities: energy solutions services

Company Name	**Vector**
For Year Ended	**31 March 2019**

SCHEDULE 5c: REPORT ON TERM CREDIT SPREAD DIFFERENTIAL ALLOWANCE

This schedule is only to be completed if, as at the date of the most recently published financial statements, the weighted average original tenor of the debt portfolio (both qualifying debt and non-qualifying debt) is greater than five years.
This information is part of audited disclosure information (as defined in section 1.4 of the ID determination), and so is subject to the assurance report required by section 2.8.

sch ref

5c(i): Qualifying Debt (for public)

Issuing party	Issue date	Pricing date	Original tenor (in years)	Coupon rate (%)	Book value at issue date (NZD)	Book value at date of financial statements (NZD)	Term Credit Spread Difference	Debt issue cost readjustment
[]VCI	15-Mar-17	23-Dec-16	3	BKBM + []VCI				
[]VCI	15-Mar-17	23-Dec-16	3	BKBM + []VCI				
[]VCI	15-Mar-17	23-Dec-16	3	BKBM + []VCI				
[]VCI	2-Feb-18	19-Dec-17	3	BKBM + []VCI				
[]VCI	2-Feb-18	19-Dec-17	3	BKBM + []VCI				
[]VCI	2-Feb-18	19-Dec-17	3	BKBM + []VCI				
[]VCI	2-Feb-18	19-Dec-17	3	BKBM + []VCI				
Subtotal of bank facilities- variable rate						**108,908**		
Capital bonds – fixed rate	**15-Jun-17**	**14-Jun-17**	**5**	**5.7**	**307,205**	**305,894**	**[]VCI**	**[]VCI**
Wholesale Bonds- fixed rate Mar17	14-Mar-17	3-Mar-17	7	4.996	100,000		[]VCI	[]VCI
Wholesale Bonds- fixed rate Jun18	25-Jun-18	21-Jun-18	5.7	4.996	140,000		[]VCI	[]VCI
Subtotal of wholesale bonds- variable rate					**240,000**	**244,372**	**[]VCI**	**[]VCI**
Senior notes - 2004 USPP 15yr	16-Sep-04	19-Jul-04	15	5.75	296,623		[]VCI	[]VCI
Senior notes - 2010 USPP 12yr	22-Dec-10	22-Sep-10	12	[]VCI	250,516		[]VCI	[]VCI
Senior notes - 2014 USPP 7yr	14-Oct-14	19-Jun-14	7	[]VCI	150,000		[]VCI	[]VCI
Senior notes - 2017 USPP 10yr	25-Oct-17	28-Sep-17	10	[]VCI	277,200		[]VCI	[]VCI
Senior notes - 2017 USPP 12yr	25-Oct-17	28-Sep-17	12	[]VCI	138,600		[]VCI	[]VCI
Subtotal of senior notes - USD fixed rate					**1,112,939**	**1,162,927**	**[]VCI**	**[]VCI**
Floating rate notes- variable rate	**26-Oct-05**	**26-Oct-05**	**15**	**BKBM + []VCI**	**350,000**	**349,024**	**[]VCI**	**[]VCI**
Medium term notes – GBP fixed rate	**11-Apr-08**	**8-Apr-08**	**10.8**	**7.625**	**285,614**	**224,189**	**[]VCI**	**[]VCI**
** include additional rows if needed*						2,395,314	9,616	(2,077)

5c(ii): Attribution of Term Credit Spread Differential

Gross term credit spread differential		7,539
Total book value of interest bearing debt	2,395,314	
Leverage	42%	
Average opening and closing RAB values	3,013,594	
Attribution Rate (%)		53%
Term credit spread differential allowance		3,984

Company Name	**Vector**
For Year Ended	**31 March 2019**

SCHEDULE 5d: REPORT ON COST ALLOCATIONS

This schedule provides information on the allocation of operational costs. EDBs must provide explanatory comment on their cost allocation in Schedule 14 (Mandatory Explanatory Notes), including on the impact of any reclassifications. This information is part of audited disclosure information (as defined in section 1.4 of the ID determination), and so is subject to the assurance report required by section 2.8.

sch ref

5d(i): Operating Cost Allocations

	Value allocated ($000s)				
	Arm's length deduction	Electricity distribution services	Non-electricity distribution services	Total	OVABAA allocation increase ($000s)
Service interruptions and emergencies					
Directly attributable		11,557			
Not directly attributable	–	–	–	–	–
Total attributable to regulated service		11,557			
Vegetation management					
Directly attributable		7,461			
Not directly attributable	–	–	–	–	–
Total attributable to regulated service		7,461			
Routine and corrective maintenance and inspection					
Directly attributable		13,741			
Not directly attributable	–	–	–	–	–
Total attributable to regulated service		13,741			
Asset replacement and renewal					
Directly attributable		13,231			
Not directly attributable	–	–	–	–	–
Total attributable to regulated service		13,231			
System operations and network support					
Directly attributable		28,591			
Not directly attributable	–	10,821	1,516	12,337	–
Total attributable to regulated service		39,412			
Business support					
Directly attributable		1,804			
Not directly attributable	–	34,755	15,740	50,495	–
Total attributable to regulated service		36,559			
Operating costs directly attributable		76,385			
Operating costs not directly attributable	–	45,576	17,256	62,832	–
Operational expenditure		121,961			

5d(ii): Other Cost Allocations

Pass through and recoverable costs	($000)
Pass through costs	
Directly attributable	11,186
Not directly attributable	–
Total attributable to regulated service	11,186
Recoverable costs	
Directly attributable	210,310
Not directly attributable	–
Total attributable to regulated service	210,310

5d(iii): Changes in Cost Allocations* †

Change in cost allocation 1

			($000) CY-1	Current Year (CY)
Cost category		Original allocation		
Original allocator or line items		New allocation		
New allocator or line items		Difference	–	–
Rationale for change				

Change in cost allocation 2

			($000) CY-1	Current Year (CY)
Cost category		Original allocation		
Original allocator or line items		New allocation		
New allocator or line items		Difference	–	–
Rationale for change				

Change in cost allocation 3

			($000) CY-1	Current Year (CY)
Cost category		Original allocation		
Original allocator or line items		New allocation		
New allocator or line items		Difference	–	–
Rationale for change				

** a change in cost allocation must be completed for each cost allocator change that has occurred in the disclosure year. A movement in an allocator metric is not a change in allocator or component.*

† include additional rows if needed

Company Name	**Vector**
For Year Ended	**31 March 2019**

SCHEDULE 5e: REPORT ON ASSET ALLOCATIONS

This schedule requires information on the allocation of asset values. This information supports the calculation of the RAB value in Schedule 4.
EDBs must provide explanatory comment on their cost allocation in Schedule 14 (Mandatory Explanatory Notes), including on the impact of any changes in asset allocations. This information is part of audited disclosure information (as defined in section 1.4 of the ID determination), and so is subject to the assurance report required by section 2.8.

sch ref

5e(i): Regulated Service Asset Values

	Value allocated ($000s) Electricity distribution services
Subtransmission lines	
Directly attributable	73,607
Not directly attributable	1,083
Total attributable to regulated service	74,690
Subtransmission cables	
Directly attributable	361,251
Not directly attributable	–
Total attributable to regulated service	361,251
Zone substations	
Directly attributable	278,120
Not directly attributable	–
Total attributable to regulated service	278,120
Distribution and LV lines	
Directly attributable	303,393
Not directly attributable	28,462
Total attributable to regulated service	331,855
Distribution and LV cables	
Directly attributable	784,800
Not directly attributable	17,576
Total attributable to regulated service	802,376
Distribution substations and transformers	
Directly attributable	280,143
Not directly attributable	–
Total attributable to regulated service	280,143
Distribution switchgear	
Directly attributable	209,450
Not directly attributable	–
Total attributable to regulated service	209,450
Other network assets	
Directly attributable	672,511
Not directly attributable	6,728
Total attributable to regulated service	679,239
Non-network assets	
Directly attributable	19,575
Not directly attributable	38,772
Total attributable to regulated service	58,347
Regulated service asset value directly attributable	2,982,850
Regulated service asset value not directly attributable	92,621
Total closing RAB value	3,075,471 –

5e(ii): Changes in Asset Allocations* †

Change in asset value allocation 1 ($000)

			CY-1	Current Year (CY)
Asset category	Subtransmission lines	Original allocation	1,177	1,218
Original allocator or line items	ACAM - 100% allocation	New allocation	1,177	1,083
New allocator or line items	ABAA - capacity ratio	Difference	–	135

Rationale for change: Adoption of the ABAA allocation methodology in place of the ACAM allocation methodology.

Change in asset value allocation 2 ($000)

			CY-1	Current Year (CY)
Asset category	Distribution and LV lines	Original allocation	30,916	32,000
Original allocator or line items	ACAM - 100% allocation	New allocation	30,916	28,462
New allocator or line items	ABAA - capacity ratio	Difference	–	3,538

Rationale for change: Adoption of the ABAA allocation methodology in place of the ACAM allocation methodology.

Change in asset value allocation 3 ($000)

			CY-1	Current Year (CY)
Asset category	Distribution and LV cables	Original allocation	19,092	19,761
Original allocator or line items	ACAM - 100% allocation	New allocation	19,092	17,576
New allocator or line items	ABAA - capacity ratio	Difference	–	2,185

Rationale for change: Adoption of the ABAA allocation methodology in place of the ACAM allocation methodology.

Change in asset value allocation 4

			CY-1	Current Year (CY)
Asset category	Other network assets	Original allocation	8,022	8,580
Original allocator or line items	ACAM - 100% allocation	New allocation	8,022	6,728
New allocator or line items	ABAA - fair value ratio	Difference	–	1,852

Rationale for change: Adoption of the ABAA allocation methodology in place of the ACAM allocation methodology.

** a change in asset allocation must be completed for each allocator or component change that has occurred in the disclosure year. A movement in an allocator metric is not a change in allocator or componer*
† include additional rows if needed

Company Name	**Vector**
For Year Ended	**31 March 2019**

SCHEDULE 6a: REPORT ON CAPITAL EXPENDITURE FOR THE DISCLOSURE YEAR

This schedule requires a breakdown of capital expenditure on assets incurred in the disclosure year, including any assets in respect of which capital contributions are received, but excluding assets that are vested assets. Information on expenditure on assets must be provided on an accounting accruals basis and must exclude finance costs.
EDBs must provide explanatory comment on their expenditure on assets in Schedule 14 (Explanatory Notes to Templates).
This information is part of audited disclosure information (as defined in section 1.4 of the ID determination), and so is subject to the assurance report required by section 2.8.

sch ref

6a(i): Expenditure on Assets

			($000)	($000)
8		Consumer connection		70,729
9		System growth		27,515
10		Asset replacement and renewal		97,343
11		Asset relocations		18,870
12		Reliability, safety and environment:		
13		Quality of supply	3,044	
14		Legislative and regulatory	954	
15		Other reliability, safety and environment	12,102	
16		**Total reliability, safety and environment**		16,100
17		**Expenditure on network assets**		230,557
18		Expenditure on non-network assets		27,810
19				
20		**Expenditure on assets**		258,367
21	*plus*	Cost of financing		1,344
22	*less*	Value of capital contributions		71,783
23	*plus*	Value of vested assets		–
24				
25		**Capital expenditure**		187,928

6a(ii): Subcomponents of Expenditure on Assets (where known)

		($000)
27	Energy efficiency and demand side management, reduction of energy losses	–
28	Overhead to underground conversion	6,231
29	Research and development	3,445

6a(iii): Consumer Connection

		*Consumer types defined by EDB**	($000)	($000)
32		Service connection	12,822	
33		Customer substations	19,553	
34		Business subdivisions	564	
35		Residential subdivisions	28,037	
36		Capacity change	8,906	
		Street lighting	841	
		Easement costs	6	
37		** include additional rows if needed*		
38		**Consumer connection expenditure**		70,729
39				
40	*less*	Capital contributions funding consumer connection expenditure	57,454	
41		**Consumer connection less capital contributions**		13,275

6a(iv): System Growth and Asset Replacement and Renewal

			System Growth ($000)	Asset Replacement and Renewal ($000)
45		Subtransmission	2,812	1,984
46		Zone substations	15,978	16,151
47		Distribution and LV lines	1,001	40,282
48		Distribution and LV cables	2,646	7,072
49		Distribution substations and transformers	3,568	11,867
50		Distribution switchgear	(80)	13,481
51		Other network assets	1,590	6,506
52		**System growth and asset replacement and renewal expenditure**	27,515	97,343
53	*less*	Capital contributions funding system growth and asset replacement and renewal	(60)	250
54		**System growth and asset replacement and renewal less capital contributions**	27,575	97,093
55				

6a(v): Asset Relocations

		*Project or programme**	($000)	($000)
58			–	
59			–	
60			–	
61			–	
62			–	
63		** include additional rows if needed*		
64		All other projects or programmes - asset relocations	18,870	
65		**Asset relocations expenditure**		18,870
66	*less*	Capital contributions funding asset relocations	14,045	
67		**Asset relocations less capital contributions**		4,825

Company Name	**Vector**
For Year Ended	**31 March 2019**

SCHEDULE 6a: REPORT ON CAPITAL EXPENDITURE FOR THE DISCLOSURE YEAR

This schedule requires a breakdown of capital expenditure on assets incurred in the disclosure year, including any assets in respect of which capital contributions are received, but excluding assets that are vested assets. Information on expenditure on assets must be provided on an accounting accruals basis and must exclude finance costs.
EDBs must provide explanatory comment on their expenditure on assets in Schedule 14 (Explanatory Notes to Templates).
This information is part of audited disclosure information (as defined in section 1.4 of the ID determination), and so is subject to the assurance report required by section 2.8.

sch ref

6a(vi): Quality of Supply

			($000)	($000)
		*Project or programme**		
			–	
			–	
			–	
			–	
			–	
		** include additional rows if needed*		
		All other projects programmes - quality of supply	3,044	
		Quality of supply expenditure		3,044
	less	Capital contributions funding quality of supply	–	
		Quality of supply less capital contributions		3,044

6a(vii): Legislative and Regulatory

			($000)	($000)
		*Project or programme**		
			–	
			–	
			–	
			–	
			–	
		** include additional rows if needed*		
		All other projects or programmes - legislative and regulatory	954	
		Legislative and regulatory expenditure		954
	less	Capital contributions funding legislative and regulatory	94	
		Legislative and regulatory less capital contributions		860

6a(viii): Other Reliability, Safety and Environment

			($000)	($000)
		*Project or programme**		
			–	
			–	
			–	
			–	
			–	
		** include additional rows if needed*		
		All other projects or programmes - other reliability, safety and environment	12,102	
		Other reliability, safety and environment expenditure		12,102
	less	Capital contributions funding other reliability, safety and environment	–	
		Other reliability, safety and environment less capital contributions		12,102

6a(ix): Non-Network Assets

Routine expenditure

			($000)	($000)
		*Project or programme**		
			–	
			–	
			–	
			–	
			–	
		** include additional rows if needed*		
		All other projects or programmes - routine expenditure	18,304	
		Routine expenditure		18,304

Atypical expenditure

			($000)	($000)
		*Project or programme**		
			–	
			–	
			–	
			–	
			–	
		** include additional rows if needed*		
		All other projects or programmes - atypical expenditure	9,506	
		Atypical expenditure		9,506
		Expenditure on non-network assets		27,810

Company Name	**Vector**
For Year Ended	**31 March 2019**

SCHEDULE 6b: REPORT ON OPERATIONAL EXPENDITURE FOR THE DISCLOSURE YEAR

This schedule requires a breakdown of operational expenditure incurred in the disclosure year.
EDBs must provide explanatory comment on their operational expenditure in Schedule 14 (Explanatory notes to templates). This includes explanatory comment on any atypical operational expenditure and assets replaced or renewed as part of asset replacement and renewal operational expenditure, and additional information on insurance.
This information is part of audited disclosure information (as defined in section 1.4 of the ID determination), and so is subject to the assurance report required by section 2.8.

sch ref		($000)	($000)
7	**6b(i): Operational Expenditure**		
8	Service interruptions and emergencies	11,557	
9	Vegetation management	7,461	
10	Routine and corrective maintenance and inspection	13,741	
11	Asset replacement and renewal	13,231	
12	**Network opex**		45,990
13	System operations and network support	39,412	
14	Business support	36,559	
15	**Non-network opex**		75,971
16			
17	**Operational expenditure**		121,961
18	**6b(ii): Subcomponents of Operational Expenditure (where known)**		
19	Energy efficiency and demand side management, reduction of energy losses		–
20	Direct billing*		–
21	Research and development		–
22	Insurance		2,818
23	** Direct billing expenditure by suppliers that directly bill the majority of their consumers*		

Company Name	**Vector**
For Year Ended	**31 March 2019**

SCHEDULE 7: COMPARISON OF FORECASTS TO ACTUAL EXPENDITURE

This schedule compares actual revenue and expenditure to the previous forecasts that were made for the disclosure year. Accordingly, this schedule requires the forecast revenue and expenditure information from previous disclosures to be inserted.
EDBs must provide explanatory comment on the variance between actual and target revenue and forecast expenditure in Schedule 14 (Mandatory Explanatory Notes). This information is part of the audited disclosure information (as defined in section 1.4 of the ID determination), and so is subject to the assurance report required by section 2.8. For the purpose of this audit, target revenue and forecast expenditures only need to be verified back to previous disclosures.

sch ref				
7	**7(i): Revenue**	**Target ($000) [1]**	**Actual ($000)**	**% variance**
8	Line charge revenue	618,791	632,109	2%
9	**7(ii): Expenditure on Assets**	**Forecast ($000) [2]**	**Actual ($000)**	**% variance**
10	Consumer connection	65,603	70,729	8%
11	System growth	46,516	27,515	(41%)
12	Asset replacement and renewal	86,096	97,343	13%
13	Asset relocations	19,386	18,870	(3%)
14	Reliability, safety and environment:			
15	Quality of supply	1,143	3,044	166%
16	Legislative and regulatory	373	954	156%
17	Other reliability, safety and environment	3,354	12,102	261%
18	**Total reliability, safety and environment**	4,870	16,100	231%
19	**Expenditure on network assets**	222,471	230,557	4%
20	Expenditure on non-network assets	18,706	27,810	49%
21	Expenditure on assets	241,177	258,367	7%
22	**7(iii): Operational Expenditure**			
23	Service interruptions and emergencies	12,242	11,557	(6%)
24	Vegetation management	6,170	7,461	21%
25	Routine and corrective maintenance and inspection	15,507	13,741	(11%)
26	Asset replacement and renewal	14,935	13,231	(11%)
27	**Network opex**	48,854	45,990	(6%)
28	System operations and network support	37,729	39,412	4%
29	Business support	41,212	36,559	(11%)
30	**Non-network opex**	78,941	75,971	(4%)
31	**Operational expenditure**	127,795	121,961	(5%)
32	**7(iv): Subcomponents of Expenditure on Assets (where known)**			
33	Energy efficiency and demand side management, reduction of energy losses	–	–	–
34	Overhead to underground conversion	6,269	6,231	(1%)
35	Research and development	2,854	3,445	21%
36				
37	**7(v): Subcomponents of Operational Expenditure (where known)**			
38	Energy efficiency and demand side management, reduction of energy losses	–	–	–
39	Direct billing	–	–	–
40	Research and development	–	–	–
41	Insurance	2,762	2,818	2%
42				

43 *1 From the nominal dollar target revenue for the disclosure year disclosed under clause 2.4.3(3) of this determination*

44 *2 From the CY+1 nominal dollar expenditure forecasts disclosed in accordance with clause 2.6.6 for the forecast period starting at the beginning of the disclosure year (the second to last disclosure of Schedules 11a and 11b)*

Company Name	**Vector Ltd**
For Year Ended	**31 March 2019**
Network / Sub-Network Name	**Combined**

SCHEDULE 8: REPORT ON BILLED QUANTITIES AND LINE CHARGE REVENUES

This schedule requires the billed quantities and associated line charge revenues for each price category code used by the EDB in its pricing schedules. Information is also required on the number of ICPs that are included in each consumer group or price category code, and the energy delivered to these ICPs.

sch ref

8(i): Billed Quantities by Price Component

Consumer group name or price category code	Consumer type or types (eg, residential, commercial etc.)	Standard or non-standard consumer group (specify)	Average no. of ICPs in disclosure year	Energy delivered to ICPs in disclosure year (MWh)	Billed quantities by price component								
Price component					FIXD	AICO	24UC	OFPK	PEAK	CAPY	DAMD	DEXA	PWRF
Unit charging basis (eg, days, kW of demand, kVA of capacity, etc.)					Day	kWh	kWh	kWh	kWh	kVA/Day	kVA/Day	kVA/Day	kVAr/Day
ARCL	residential	Standard	128,985	695,931	47,030,920	695,930,931	–	–	–	–	–	–	–
ARCS	residential	Standard	78,388	780,220	28,692,014	780,219,645	–	–	–	–	–	–	–
ARUL	residential	Standard	28,145	110,915	10,239,770	–	110,915,110	–	–	–	–	–	–
ARUS	residential	Standard	16,189	121,152	5,911,343	–	121,151,805	–	–	–	–	–	–
ARHL	residential	Standard	1,614	8,034	593,331	–	–	5,591,768	2,442,488	–	–	–	–
ARHS	residential	Standard	715	7,417	266,383	–	–	5,148,016	2,269,271	–	–	–	–
ARGL	residential	Standard	25,852	126,964	9,446,196	–	126,964,117	–	–	–	–	–	–
ARGS	residential	Standard	13,857	143,809	5,084,066	–	143,809,071	–	–	–	–	–	–
ABSN	business	Standard	35,924	741,124	13,104,408	–	741,123,793	–	–	–	–	–	–
ABSU	business	Standard	1,727	30,903	25,208,493	–	30,903,073	–	–	–	–	–	–
ABSH	business	Standard	295	20,714	115,678	–	–	13,288,815	7,425,447	–	–	–	–
ALVN	low voltage	Standard	2,171	234,196	792,243	–	234,196,286	–	–	117,063,480	–	–	398,271
ALVT	low voltage	Standard	1,438	551,525	–	–	551,524,808	–	–	132,609,205	46,981,744	–	4,416,515
ATXN	transformer	Standard	160	22,392	58,563	–	22,392,220	–	–	13,246,112	–	–	31,188
ATXT	transformer	Standard	911	1,143,990	–	–	1,143,990,012	–	–	235,453,671	90,568,763	–	4,588,393
AHVN	high voltage	Standard	8	652	2,786	–	651,613	–	–	526,767	–	–	5,427
AHVT	high voltage	Standard	139	451,249	–	–	451,249,487	–	–	59,177,846	33,974,318	184,940	1,465,070
WRCL	residential	Standard	88,527	489,194	32,298,369	489,193,810	–	–	–	–	–	–	–
WRCS	residential	Standard	66,140	666,272	24,191,885	666,272,055	–	–	–	–	–	–	–
WRUL	residential	Standard	14,179	71,366	5,150,421	–	71,366,188	–	–	–	–	–	–
WRUS	residential	Standard	15,739	125,602	5,758,409	–	125,601,721	–	–	–	–	–	–
WRHL	residential	Standard	1,308	7,265	482,487	–	–	5,119,057	2,145,549	–	–	–	–
WRHS	residential	Standard	847	9,410	314,498	–	–	6,599,442	2,810,098	–	–	–	–
WRGL	residential	Standard	11,089	54,807	4,043,760	–	54,806,682	–	–	–	–	–	–
WRGS	residential	Standard	6,506	61,222	2,379,585	–	61,222,007	–	–	–	–	–	–
WBSN	business	Standard	21,989	385,926	8,013,046	–	385,925,655	–	–	–	–	–	–
WBSU	business	Standard	623	19,151	15,521,309	–	19,150,994	–	–	–	–	–	–
WBSH	business	Standard	174	11,720	65,976	–	–	6,920,658	4,799,012	–	–	–	–
WLVN	low voltage	Standard	859	120,549	312,811	–	120,549,203	–	–	45,649,858	–	–	325,092
WLVH	low voltage	Standard	248	126,331	90,384	–	126,330,891	–	–	22,113,483	9,649,555	–	712,733
WTXN	transformer	Standard	126	37,080	46,080	–	37,079,917	–	–	11,194,570	–	–	179,524
WTXH	transformer	Standard	275	365,461	100,469	–	365,461,099	–	–	75,854,846	29,478,407	–	1,617,053
WHVN	high voltage	Standard	–	–	–	–	–	–	–	–	–	–	–
WHVH	high voltage	Standard	23	129,970	8,395	–	129,969,643	–	–	14,288,020	9,096,284	103,603	238,763
NS	non-standard	Non-standard	30	623,190	1,338	–	–	–	–	–	–	–	9,580
Add extra rows for additional consumer groups or price category codes as necessary													
		Standard consumer totals	565,170	7,872,513	245,324,078	2,631,616,441	5,176,335,395	42,667,756	21,891,865	727,177,858	219,749,071	288,543	13,978,029
		Non-standard consumer totals	30	623,190	1,338	–	–	–	–	–	–	–	9,580
		Total for all consumers	565,200	8,495,703	245,325,416	2,631,616,441	5,176,335,395	42,667,756	21,891,865	727,177,858	219,749,071	288,543	13,987,609

Add extra columns for additional billed quantities by price component as necessary

Company Name	**Vector Ltd**
For Year Ended	**31 March 2019**
Network / Sub-Network Name	**Combined**

SCHEDULE 8: REPORT ON BILLED QUANTITIES AND LINE CHARGE REVENUES

This schedule requires the billed quantities and associated line charge revenues for each price category code used by the EDB in its pricing schedules. Information is also required on the number of ICPs that are included in each consumer group or price category code, and the energy delivered to these ICPs.

8(ii): Line Charge Revenues ($000) by Price Component

Consumer group name or price category code	Consumer type or types (eg, residential, commercial etc.)	Standard or non-standard consumer group (specify)	Total line charge revenue in disclosure year	Notional revenue foregone from posted discounts (if applicable)	Total distribution line charge revenue	Total transmission line charge revenue (if available)	Line charge revenues ($000) by price component									*Add extra columns for additional line charge revenues by price component as necessary*
							Price component	FIXD	AICO	24UC	OFPK	PEAK	CAPY	DAMD	DEXA	PWRF
							Rate (eg, $ per day, $ per kWh, etc.)	Day	kWh	kWh	kWh	kWh	kVA/Day	kVA/Day	kVA/Day	kVAr/Day
ARCL	residential	Standard	$72,688		$53,179	$19,509		$7,055	$65,633	–	–	–	–	–	–	–
ARCS	residential	Standard	$71,977		$50,105	$21,872		$28,982	$42,995	–	–	–	–	–	–	–
ARUL	residential	Standard	$12,839		$8,939	$3,900		$1,536	–	$11,303	–	–	–	–	–	–
ARUS	residential	Standard	$13,568		$9,308	$4,260		$5,971	–	$7,597	–	–	–	–	–	–
ARHL	residential	Standard	$840		$621	$219		$89	–	–	$360	$391	–	–	–	–
ARHS	residential	Standard	$673		$470	$203		$269	–	–	$130	$274	–	–	–	–
ARGL	residential	Standard	$13,391		$9,832	$3,559		$1,417	–	$11,974	–	–	–	–	–	–
ARGS	residential	Standard	$13,060		$9,029	$4,031		$5,135	–	$7,925	–	–	–	–	–	–
ABSN	business	Standard	$59,710		$33,653	$26,057		$13,237	–	$46,473	–	–	–	–	–	–
ABSU	business	Standard	$5,928		$4,841	$1,087		$3,782	–	$2,146	–	–	–	–	–	–
ABSH	business	Standard	$1,348		$683	$665		$117	–	–	$335	$896	–	–	–	–
ALVN	low voltage	Standard	$21,090		$16,018	$5,072		$1,394	–	$14,733	–	–	$4,847	–	–	$116
ALVT	low voltage	Standard	$29,679		$19,085	$10,594		–	–	$7,502	–	–	$5,491	$15,398	–	$1,288
ATXN	transformer	Standard	$2,026		$1,541	$485		$100	–	$1,380	–	–	$537	–	–	$9
ATXT	transformer	Standard	$55,255		$34,833	$20,422		–	–	$15,331	–	–	$9,537	$29,048	–	$1,339
AHVN	high voltage	Standard	$67		$53	$14		$5	–	$39	–	–	$21	–	–	$2
AHVT	high voltage	Standard	$19,330		$11,669	$7,661		–	–	$5,867	–	–	$2,326	$10,550	$160	$427
WRCL	residential	Standard	$50,960		$37,246	$13,714		$4,843	$46,117	–	–	–	–	–	–	–
WRCS	residential	Standard	$61,128		$42,450	$18,678		$24,427	$36,701	–	–	–	–	–	–	–
WRUL	residential	Standard	$8,042		$5,533	$2,509		$772	–	$7,270	–	–	–	–	–	–
WRUS	residential	Standard	$13,687		$9,271	$4,416		$5,814	–	$7,873	–	–	–	–	–	–
WRHL	residential	Standard	$745		$553	$192		$72	–	–	$330	$343	–	–	–	–
WRHS	residential	Standard	$820		$568	$252		$318	–	–	$166	$336	–	–	–	–
WRGL	residential	Standard	$5,773		$4,237	$1,536		$606	–	$5,167	–	–	–	–	–	–
WRGS	residential	Standard	$5,775		$4,059	$1,716		$2,403	–	$3,372	–	–	–	–	–	–
WBSN	business	Standard	$32,281		$18,712	$13,569		$8,091	–	$24,190	–	–	–	–	–	–
WBSU	business	Standard	$3,657		$2,984	$673		$2,328	–	$1,329	–	–	–	–	–	–
WBSH	business	Standard	$820		$390	$430		$67	–	–	$174	$579	–	–	–	–
WLVN	low voltage	Standard	$8,771		$6,160	$2,611		$1,926	–	$5,230	–	–	$1,520	–	–	$95
WLVH	low voltage	Standard	$5,615		$3,439	$2,176		$1,049	–	$733	–	–	$736	$2,889	–	$208
WTXN	transformer	Standard	$2,115		$1,312	$803		$255	–	$1,442	–	–	$366	–	–	$52
WTXH	transformer	Standard	$14,728		$8,081	$6,647		$1,050	–	$2,083	–	–	$2,480	$8,643	–	$472
WHVN	high voltage	Standard	–		–	–		–	–	–	–	–	–	–	–	–
WHVH	high voltage	Standard	$3,978		$1,927	$2,051		$85	–	$715	–	–	$453	$2,583	$72	$70
NS	non-standard	Non-standard	$19,745		$11,017	$8,728		$19,610	–	–	–	–	–	–	–	$135
Add extra rows for additional consumer groups or price category codes as necessary																
		Standard consumer totals	$612,364	–	$410,781	$201,583		$123,195	$191,446	$191,674	$1,495	$2,819	$28,314	$69,111	$232	$4,078
		Non-standard consumer totals	$19,745	–	$11,017	$8,728		$19,610	–	–	–	–	–	–	–	$135
		Total for all consumers	$632,109	–	$421,798	$210,311		$142,805	$191,446	$191,674	$1,495	$2,819	$28,314	$69,111	$232	$4,213

8(iii): Number of ICPs directly billed

Number of directly billed ICPs at year end	43	**Check** OK

Company Name	**Vector Ltd**
For Year Ended	**31 March 2019**
Network / Sub-Network Name	**Southern**

SCHEDULE 8: REPORT ON BILLED QUANTITIES AND LINE CHARGE REVENUES

This schedule requires the billed quantities and associated line charge revenues for each price category code used by the EDB in its pricing schedules. Information is also required on the number of ICPs that are included in each consumer group or price category code, and the energy delivered to these ICPs.

sch ref

8(i): Billed Quantities by Price Component

Consumer group name or price category code	Consumer type or types (eg, residential, commercial etc.)	Standard or non-standard consumer group (specify)	Average no. of ICPs in disclosure year	Energy delivered to ICPs in disclosure year (MWh)	Billed quantities by price component								
Price component					FIXD	AICO	24UC	OFPK	PEAK	CAPY	DAMD	DEXA	PWRF
Unit charging basis (eg, days, kW of demand, kVA of capacity, etc.)					Day	kWh	kWh	kWh	kWh	kVA/Day	kVA/Day	kVA/Day	kVAr/Day
ARCL	residential	Standard	128,985	695,931	47,030,920	695,930,931	–	–	–	–	–	–	–
ARCS	residential	Standard	78,388	780,220	28,692,014	780,219,645	–	–	–	–	–	–	–
ARUL	residential	Standard	28,145	110,915	10,239,770	–	110,915,110	–	–	–	–	–	–
ARUS	residential	Standard	16,189	121,152	5,911,343	–	121,151,805	–	–	–	–	–	–
ARHL	residential	Standard	1,614	8,034	593,331	–	–	5,591,768	2,442,488	–	–	–	–
ARHS	residential	Standard	715	7,417	266,383	–	–	5,148,016	2,269,271	–	–	–	–
ARGL	residential	Standard	25,852	126,964	9,446,196	–	126,964,117	–	–	–	–	–	–
ARGS	residential	Standard	13,857	143,809	5,084,066	–	143,809,071	–	–	–	–	–	–
ABSN	business	Standard	35,924	741,124	13,104,408	–	741,123,793	–	–	–	–	–	–
ABSU	business	Standard	1,727	30,903	25,208,493	–	30,903,073	–	–	–	–	–	–
ABSH	business	Standard	295	20,714	115,678	–	–	13,288,815	7,425,447	–	–	–	–
ALVN	low voltage	Standard	2,171	234,196	792,243	–	234,196,286	–	–	117,063,480	–	–	398,271
ALVT	low voltage	Standard	1,438	551,525	–	–	551,524,808	–	–	132,609,205	46,981,744	–	4,416,515
ATXN	transformer	Standard	160	22,392	58,563	–	22,392,220	–	–	13,246,112	–	–	31,188
ATXT	transformer	Standard	911	1,143,990	–	–	1,143,990,012	–	–	235,453,671	90,568,763	–	4,588,393
AHVN	high voltage	Standard	8	652	2,786	–	651,613	–	–	526,767	–	–	5,427
AHVT	high voltage	Standard	139	451,249	–	–	451,249,487	–	–	59,177,846	33,974,318	184,940	1,465,070
NS	non-standard	Non-standard	26	523,778	9,338	–	–	–	–	–	–	–	7,998
Add extra rows for additional consumer groups or price category codes as necessary													
		Standard consumer totals	336,518	5,191,187	146,546,194	1,476,150,576	3,678,871,395	24,028,599	12,137,206	558,077,081	171,524,825	184,940	10,904,864
		Non-standard consumer totals	26	523,778	9,338	–	–	–	–	–	–	–	7,998
		Total for all consumers	336,544	5,714,965	146,555,532	1,476,150,576	3,678,871,395	24,028,599	12,137,206	558,077,081	171,524,825	184,940	10,912,862

Add extra columns for additional billed quantities by price component as necessary

Company Name	**Vector Ltd**
For Year Ended	**31 March 2019**
Network / Sub-Network Name	**Southern**

SCHEDULE 8: REPORT ON BILLED QUANTITIES AND LINE CHARGE REVENUES

This schedule requires the billed quantities and associated line charge revenues for each price category code used by the EDB in its pricing schedules. Information is also required on the number of ICPs that are included in each consumer group or price category code, and the energy delivered to these ICPs.

8(ii): Line Charge Revenues ($000) by Price Component

Consumer group name or price category code	Consumer type or types (eg, residential, commercial etc.)	Standard or non-standard consumer group (specify)	Total line charge revenue in disclosure year	Notional revenue foregone from posted discounts (if applicable)	Total distribution line charge revenue	Total transmission line charge revenue (if available)	Line charge revenues ($000) by price component									*Add extra columns for additional line charge revenues by price component as necessary*
							Price component	FIXD	AICO	24UC	OFPK	PEAK	CAPY	DAMD	DEXA	PWRF
							Rate (eg, $ per day, $ per kWh, etc.)	Day	kWh	kWh	kWh	kWh	kVA/Day	kVA/Day	kVA/Day	kVAr/Day
ARCL	residential	Standard	$72,688		$53,179	$19,509		$7,055	$65,633	–	–	–	–	–	–	–
ARCS	residential	Standard	$71,977		$50,105	$21,872		$28,982	$42,995	–	–	–	–	–	–	–
ARUL	residential	Standard	$12,839		$8,939	$3,900		$1,536	–	$11,303	–	–	–	–	–	–
ARUS	residential	Standard	$13,568		$9,308	$4,260		$5,971	–	$7,597	–	–	–	–	–	–
ARHL	residential	Standard	$840		$621	$219		$89	–	–	$360	$391	–	–	–	–
ARHS	residential	Standard	$673		$470	$203		$269	–	–	$130	$274	–	–	–	–
ARGL	residential	Standard	$13,391		$9,832	$3,559		$1,417	–	$11,974	–	–	–	–	–	–
ARGS	residential	Standard	$13,060		$9,029	$4,031		$5,135	–	$7,925	–	–	–	–	–	–
ABSN	business	Standard	$59,710		$33,653	$26,057		$13,237	–	$46,473	–	–	–	–	–	–
ABSU	business	Standard	$5,928		$4,841	$1,087		$3,782	–	$2,146	–	–	–	–	–	–
ABSH	business	Standard	$1,348		$683	$665		$117	–	–	$335	$896	–	–	–	–
ALVN	low voltage	Standard	$21,090		$16,018	$5,072		$1,394	–	$14,733	–	–	$4,847	–	–	$116
ALVT	low voltage	Standard	$29,679		$19,085	$10,594		–	–	$7,502	–	–	$5,491	$15,398	–	$1,288
ATXN	transformer	Standard	$2,026		$1,541	$485		$100	–	$1,380	–	–	$537	–	–	$9
ATXT	transformer	Standard	$55,255		$34,833	$20,422		–	–	$15,331	–	–	$9,537	$29,048	–	$1,339
AHVN	high voltage	Standard	$67		$53	$14		$5	–	$39	–	–	$21	–	–	$2
AHVT	high voltage	Standard	$19,330		$11,669	$7,661		–	–	$5,867	–	–	$2,326	$10,550	$160	$427
NS	non-standard	Non-standard	$16,956		$9,171	$7,785		$16,898	–	–	–	–	–	–	–	$58
Add extra rows for additional consumer groups or price category codes as necessary																
		Standard consumer totals	$393,469	–	$263,859	$129,610		$69,089	$108,628	$132,270	$825	$1,561	$22,759	$54,996	$160	$3,181
		Non-standard consumer totals	$16,956	–	$9,171	$7,785		$16,898	–	–	–	–	–	–	–	$58
		Total for all consumers	$410,425	–	$273,030	$137,395		$85,987	$108,628	$132,270	$825	$1,561	$22,759	$54,996	$160	$3,239

8(iii): Number of ICPs directly billed

Number of directly billed ICPs at year end	34	**Check** OK

Company Name	**Vector Ltd**
For Year Ended	**31 March 2019**
Network / Sub-Network Name	**Northern**

SCHEDULE 8: REPORT ON BILLED QUANTITIES AND LINE CHARGE REVENUES

This schedule requires the billed quantities and associated line charge revenues for each price category code used by the EDB in its pricing schedules. Information is also required on the number of ICPs that are included in each consumer group or price category code, and the energy delivered to these ICPs.

sch ref

8(i): Billed Quantities by Price Component

Consumer group name or price category code	Consumer type or types (eg, residential, commercial etc.)	Standard or non-standard consumer group (specify)	Average no. of ICPs in disclosure year	Energy delivered to ICPs in disclosure year (MWh)	Billed quantities by price component								
					Price component	FIXD	AICO	24UC	OFPK	PEAK	CAPY	DAMD	DEXA	PWRF
					Unit charging basis (eg, days, kW of demand, kVA of capacity, etc.)	Day	kWh	kWh	kWh	kWh	kVA/Day	kVA/Day	kVA/Day	kVAr/Day
WRCL	residential	Standard	88,527	489,194		32,298,369	489,193,810	–	–	–	–	–	–	–
WRCS	residential	Standard	66,140	666,272		24,191,885	666,272,055	–	–	–	–	–	–	–
WRUL	residential	Standard	14,179	71,366		5,150,421	–	71,366,188	–	–	–	–	–	–
WRUS	residential	Standard	15,739	125,602		5,758,409	–	125,601,721	–	–	–	–	–	–
WRHL	residential	Standard	1,308	7,265		482,487	–	–	5,119,057	2,145,549	–	–	–	–
WRHS	residential	Standard	847	9,410		314,498	–	–	6,599,442	2,810,098	–	–	–	–
WRGL	residential	Standard	11,089	54,807		4,043,760	–	54,806,682	–	–	–	–	–	–
WRGS	residential	Standard	6,506	61,222		2,379,585	–	61,222,007	–	–	–	–	–	–
WBSN	business	Standard	21,989	385,926		8,013,046	–	385,925,655	–	–	–	–	–	–
WBSU	business	Standard	623	19,151		15,521,309	–	19,150,994	–	–	–	–	–	–
WBSH	business	Standard	174	11,720		65,976	–	–	6,920,658	4,799,012	–	–	–	–
WLVN	low voltage	Standard	859	120,549		312,811	–	120,549,203	–	–	45,649,858	–	–	325,092
WLVH	low voltage	Standard	248	126,331		90,384	–	126,330,891	–	–	22,113,483	9,649,555	–	712,733
WTXN	transformer	Standard	126	37,080		46,080	–	37,079,917	–	–	11,194,570	–	–	179,524
WTXH	transformer	Standard	275	365,461		100,469	–	365,461,099	–	–	75,854,846	29,478,407	–	1,617,053
WHVN	high voltage	Standard	–	–		–	–	–	–	–	–	–	–	–
WHVH	high voltage	Standard	23	129,970		8,395	–	129,969,643	–	–	14,288,020	9,096,284	103,603	238,763
NS	non-standard	Non-standard	4	99,412		1,338	–	–	–	–	–	–	–	9,580
Add extra rows for additional consumer groups or price category codes as necessary														
		Standard consumer totals	228,652	2,681,326		98,777,884	1,155,465,865	1,497,464,000	18,639,157	9,754,659	169,100,777	48,224,246	103,603	3,073,165
		Non-standard consumer totals	4	99,412		1,338	–	–	–	–	–	–	–	9,580
		Total for all consumers	228,656	2,780,738		98,779,222	1,155,465,865	1,497,464,000	18,639,157	9,754,659	169,100,777	48,224,246	103,603	3,082,745

Add extra columns for additional billed quantities by price component as necessary

Company Name	**Vector Ltd**
For Year Ended	**31 March 2019**
Network / Sub-Network Name	**Northern**

SCHEDULE 8: REPORT ON BILLED QUANTITIES AND LINE CHARGE REVENUES

This schedule requires the billed quantities and associated line charge revenues for each price category code used by the EDB in its pricing schedules. Information is also required on the number of ICPs that are included in each consumer group or price category code, and the energy delivered to these ICPs.

8(ii): Line Charge Revenues ($000) by Price Component

Consumer group name or price category code	Consumer type or types (eg, residential, commercial etc.)	Standard or non-standard consumer group (specify)	Total line charge revenue in disclosure year	Notional revenue foregone from posted discounts (if applicable)	Total distribution line charge revenue	Total transmission line charge revenue (if available)	Line charge revenues ($000) by price component								
							Price component	FIXD	AICO	24UC	OFPK	PEAK	CAPY	DAMD	DEXA	PWRF
							Rate (eg, $ per day, $ per kWh, etc.)	Day	kWh	kWh	kWh	kWh	kVA/Day	kVA/Day	kVA/Day	kVAr/Day
WRCL	residential	Standard	$50,960		$37,246	$13,714		$4,843	$46,117	–	–	–	–	–	–	–
WRCS	residential	Standard	$61,128		$42,450	$18,678		$24,427	$36,701	–	–	–	–	–	–	–
WRUL	residential	Standard	$8,042		$5,533	$2,509		$772	–	$7,270	–	–	–	–	–	–
WRUS	residential	Standard	$13,687		$9,271	$4,416		$5,814	–	$7,873	–	–	–	–	–	–
WRHL	residential	Standard	$745		$553	$192		$72	–	–	$330	$343	–	–	–	–
WRHS	residential	Standard	$820		$568	$252		$318	–	–	$166	$336	–	–	–	–
WRGL	residential	Standard	$5,773		$4,237	$1,536		$606	–	$5,167	–	–	–	–	–	–
WRGS	residential	Standard	$5,775		$4,059	$1,716		$2,403	–	$3,372	–	–	–	–	–	–
WBSN	business	Standard	$32,281		$18,712	$13,569		$8,091	–	$24,190	–	–	–	–	–	–
WBSU	business	Standard	$3,657		$2,984	$673		$2,328	–	$1,329	–	–	–	–	–	–
WBSH	business	Standard	$820		$390	$430		$67	–	–	$174	$579	–	–	–	–
WLVN	low voltage	Standard	$8,771		$6,160	$2,611		$1,926	–	$5,230	–	–	$1,520	–	–	$95
WLVH	low voltage	Standard	$5,615		$3,439	$2,176		$1,049	–	$733	–	–	$736	$2,889	–	$208
WTXN	transformer	Standard	$2,115		$1,312	$803		$255	–	$1,442	–	–	$366	–	–	$52
WTXH	transformer	Standard	$14,728		$8,081	$6,647		$1,050	–	$2,083	–	–	$2,480	$8,643	–	$472
WHVN	high voltage	Standard	–		–	–		–	–	–	–	–	–	–	–	–
WHVH	high voltage	Standard	$3,978		$1,927	$2,051		$85	–	$715	–	–	$453	$2,583	$72	$70
NS	non-standard	Non-standard	$2,789		$1,846	$943		$2,712	–	–	–	–	–	–	–	$77
Add extra rows for additional consumer groups or price category codes as necessary																
		Standard consumer totals	$218,895	–	$146,922	$71,973		$54,106	$82,818	$59,404	$670	$1,258	$5,555	$14,115	$72	$897
		Non-standard consumer totals	$2,789	–	$1,846	$943		$2,712	–	–	–	–	–	–	–	$77
		Total for all consumers	$221,684	–	$148,768	$72,916		$56,818	$82,818	$59,404	$670	$1,258	$5,555	$14,115	$72	$974

Add extra columns for additional line charge revenues by price component as necessary

8(iii): Number of ICPs directly billed

Number of directly billed ICPs at year end	9	**Check** OK

Company Name	**Vector**
For Year Ended	**31 March 2019**
Network / Sub-network Name	**Combined**

SCHEDULE 9a: ASSET REGISTER

This schedule requires a summary of the quantity of assets that make up the network, by asset category and asset class. All units relating to cable and line assets, that are expressed in km, refer to circuit lengths.

sch ref

8	Voltage	Asset category	Asset class	Units	Items at start of year (quantity)	Items at end of year (quantity)	Net change	Data accuracy (1–4)
9	All	Overhead Line	Concrete poles / steel structure	No.	113,999	115,938	1,939	3
10	All	Overhead Line	Wood poles	No.	6,678	6,171	-507	2
11	All	Overhead Line	Other pole types	No.	598	831	233	4
12	HV	Subtransmission Line	Subtransmission OH up to 66kV conductor	km	370	369.343	0	4
13	HV	Subtransmission Line	Subtransmission OH 110kV+ conductor	km	27	26.605	0	4
14	HV	Subtransmission Cable	Subtransmission UG up to 66kV (XLPE)	km	346	348.473	2	4
15	HV	Subtransmission Cable	Subtransmission UG up to 66kV (Oil pressurised)	km	145	144.896	0	4
16	HV	Subtransmission Cable	Subtransmission UG up to 66kV (Gas pressurised)	km	2	2.415	0	4
17	HV	Subtransmission Cable	Subtransmission UG up to 66kV (PILC)	km	50	49.736	0	4
18	HV	Subtransmission Cable	Subtransmission UG 110kV+ (XLPE)	km	30	30.319	0	4
19	HV	Subtransmission Cable	Subtransmission UG 110kV+ (Oil pressurised)	km	17	17.143	0	4
20	HV	Subtransmission Cable	Subtransmission UG 110kV+ (Gas Pressurised)	km	0	0	0	N/A
21	HV	Subtransmission Cable	Subtransmission UG 110kV+ (PILC)	km	0	0.004	0	4
22	HV	Subtransmission Cable	Subtransmission submarine cable	km	12	11.674	0	4
23	HV	Zone substation Buildings	Zone substations up to 66kV	No.	99	101	2	4
24	HV	Zone substation Buildings	Zone substations 110kV+	No.	6	6	0	4
25	HV	Zone substation switchgear	50/66/110kV CB (Indoor)	No.	20	20	0	4
26	HV	Zone substation switchgear	50/66/110kV CB (Outdoor)	No.	2	2	0	4
27	HV	Zone substation switchgear	33kV Switch (Ground Mounted)	No.	0	0	0	N/A
28	HV	Zone substation switchgear	33kV Switch (Pole Mounted)	No.	301	245	-56	4
29	HV	Zone substation switchgear	33kV RMU	No.	9	9	0	4
30	HV	Zone substation switchgear	22/33kV CB (Indoor)	No.	238	245	7	4
31	HV	Zone substation switchgear	22/33kV CB (Outdoor)	No.	158	130	-28	4
32	HV	Zone substation switchgear	3.3/6.6/11/22kV CB (ground mounted)	No.	1,369	1,330	-39	4
33	HV	Zone substation switchgear	3.3/6.6/11/22kV CB (pole mounted)	No.	0	0	0	N/A
34	HV	Zone Substation Transformer	Zone Substation Transformers	No.	216	216	0	4
35	HV	Distribution Line	Distribution OH Open Wire Conductor	km	3,783	3,758.15	-25	3
36	HV	Distribution Line	Distribution OH Aerial Cable Conductor	km	0	0	0	N/A
37	HV	Distribution Line	SWER conductor	km	0	0	0	N/A
38	HV	Distribution Cable	Distribution UG XLPE or PVC	km	1,449	1,509.60	60	4
39	HV	Distribution Cable	Distribution UG PILC	km	2,206	2,201.01	-5	4
40	HV	Distribution Cable	Distribution Submarine Cable	km	8	8.146	0	4
41	HV	Distribution switchgear	3.3/6.6/11/22kV CB (pole mounted) - reclosers and sectionalisers	No.	252	261	9	4
42	HV	Distribution switchgear	3.3/6.6/11/22kV CB (Indoor)	No.	164	272	108	4
43	HV	Distribution switchgear	3.3/6.6/11/22kV Switches and fuses (pole mounted)	No.	10,116	10,343	227	3
44	HV	Distribution switchgear	3.3/6.6/11/22kV Switch (ground mounted) - except RMU	No.	3,464	3,204	-260	3
45	HV	Distribution switchgear	3.3/6.6/11/22kV RMU	No.	6,193	6,160	-33	4
46	HV	Distribution Transformer	Pole Mounted Transformer	No.	7,565	7,577	12	4
47	HV	Distribution Transformer	Ground Mounted Transformer	No.	14,098	14,317	219	4
48	HV	Distribution Transformer	Voltage regulators	No.	12	11	-1	4
49	HV	Distribution Substations	Ground Mounted Substation Housing	No.	12,656	12,847	191	3
50	LV	LV Line	LV OH Conductor	km	4,163	4,027.76	-135	3
51	LV	LV Cable	LV UG Cable	km	6,049	6,201.78	153	4
52	LV	LV Street lighting	LV OH/UG Streetlight circuit	km	450	463.171	13	3
53	LV	Connections	OH/UG consumer service connections	No.	561,233	568,897	7,664	4
54	All	Protection	Protection relays (electromechanical, solid state and numeric)	No.	3,670	3,748	78	3
55	All	SCADA and communications	SCADA and communications equipment operating as a single system	Lot	312	332	20	2
56	All	Capacitor Banks	Capacitors including controls	No	91	77	-14	4
57	All	Load Control	Centralised plant	Lot	33	33	0	3
58	All	Load Control	Relays	No	0	0	0	N/A
59	All	Civils	Cable Tunnels	km	10	10.39	0	3

Company Name	**Vector**
For Year Ended	**31 March 2019**
Network / Sub-network Name	**Southern**

SCHEDULE 9a: ASSET REGISTER

This schedule requires a summary of the quantity of assets that make up the network, by asset category and asset class. All units relating to cable and line assets, that are expressed in km, refer to circuit lengths.

sch ref

8	Voltage	Asset category	Asset class	Units	Items at start of year (quantity)	Items at end of year (quantity)	Net change	Data accuracy (1–4)
9	All	Overhead Line	Concrete poles / steel structure	No.	48,797	49,982	1,185	3
10	All	Overhead Line	Wood poles	No.	4,179	3,868	(311)	2
11	All	Overhead Line	Other pole types	No.	362	407	45	4
12	HV	Subtransmission Line	Subtransmission OH up to 66kV conductor	km	51	51	0	4
13	HV	Subtransmission Line	Subtransmission OH 110kV+ conductor	km	0	0	0	N/A
14	HV	Subtransmission Cable	Subtransmission UG up to 66kV (XLPE)	km	204	205	0	4
15	HV	Subtransmission Cable	Subtransmission UG up to 66kV (Oil pressurised)	km	143	143	0	4
16	HV	Subtransmission Cable	Subtransmission UG up to 66kV (Gas pressurised)	km	2	2	0	4
17	HV	Subtransmission Cable	Subtransmission UG up to 66kV (PILC)	km	49	49	0	4
18	HV	Subtransmission Cable	Subtransmission UG 110kV+ (XLPE)	km	30	30	0	4
19	HV	Subtransmission Cable	Subtransmission UG 110kV+ (Oil pressurised)	km	17	17	0	4
20	HV	Subtransmission Cable	Subtransmission UG 110kV+ (Gas Pressurised)	km	0	0	0	N/A
21	HV	Subtransmission Cable	Subtransmission UG 110kV+ (PILC)	km	0	0	0	4
22	HV	Subtransmission Cable	Subtransmission submarine cable	km	11	11	0	4
23	HV	Zone substation Buildings	Zone substations up to 66kV	No.	50	50	0	4
24	HV	Zone substation Buildings	Zone substations 110kV+	No.	5	5	0	4
25	HV	Zone substation switchgear	50/66/110kV CB (Indoor)	No.	20	20	0	4
26	HV	Zone substation switchgear	50/66/110kV CB (Outdoor)	No.	0	0	0	N/A
27	HV	Zone substation switchgear	33kV Switch (Ground Mounted)	No.	0	0	0	N/A
28	HV	Zone substation switchgear	33kV Switch (Pole Mounted)	No.	0	0	0	N/A
29	HV	Zone substation switchgear	33kV RMU	No.	0	0	0	N/A
30	HV	Zone substation switchgear	22/33kV CB (Indoor)	No.	132	132	0	4
31	HV	Zone substation switchgear	22/33kV CB (Outdoor)	No.	0	0	0	N/A
32	HV	Zone substation switchgear	3.3/6.6/11/22kV CB (ground mounted)	No.	861	833	(28)	4
33	HV	Zone substation switchgear	3.3/6.6/11/22kV CB (pole mounted)	No.	0	0	0	N/A
34	HV	Zone Substation Transformer	Zone Substation Transformers	No.	129	129	0	4
35	HV	Distribution Line	Distribution OH Open Wire Conductor	km	892	885	-8	3
36	HV	Distribution Line	Distribution OH Aerial Cable Conductor	km	0	0	0	N/A
37	HV	Distribution Line	SWER conductor	km	0	0	0	N/A
38	HV	Distribution Cable	Distribution UG XLPE or PVC	km	636	674	38	4
39	HV	Distribution Cable	Distribution UG PILC	km	1,579	1,576	(3)	4
40	HV	Distribution Cable	Distribution Submarine Cable	km	2	2	0	4
41	HV	Distribution switchgear	3.3/6.6/11/22kV CB (pole mounted) - reclosers and sectionalisers	No.	55	58	3	4
42	HV	Distribution switchgear	3.3/6.6/11/22kV CB (Indoor)	No.	117	216	99	4
43	HV	Distribution switchgear	3.3/6.6/11/22kV Switches and fuses (pole mounted)	No.	2,366	2,428	62	3
44	HV	Distribution switchgear	3.3/6.6/11/22kV Switch (ground mounted) - except RMU	No.	2,728	2,503	(225)	3
45	HV	Distribution switchgear	3.3/6.6/11/22kV RMU	No.	4,600	4,535	(65)	4
46	HV	Distribution Transformer	Pole Mounted Transformer	No.	1,985	1,975	(10)	4
47	HV	Distribution Transformer	Ground Mounted Transformer	No.	6,776	6,893	117	4
48	HV	Distribution Transformer	Voltage regulators	No.	5	4	(1)	4
49	HV	Distribution Substations	Ground Mounted Substation Housing	No.	6,029	6,103	74	3
50	LV	LV Line	LV OH Conductor	km	1,965	1,900	(65)	3
51	LV	LV Cable	LV UG Cable	km	3,686	3,757	71	4
52	LV	LV Street lighting	LV OH/UG Streetlight circuit	km	255	260	5	3
53	LV	Connections	OH/UG consumer service connections	No.	334,330	338,487	3,502	4
54	All	Protection	Protection relays (electromechanical, solid state and numeric)	No.	2,026	2,080	54	3
55	All	SCADA and communications	SCADA and communications equipment operating as a single system	Lot	172	180	8	2
56	All	Capacitor Banks	Capacitors including controls	No	23	13	(10)	4
57	All	Load Control	Centralised plant	Lot	22	22	0	3
58	All	Load Control	Relays	No	0	0	0	N/A
59	All	Civils	Cable Tunnels	km	10	10	0	3

Company Name	**Vector**
For Year Ended	**31 March 2019**
Network / Sub-network Name	**Northern**

SCHEDULE 9a: ASSET REGISTER

This schedule requires a summary of the quantity of assets that make up the network, by asset category and asset class. All units relating to cable and line assets, that are expressed in km, refer to circuit lengths.

sch ref

8	Voltage	Asset category	Asset class	Units	Items at start of year (quantity)	Items at end of year (quantity)	Net change	Data accuracy (1–4)
9	All	Overhead Line	Concrete poles / steel structure	No.	65,202	65,956	754	3
10	All	Overhead Line	Wood poles	No.	2,499	2,303	(196)	2
11	All	Overhead Line	Other pole types	No.	236	424	188	4
12	HV	Subtransmission Line	Subtransmission OH up to 66kV conductor	km	319	318.46	0	4
13	HV	Subtransmission Line	Subtransmission OH 110kV+ conductor	km	27	26.605	0	4
14	HV	Subtransmission Cable	Subtransmission UG up to 66kV (XLPE)	km	142	143.627	2	4
15	HV	Subtransmission Cable	Subtransmission UG up to 66kV (Oil pressurised)	km	2	2.315	0	4
16	HV	Subtransmission Cable	Subtransmission UG up to 66kV (Gas pressurised)	km	0	0	0	N/A
17	HV	Subtransmission Cable	Subtransmission UG up to 66kV (PILC)	km	1	1.023	0	4
18	HV	Subtransmission Cable	Subtransmission UG 110kV+ (XLPE)	km	0	0	0	N/A
19	HV	Subtransmission Cable	Subtransmission UG 110kV+ (Oil pressurised)	km	0	0	0	N/A
20	HV	Subtransmission Cable	Subtransmission UG 110kV+ (Gas Pressurised)	km	0	0	0	N/A
21	HV	Subtransmission Cable	Subtransmission UG 110kV+ (PILC)	km	0	0	0	N/A
22	HV	Subtransmission Cable	Subtransmission submarine cable	km	1	0.895	0	4
23	HV	Zone substation Buildings	Zone substations up to 66kV	No.	49	51	2	4
24	HV	Zone substation Buildings	Zone substations 110kV+	No.	1	1	0	4
25	HV	Zone substation switchgear	50/66/110kV CB (Indoor)	No.	0	0	0	N/A
26	HV	Zone substation switchgear	50/66/110kV CB (Outdoor)	No.	2	2	0	4
27	HV	Zone substation switchgear	33kV Switch (Ground Mounted)	No.	0	0	0	N/A
28	HV	Zone substation switchgear	33kV Switch (Pole Mounted)	No.	301	245	(56)	4
29	HV	Zone substation switchgear	33kV RMU	No.	9	9	0	4
30	HV	Zone substation switchgear	22/33kV CB (Indoor)	No.	106	113	7	4
31	HV	Zone substation switchgear	22/33kV CB (Outdoor)	No.	158	130	(28)	4
32	HV	Zone substation switchgear	3.3/6.6/11/22kV CB (ground mounted)	No.	508	497	(11)	4
33	HV	Zone substation switchgear	3.3/6.6/11/22kV CB (pole mounted)	No.	0	0	0	N/A
34	HV	Zone Substation Transformer	Zone Substation Transformers	No.	87	87	0	4
35	HV	Distribution Line	Distribution OH Open Wire Conductor	km	2,891	2,873.44	(18)	3
36	HV	Distribution Line	Distribution OH Aerial Cable Conductor	km	0	0	0	N/A
37	HV	Distribution Line	SWER conductor	km	0	0	0	N/A
38	HV	Distribution Cable	Distribution UG XLPE or PVC	km	813	835.134	22	4
39	HV	Distribution Cable	Distribution UG PILC	km	627	624.961	(2)	4
40	HV	Distribution Cable	Distribution Submarine Cable	km	7	6.582	0	4
41	HV	Distribution switchgear	3.3/6.6/11/22kV CB (pole mounted) - reclosers and sectionalisers	No.	197	203	6	4
42	HV	Distribution switchgear	3.3/6.6/11/22kV CB (Indoor)	No.	47	56	9	4
43	HV	Distribution switchgear	3.3/6.6/11/22kV Switches and fuses (pole mounted)	No.	7,750	7,915	165	3
44	HV	Distribution switchgear	3.3/6.6/11/22kV Switch (ground mounted) - except RMU	No.	736	701	(35)	3
45	HV	Distribution switchgear	3.3/6.6/11/22kV RMU	No.	1,593	1,625	32	4
46	HV	Distribution Transformer	Pole Mounted Transformer	No.	5,580	5,602	22	4
47	HV	Distribution Transformer	Ground Mounted Transformer	No.	7,322	7,424	102	4
48	HV	Distribution Transformer	Voltage regulators	No.	7	7	0	4
49	HV	Distribution Substations	Ground Mounted Substation Housing	No.	6,627	6,744	117	3
50	LV	LV Line	LV OH Conductor	km	2,197	2,127.89	(70)	3
51	LV	LV Cable	LV UG Cable	km	2,363	2,445.01	82	4
52	LV	LV Street lighting	LV OH/UG Streetlight circuit	km	195	202.785	8	3
53	LV	Connections	OH/UG consumer service connections	No.	226,903	230,410	3,507	4
54	All	Protection	Protection relays (electromechanical, solid state and numeric)	No.	1,644	1,668	24	3
55	All	SCADA and communications	SCADA and communications equipment operating as a single system	Lot	140	152	12	2
56	All	Capacitor Banks	Capacitors including controls	No	68	64	(4)	4
57	All	Load Control	Centralised plant	Lot	11	11	0	3
58	All	Load Control	Relays	No	0	0	0	N/A
59	All	Civils	Cable Tunnels	km	0	0	0	N/A

Company Name	**Vector**
For Year Ended	**31 March 2019**
Network / Sub-network Name	**Combined**

SCHEDULE 9b: ASSET AGE PROFILE

This schedule requires a summary of the age profile (based on year of installation) of the assets that make up the network, by asset category and asset class. All units relating to cable and line assets, that are expressed in km, refer to circuit lengths.

sch ref																																									
8		**Disclosure Year (year ended)**	31 March 2019		**Number of assets at disclosure year end by installation date**																																				
9	**Voltage**	**Asset category**	**Asset class**	**Units**	**pre-1940**	**1940 –1949**	**1950 –1959**	**1960 –1969**	**1970 –1979**	**1980 –1989**	**1990 –1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**No. with age unknown**	**Items at end of year**	**No. with default dates**	**Data accuracy (1–4)**
10	All	Overhead Line	Concrete poles / steel structure	No.	13	307	5,216	15,923	16,598	15,715	10,012	575	754	941	813	391	1,310	2,048	2,108	1,812	1,951	1,684	1,202	1,419	1,973	1,796	1,895	2,615	3,503	5,247	3,940							14,176	115,938		3
11	All	Overhead Line	Wood poles	No.	4	10	149	459	508	623	887	191	50	72	90	43	99	150	112	67	55	116	15	27	34	28	17	8	3	22	31							2,301	6,171		2
12	All	Overhead Line	Other pole types	No.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	17	30	75	211	309	183							0	831		4
13	HV	Subtransmission Line	Subtransmission OH up to 66kV conductor	km	2	2	24	73	160	72	2	0	0	1	1	0	1	4	1	0	13	1	1	0	0	0	2	1	0	0	1							0	369		4
14	HV	Subtransmission Line	Subtransmission OH 110kV+ conductor	km	0	0	0	7	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	27		4
15	HV	Subtransmission Cable	Subtransmission UG up to 66kV (XLPE)	km	0	0	0	0	59	11	55	56	1	22	6	2	4	8	32	8	25	21	4	10	7	3	16	16	13	6	3							0	348		4
16	HV	Subtransmission Cable	Subtransmission UG up to 66kV (Oil pressurised)	km	0	0	0	40	74	24	4	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0							0	145		4
17	HV	Subtransmission Cable	Subtransmission UG up to 66kV (Gas pressurised)	km	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	2		4
18	HV	Subtransmission Cable	Subtransmission UG up to 66kV (PILC)	km	7	3	17	16	3	2	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0							0	50		4
19	HV	Subtransmission Cable	Subtransmission UG 110kV+ (XLPE)	km	0	0	0	0	0	0	8	0	0	18	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0							0	30		4
20	HV	Subtransmission Cable	Subtransmission UG 110kV+ (Oil pressurised)	km	0	0	0	11	0	1	0	0	0	4	0	0	1	0	0	0	0	0	0	0	0	0	4	0	0	0	0							0	17		4
21	HV	Subtransmission Cable	Subtransmission UG 110kV+ (Gas Pressurised)	km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	–		N/A
22	HV	Subtransmission Cable	Subtransmission UG 110kV+ (PILC)	km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	0		4
23	HV	Subtransmission Cable	Subtransmission submarine cable	km	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	12		4
24	HV	Zone substation Buildings	Zone substations up to 66kV	No.	0	1	4	23	26	18	10	3	1	0	2	0	0	1	1	3	1	2	2	0	0	1	0	1	1	0	0							0	101		4
25	HV	Zone substation Buildings	Zone substations 110kV+	No.	0	0	0	0	1	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	6		4
26	HV	Zone substation switchgear	50/66/110kV CB (Indoor)	No.	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0							0	20		4
27	HV	Zone substation switchgear	50/66/110kV CB (Outdoor)	No.	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	2		4
28	HV	Zone substation switchgear	33kV Switch (Ground Mounted)	No.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	–		N/A
29	HV	Zone substation switchgear	33kV Switch (Pole Mounted)	No.	0	0	33	62	47	5	0	0	0	0	0	0	1	0	0	8	3	0	1	0	53	20	7	0	4	0	1							0	245		4
30	HV	Zone substation switchgear	33kV RMU	No.	0	0	0	8	0	0	0	0	0	0	1	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0							0	9		4
31	HV	Zone substation switchgear	22/33kV CB (Indoor)	No.	0	0	0	14	20	9	0	10	0	4	0	9	1	7	32	3	0	0	6	0	35	24	52	11	0	9								0	245		4
32	HV	Zone substation switchgear	22/33kV CB (Outdoor)	No.	0	0	9	22	25	27	4	0	0	0	1	0	2	1	1	9	18	2	4	0	1	0	0	2	0	0	0							0	130		4
33	HV	Zone substation switchgear	3.3/6.6/11/22kV CB (ground mounted)	No.	0	0	9	145	175	256	106	11	8	2	7	0	19	15	44	86	43	39	36	25	49	30	17	53	95	42	20							0	1,330		4
34	HV	Zone substation switchgear	3.3/6.6/11/22kV CB (pole mounted)	No.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	–		N/A
35	HV	Zone Substation Transformer	Zone Substation Transformers	No.	0	0	4	41	49	33	28	4	1	2	1	1	0	1	2	3	6	5	8	5	1	2	7	4	4	2	0							0	216		4
36	HV	Distribution Line	Distribution OH Open Wire Conductor	km	1	4	144	545	1,005	1,380	294	94	11	4	11	6	22	36	62	21	22	13	8	6	5	7	8	4	7	3	9							25	3,758		3
37	HV	Distribution Line	Distribution OH Aerial Cable Conductor	km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	–		N/A
38	HV	Distribution Line	SWER conductor	km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	–		N/A
39	HV	Distribution Cable	Distribution UG XLPE or PVC	km	0	0	0	0	17	33	177	37	41	30	22	18	97	137	102	61	107	54	72	40	49	70	63	67	65	80	64							6	1,510		4
40	HV	Distribution Cable	Distribution UG PILC	km	13	3	25	198	628	708	513	34	13	4	1	2	12	7	19	5	6	2	1	0	0	0	1	0	0	0	0							6	2,201		4
41	HV	Distribution Cable	Distribution Submarine Cable	km	0	0	6	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	8		4
42	HV	Distribution switchgear	3.3/6.6/11/22kV CB (pole mounted) - reclosers and sectionaliser	No.	0	0	0	0	0	0	21	4	5	1	2	0	3	10	37	74	40	5	1	9	13	2	2	4	4	0	24							0	261		4
43	HV	Distribution switchgear	3.3/6.6/11/22kV CB (Indoor)	No.	37	0	2	0	4	9	4	11	0	4	2	2	3	6	10	10	7	8	6	25	8	8	7	39	12	30	18							0	272		4
44	HV	Distribution switchgear	3.3/6.6/11/22kV Switches and fuses (pole mounted)	No.	0	0	8	232	1,043	1,772	1,451	248	172	154	150	63	221	297	255	253	267	159	114	168	267	323	413	496	582	469	571							195	10,343		3
45	HV	Distribution switchgear	3.3/6.6/11/22kV Switch (ground mounted) - except RMU	No.	7	0	2	364	997	638	380	63	60	53	43	57	73	75	50	31	42	38	41	44	22	10	5	5	0	0	2							104	3,204		3
46	HV	Distribution switchgear	3.3/6.6/11/22kV RMU	No.	4	0	2	260	994	1,216	699	107	82	98	156	153	158	120	104	65	58	99	125	128	180	186	187	221	271	297	203							7	6,160		4
47	HV	Distribution Transformer	Pole Mounted Transformer	No.	12	29	129	252	617	1,296	1,254	265	132	171	142	37	231	258	308	201	253	255	125	208	168	201	201	172	208	270	238							4	7,577		4
48	HV	Distribution Transformer	Ground Mounted Transformer	No.	6	38	143	769	1,967	2,325	2,309	276	278	256	224	83	591	428	498	304	308	290	319	261	331	393	353	302	380	530	357							4	14,317		4
49	HV	Distribution Transformer	Voltage regulators	No.	0	0	0	0	0	0	1	0	0	0	0	1	0	0	2	0	0	0	1	3	2	1	0	0	0	0	0							0	11		4
50	HV	Distribution Substations	Ground Mounted Substation Housing	No.	11	62	178	1,286	3,017	3,410	2,072	188	236	125	141	200	125	119	86	70	59	49	53	56	102	155	204	147	167	189	224							116	12,847		3
51	LV	LV Line	LV OH Conductor	km	0	4	111	528	1,025	1,751	152	109	6	6	11	4	16	26	47	12	13	8	11	10	10	9	10	9	15	27	31							65	4,028		3
52	LV	LV Cable	LV UG Cable	km	5	20	46	434	1,073	1,062	1,269	118	98	58	49	47	213	262	161	81	115	72	74	46	69	100	125	131	136	163	157							21	6,202		4
53	LV	LV Street lighting	LV OH/UG Streetlight circuit	km	3	1	9	24	45	53	86	9	7	4	3	3	15	18	15	11	17	9	17	8	8	17	12	21	17	14	15							6	463		3
54	LV	Connections	OH/UG consumer service connections	No.	0	0	0	163	34,130	174,808	127,020	23,832	8,889	7,791	11,504	14,995	18,516	19,325	14,060	10,280	7,023	6,812	6,676	6,106	6,821	7,789	8,366	9,252	12,396	15,596	16,767							0	568,897		4
55	All	Protection	Protection relays (electromechanical, solid state and numeric)	No.	0	0	4	152	458	357	251	35	32	17	15	44	46	80	39	140	321	214	165	103	231	116	90	146	181	145	81							285	3,748		3
56	All	SCADA and communications	SCADA and communications equipment operating as a single sys	Lot	0	0	0	0	0	0	3	0	0	0	0	5	3	5	24	12	10	14	8	17	25	4	14	50	21	30	13							74	332		2
57	All	Capacitor Banks	Capacitors including controls	No	0	0	0	0	0	0	10	46	0	0	1	0	0	2	0	0	0	1	0	1	11	0	0	5	0	0	0							0	77		4
58	All	Load Control	Centralised plant	Lot	0	0	0	9	1	7	11	0	0	0	0	0	1	0	1	3	0	0	0	0	0	0	0	0	0	0	0							1	33		3
59	All	Load Control	Relays	No	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	–		N/A
60	All	Civils	Cable Tunnels	km	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							1	10		3

Company Name	**Vector**
For Year Ended	**31 March 2019**
Network / Sub-network Name	**Southern**

SCHEDULE 9b: ASSET AGE PROFILE

This schedule requires a summary of the age profile (based on year of installation) of the assets that make up the network, by asset category and asset class. All units relating to cable and line assets, that are expressed in km, refer to circuit lengths.

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8		**Disclosure Year (year ended)**	31 March 2019		**Number of assets at disclosure year end by installation date**																																				
9	**Voltage**	**Asset category**	**Asset class**	**Units**	**pre-1940**	**1940 –1949**	**1950 –1959**	**1960 –1969**	**1970 –1979**	**1980 –1989**	**1990 –1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**No. with age unknown**	**Items at end of year**	**No. with default dates**	**Data accuracy (1–4)**
10	All	Overhead Line	Concrete poles / steel structure	No.	5	0	170	4,758	866	2,697	4,028	248	484	689	558	198	935	1,539	1,725	1,425	1,245	1,205	889	1,016	1,235	1,048	918	1,439	1,816	2,655	2,148							14,043	49,982		3
11	All	Overhead Line	Wood poles	No.	0	0	0	234	118	96	473	172	37	22	66	30	53	86	53	44	17	22	14	7	16	4	1	0	1	15	19							2,270	3,868		2
12	All	Overhead Line	Other pole types	No.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	7	32	147	174	44							0	407		4
13	HV	Subtransmission Line	Subtransmission OH up to 66kV conductor	km	0	0	0	0	34.360	0	0	0	0	2.906	0.825	0	0	0	0	0	5.071	0	5.743	0	0	0.087	1.873	0	0	0	0							0.017	51		4
14	HV	Subtransmission Line	Subtransmission OH 110kV+ conductor	km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0.000	–		N/A
15	HV	Subtransmission Cable	Subtransmission UG up to 66kV (XLPE)	km	0	0	0	0	0.103	1.745	32.042	48.370	1.106	21.137	5.451	0.011	1.248	1.371	14.658	0.840	2.875	18.721	0.419	9.016	4.566	2.345	14.510	12.538	9.126	1.678	0.764							0.203	205		4
16	HV	Subtransmission Cable	Subtransmission UG up to 66kV (Oil pressurised)	km	0	0	0	38.743	72.563	24.413	4.016	0	0.010	0.007	0	0.010	1.293	0.780	0.646	0	0.033	0.006	0	0	0.034	0	0	0	0.027	0	0							0	143		4
17	HV	Subtransmission Cable	Subtransmission UG up to 66kV (Gas pressurised)	km	0	0	0	2.266	0.149	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	2		4
18	HV	Subtransmission Cable	Subtransmission UG up to 66kV (PILC)	km	7.421	2.818	16.727	15.537	2.640	2.232	0.290	0.032	0	0	0	0	0.353	0.007	0	0.619	0	0	0	0	0	0.004	0	0	0	0	0	0							0.033	49		4
19	HV	Subtransmission Cable	Subtransmission UG 110kV+ (XLPE)	km	0	0	0	0	0	0	8.476	0	0	18.479	0	0	1.191	0	0	0.036	0	0	2.133	0	0.004	0	0	0	0	0	0							0	30		4
20	HV	Subtransmission Cable	Subtransmission UG 110kV+ (Oil pressurised)	km	0	0	0	11.302	0	4.790	0.009	0.020	0	4	0	0	1.022	0	0	0	0	0	0	0	0	0	4	0	0	0	0							0	17		4
21	HV	Subtransmission Cable	Subtransmission UG 110kV+ (Gas Pressurised)	km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0.000	–		N/A
22	HV	Subtransmission Cable	Subtransmission UG 110kV+ (PILC)	km	0	0	0	0	0.003	0.003	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	0		4
23	HV	Subtransmission Cable	Subtransmission submarine cable	km	0	0	0	0	0	10.779	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	11		4
24	HV	Zone substation Buildings	Zone substations up to 66kV	No.	0	1	2	11	15	7	5	3	0	0	1	0	0	1	1	0	0	1	1	0	0	0	0	1	0	0	0							0	50		4
25	HV	Zone substation Buildings	Zone substations 110kV+	No.	0	0	0	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	5		4
26	HV	Zone substation switchgear	50/66/110kV CB (Indoor)	No.	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0							0	20		4
27	HV	Zone substation switchgear	50/66/110kV CB (Outdoor)	No.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	–		N/A
28	HV	Zone substation switchgear	33kV Switch (Ground Mounted)	No.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	–		N/A
29	HV	Zone substation switchgear	33kV Switch (Pole Mounted)	No.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	–		N/A
30	HV	Zone substation switchgear	33kV RMU	No.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	–		N/A
31	HV	Zone substation switchgear	22/33kV CB (Indoor)	No.	0	0	0	0	14	20	9	0	10	4	0	0	0	0	1	8	0	0	0	6	0	0	17	39	2	0	0							0	132		4
32	HV	Zone substation switchgear	22/33kV CB (Outdoor)	No.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	–		N/A
33	HV	Zone substation switchgear	3.3/6.6/11/22kV CB (ground mounted)	No.	0	0	2	119	103	191	66	11	0	0	0	0	1	9	44	38	17	13	28	16	25	13	6	26	57	29	19							0	833		4
34	HV	Zone substation switchgear	3.3/6.6/11/22kV CB (pole mounted)	No.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	–		N/A
35	HV	Zone Substation Transformer	Zone Substation Transformers	No.	0	0	2	23	33	17	20	4	0	1	1	0	0	1	0	3	0	5	5	4	0	1	3	3	1	2	0							0	129		4
36	HV	Distribution Line	Distribution OH Open Wire Conductor	km	0.482	0	0	0.125	65.545	615.713	34.610	86.687	2.114	1.795	9.320	0.919	5.449	5.671	9.760	9.376	3.536	3.606	2.717	2.597	1.299	1.121	0.360	0.198	2.370	0.225	2.168							16.945	885		3
37	HV	Distribution Line	Distribution OH Aerial Cable Conductor	km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0.000	–		N/A
38	HV	Distribution Line	SWER conductor	km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0.000	–		N/A
39	HV	Distribution Cable	Distribution UG XLPE or PVC	km	0.009	0	0	0.032	10.703	11.251	25.348	7.762	17.719	13.757	13.692	4.998	64.918	55.053	59.659	30.400	34.195	25.509	41.092	21.966	24.188	44.501	27.141	33.801	30.096	31.474	40.093							5.104	674		4
40	HV	Distribution Cable	Distribution UG PILC	km	13.394	2.772	24.630	180.726	508.567	441.552	317.068	26.143	11.029	2.542	0.798	0.001	10.899	5.122	16.591	3.927	3.616	1.829	0.949	0	0.014	0.007	0	0.133	0	0.039	0							3.701	1,576		4
41	HV	Distribution Cable	Distribution Submarine Cable	km	0	0	0	0	0.879	0	0.693	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	2		4
42	HV	Distribution switchgear	3.3/6.6/11/22kV CB (pole mounted) - reclosers and sectionaliser	No.	0	0	0	0	0	0	1	0	0	0	1	0	0	8	16	15	2	2	1	3	3	1	0	0	1	0	4							0	58		4
43	HV	Distribution switchgear	3.3/6.6/11/22kV CB (Indoor)	No.	37	0	2	0	3	7	4	11	0	4	2	1	2	6	10	4	7	8	4	24	8	8	5	23	4	17	15							0	216		4
44	HV	Distribution switchgear	3.3/6.6/11/22kV Switches and fuses (pole mounted)	No.	0	0	0	4	45	485	174	90	51	41	49	0	86	52	88	81	43	38	37	62	122	140	103	117	125	103	133							159	2,428		3
45	HV	Distribution switchgear	3.3/6.6/11/22kV Switch (ground mounted) - except RMU	No.	7	0	1	353	979	544	223	33	39	20	25	36	33	39	22	17	21	15	25	28	10	4	3	1	0	0	1							15	2,503		3
46	HV	Distribution switchgear	3.3/6.6/11/22kV RMU	No.	4	0	2	249	955	1,049	472	57	56	58	103	92	114	84	68	40	41	44	88	74	134	108	106	123	137	141	130							6	4,535		4
47	HV	Distribution Transformer	Pole Mounted Transformer	No.	0	0	1	39	146	232	267	111	29	78	63	1	53	45	87	83	92	73	40	69	61	79	78	39	63	76	56							2	1,975		4
48	HV	Distribution Transformer	Ground Mounted Transformer	No.	0	0	2	82	1,055	1,483	1,371	126	132	113	109	16	160	174	276	141	120	92	114	126	184	194	159	125	154	194	158							4	6,893		4
49	HV	Distribution Transformer	Voltage regulators	No.	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0							0	4		4
50	HV	Distribution Substations	Ground Mounted Substation Housing	No.	0	1	2	165	1,423	2,127	1,123	84	103	56	60	71	60	52	58	39	40	15	29	30	55	72	72	52	31	65	103							115	6,103		3
51	LV	LV Line	LV OH Conductor	km	0.025	0	0	2.496	236.646	1,342.320	85.982	102.406	4.526	5.271	10.759	1.658	6.835	4.383	7.089	4.452	4.520	2.751	4.363	4.258	5.081	3.738	3.174	2.896	3.143	2.720	2.302							46.074	1,900		3
52	LV	LV Cable	LV UG Cable	km	4.377	16.547	36.255	232.601	670.074	784.918	775.340	55.536	67.341	34.208	34.912	17.339	151.471	119.121	106.040	49.494	62.240	45.365	45.417	25.906	38.255	53.070	55.658	65.228	52.637	69.609	74.499							13.266	3,757		4
53	LV	LV Street lighting	LV OH/UG Streetlight circuit	km	2.593	0.113	8.450	14.749	27.163	33.169	50.490	3.142	4.857	3.059	1.680	1.443	12.390	11.771	11.205	8.830	8.508	4.016	5.707	4.007	4.358	4.520	4.470	8.357	7.221	5.942	5.578							2.596	260		3
54	LV	Connections	OH/UG consumer service connections	No.	0	0	0	97	6,543	130,303	39,361	18,338	4,870	4,224	7,205	10,409	14,314	15,959	10,922	7,088	4,823	4,382	4,494	4,053	4,510	4,990	5,101	5,394	8,074	10,746	12,287							0	338,487		4
55	All	Protection	Protection relays (electromechanical, solid state and numeric)	No.	0	0	0	111	262	188	151	35	26	12	7	4	1	68	17	81	203	118	85	65	69	66	42	118	93	60	81							117	2,080		3
56	All	SCADA and communications	SCADA and communications equipment operating as a single sys	Lot	0	0	0	0	0	0	1	0	0	0	0	5	0	5	9	6	9	7	5	8	14	4	9	30	11	17	8							32	180		2
57	All	Capacitor Banks	Capacitors including controls	No	0	0	0	0	0	0	10	1	0	0	0	0	0	0	0	0	0	0	0	1	9	0	0	1	0	0	0							0	13		4
58	All	Load Control	Centralised plant	Lot	0	0	0	0	0	5	11	0	0	0	0	0	1	0	1	3	0	0	0	0	0	0	0	0	0	0	0							1	22		3
59	All	Load Control	Relays	No	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	–		N/A
60	All	Civils	Cable Tunnels	km	0	0	0	0	0	0	0	9.289	0	0	0	0	0.109	0	0	0	0	0	0	0.095	0	0	0	0	0	0	0							0.896	10		3

Company Name	**Vector**
For Year Ended	**31 March 2019**
Network / Sub-network Name	**Northern**

SCHEDULE 9b: ASSET AGE PROFILE

This schedule requires a summary of the age profile (based on year of installation) of the assets that make up the network, by asset category and asset class. All units relating to cable and line assets, that are expressed in km, refer to circuit lengths.

sch ref																																								
8		**Disclosure Year (year ended)**	31 March 2019											**Number of assets at disclosure year end by installation date**																											
9	**Voltage**	**Asset category**	**Asset class**	**Units**	**pre-1940**	**1940 –1949**	**1950 –1959**	**1960 –1969**	**1970 –1979**	**1980 –1989**	**1990 –1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**No. with age unknown**	**Items at end of year**	**No. with default dates**	**Data accuracy (1–4)**
10	All	Overhead Line	Concrete poles / steel structure	No.	8	307	5,046	11,165	15,732	13,018	5,984	327	270	252	255	193	375	509	384	387	706	479	313	403	738	748	977	1,176	1,687	2,592	1,792							133	65,956		3
11	All	Overhead Line	Wood poles	No.	4	10	149	225	390	527	414	19	13	50	24	13	48	64	59	23	38	94	1	20	18	24	16	8	2	7	12							31	2,303		2
12	All	Overhead Line	Other pole types	No.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	14	23	43	64	135	139							0	424		4
13	HV	Subtransmission Line	Subtransmission OH up to 66kV conductor	km	1.607	1.615	24.117	73.046	125.814	71.857	1.763	0	0	0	0.001	0	0.793	4.182	1.359	0.003	8.076	0.803	1.618	0	0.015	0	0	0.623	0.107	0	0.972							0	318		4
14	HV	Subtransmission Line	Subtransmission OH 110kV+ conductor	km	0	0	0	7.067	12.181	0	0	0	0	0	0	0	0	0	6.839	0	0	0	0	0.432	0	0	0	0.088	0	0	0							0	27		4
15	HV	Subtransmission Cable	Subtransmission UG up to 66kV (XLPE)	km	0	0	0.190	0	19.176	9.473	22.631	7.728	0.308	0.787	0.903	1.615	2.790	6.733	17.527	7.066	21.905	2.079	3.556	0.622	2.885	0.534	1.914	3.403	3.575	4.231	1.902							0	144		4
16	HV	Subtransmission Cable	Subtransmission UG up to 66kV (Oil pressurised)	km	0	0	0	1.053	1.123	0	0	0	0	0	0	0	0	0	0.136	0	0	0	0	0	0	0	0	0	0	0	0							0	2		4
17	HV	Subtransmission Cable	Subtransmission UG up to 66kV (Gas pressurised)	km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	–		N/A
18	HV	Subtransmission Cable	Subtransmission UG up to 66kV (PILC)	km	0	0	0	0	0.589	0.091	0.342	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	1		4
19	HV	Subtransmission Cable	Subtransmission UG 110kV+ (XLPE)	km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	–		N/A
20	HV	Subtransmission Cable	Subtransmission UG 110kV+ (Oil pressurised)	km	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0							0	–		N/A
21	HV	Subtransmission Cable	Subtransmission UG 110kV+ (Gas Pressurised)	km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	–		N/A
22	HV	Subtransmission Cable	Subtransmission UG 110kV+ (PILC)	km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	–		N/A
23	HV	Subtransmission Cable	Subtransmission submarine cable	km	0	0	0	0.429	0	0.158	0.308	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	1		4
24	HV	Zone substation Buildings	Zone substations up to 66kV	No.	0	0	2	12	11	11	5	0	1	0	1	0	0	0	0	3	1	1	1	0	0	1	0	0	1	0	0							0	51		4
25	HV	Zone substation Buildings	Zone substations 110kV+	No.	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	1		4
26	HV	Zone substation switchgear	50/66/110kV CB (Indoor)	No.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	–		N/A
27	HV	Zone substation switchgear	50/66/110kV CB (Outdoor)	No.	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2							0	2		4
28	HV	Zone substation switchgear	33kV Switch (Ground Mounted)	No.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	–		N/A
29	HV	Zone substation switchgear	33kV Switch (Pole Mounted)	No.	0	0	33	62	47	5	0	0	0	0	0	0	1	0	8	3	0	1	0	1	0	53	20	7	0	4	0	1						0	245		4
30	HV	Zone substation switchgear	33kV RMU	No.	0	0	0	0	0	0	0	0	0	0	1	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0							0	9		4
31	HV	Zone substation switchgear	22/33kV CB (Indoor)	No.	0	0	0	0	0	0	0	0	0	4	4	0	9	1	6	24	3	0	0	0	0	0	29	7	13	9	0	9						0	113		4
32	HV	Zone substation switchgear	22/33kV CB (Outdoor)	No.	0	0	9	22	25	27	4	0	0	0	1	0	2	1	1	9	19	2	4	0	1	0	0	1	0	0	0							0	130		4
33	HV	Zone substation switchgear	3.3/6.6/11/22kV CB (ground mounted)	No.	0	0	7	26	72	65	40	0	8	2	7	0	18	6	0	48	26	26	8	9	24	17	11	27	38	13	1							0	497		4
34	HV	Zone substation switchgear	3.3/6.6/11/22kV CB (pole mounted)	No.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	–		N/A
35	HV	Zone Substation Transformer	Zone Substation Transformers	No.	0	0	2	18	36	18	8	0	1	1	0	1	0	0	2	0	6	0	3	1	1	1	4	1	3	0	0							0	87		4
36	HV	Distribution Line	Distribution OH Open Wire Conductor	km	0.068	3.918	144.068	545.112	939.351	764.410	259.108	7.751	8.591	2.390	2.099	5.063	16.620	30.586	52.311	11.758	18.362	6.942	5.139	3.071	3.820	6.244	7.668	4.170	4.818	4.521	6.935							9	2,873		3
37	HV	Distribution Line	Distribution OH Aerial Cable Conductor	km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	–		N/A
38	HV	Distribution Line	SWER conductor	km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	–		N/A
39	HV	Distribution Cable	Distribution UG XLPE or PVC	km	0	0.005	0.021	0.302	5.938	21.855	151.225	29.098	23.223	16.643	8.420	13.154	32.544	81.616	42.615	30.118	72.870	28.142	31.352	17.793	24.733	25.707	36.055	33.327	35.339	48.286	23.858							1	835		4
40	HV	Distribution Cable	Distribution UG PILC	km	0	0	0.626	16.791	119.236	266.213	196.071	7.834	1.695	1.677	0.014	2.186	1.098	2.003	2.458	0.893	2.418	0.022	0.243	0.001	0.002	0.006	0.584	0.332	0	0.129	0.001							2	625		4
41	HV	Distribution Cable	Distribution Submarine Cable	km	0	0	6.008	0.142	0	0	0.427	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	7		4
42	HV	Distribution switchgear	3.3/6.6/11/22kV CB (pole mounted) - reclosers and sectionaliser	No.	0	0	0	0	0	0	20	4	5	1	1	0	3	2	21	59	38	3	0	6	10	1	2	4	3	0	20							0	203		4
43	HV	Distribution switchgear	3.3/6.6/11/22kV CB (Indoor)	No.	0	0	0	0	1	2	0	0	0	0	0	1	1	0	0	6	0	0	2	1	0	0	2	16	8	13	3							0	56		4
44	HV	Distribution switchgear	3.3/6.6/11/22kV Switches and fuses (pole mounted)	No.	0	0	8	228	998	1,287	1,277	158	121	113	101	63	135	245	167	172	224	123	77	106	145	183	310	379	457	366	438							36	7,915		3
45	HV	Distribution switchgear	3.3/6.6/11/22kV Switch (ground mounted) - except RMU	No.	0	0	1	9	18	52	157	30	21	33	18	21	35	36	28	14	21	23	18	16	12	6	2	2	0	0	1							89	701		3
46	HV	Distribution switchgear	3.3/6.6/11/22kV RMU	No.	0	0	0	11	39	167	222	50	26	40	53	61	44	35	38	25	17	55	37	54	48	58	81	98	134	156	73							1	1,625		4
47	HV	Distribution Transformer	Pole Mounted Transformer	No.	12	29	128	213	471	1,044	987	154	83	93	79	36	178	213	221	118	161	142	85	139	107	122	131	133	145	194	182							2	5,602		4
48	HV	Distribution Transformer	Ground Mounted Transformer	No.	6	38	141	687	912	842	938	150	123	137	115	67	425	254	222	163	188	198	205	135	147	199	194	177	226	336	199							0	7,424		4
49	HV	Distribution Transformer	Voltage regulators	No.	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	1	2	1	0	0	0	0	0							0	7		4
50	HV	Distribution Substations	Ground Mounted Substation Housing	No.	11	61	176	1,121	1,594	1,283	949	104	133	69	81	129	65	67	28	31	19	34	24	26	47	83	132	95	136	124	121							1	6,744		3
51	LV	LV Line	LV OH Conductor	km	0	3.957	111.463	525.939	788.031	409.013	66.457	6.938	1.665	1.021	0.475	2.130	9.417	21.404	39.521	7.683	8.617	5.431	6.617	5.919	4.905	4.839	6.857	6.148	12.315	23.927	28.347							19	2,128		3
52	LV	LV Cable	LV UG Cable	km	0.546	3.373	9.385	201.303	403.167	277.403	493.472	62.913	30.545	21.083	14.539	29.949	61.462	142.431	55.193	31.393	52.289	27.075	28.359	19.749	30.743	47.022	69.075	66.095	83.177	93.091	82.222							8	2,445		4
53	LV	LV Street lighting	LV OH/UG Streetlight circuit	km	0	0.520	1.028	9.268	18.139	19.469	35.346	5.539	2.245	1.089	0.945	1.779	2.542	4.103	4.265	1.801	8.057	4.833	11.603	4.393	3.700	12.403	7.695	12.701	9.540	7.673	8.955							3	203		3
54	LV	Connections	OH/UG consumer service connections	No.	0	0	0	66	27,567	44,505	87,659	5,494	4,019	3,567	4,299	4,586	4,202	3,366	3,138	3,192	2,200	2,439	2,182	2,053	2,311	2,799	3,265	3,858	4,322	4,850	4,480							0	230,410		4
55	All	Protection	Protection relays (electromechanical, solid state and numeric)	No.	0	0	4	41	196	169	100	0	6	5	8	40	45	12	22	59	118	96	80	38	162	50	48	28	88	85	0							168	1,668		3
56	All	SCADA and communications	SCADA and communications equipment operating as a single sys	Lot	0	0	0	0	0	0	2	0	0	0	0	0	3	0	19	6	1	7	3	9	11	0	5	20	10	13	5							42	152		2
57	All	Capacitor Banks	Capacitors including controls	No	0	0	0	0	0	0	0	45	0	0	1	0	0	2	0	0	0	1	0	0	11	0	0	4	0	0	0							0	64		4
58	All	Load Control	Centralised plant	Lot	0	0	0	9	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	11		3
59	All	Load Control	Relays	No	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	–		N/A
60	All	Civils	Cable Tunnels	km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							0	–		N/A

Company Name	**Vector**
For Year Ended	**31 March 2019**
Network / Sub-network Name	**Combined**

SCHEDULE 9c: REPORT ON OVERHEAD LINES AND UNDERGROUND CABLES

This schedule requires a summary of the key characteristics of the overhead line and underground cable network. All units relating to cable and line assets, that are expressed in km, refer to circuit lengths.

sch ref				
9				
10	**Circuit length by operating voltage (at year end)**	**Overhead (km)**	**Underground (km)**	**Total circuit length (km)**
11	> 66kV	27	47	74
12	50kV & 66kV	-	-	-
13	33kV	366	421	787
14	SWER (all SWER voltages)	-	-	-
15	22kV (other than SWER)	3	181	184
16	6.6kV to 11kV (inclusive—other than SWER)	3,758	3,674	7,432
17	Low voltage (< 1kV)	4,028	6,202	10,230
18	**Total circuit length (for supply)**	8,182	10,526	18,708
19				
20	Dedicated street lighting circuit length (km)	17	446	463
21	Circuit in sensitive areas (conservation areas, iwi territory etc) (km)			3,966
22				
23	**Overhead circuit length by terrain (at year end)**	**Circuit length (km)**	**(% of total overhead length)**	
24	Urban	4,666	57%	
25	Rural	3,516	43%	
26	Remote only	-	-	
27	Rugged only	-	-	
28	Remote and rugged	-	-	
29	Unallocated overhead lines	-	-	
30	**Total overhead length**	8,182	100%	
31				
32		**Circuit length (km)**	**(% of total circuit length)**	
33	Length of circuit within 10km of coastline or geothermal areas (where known)	18,625	99.6%	
34		**Circuit length (km)**	**(% of total overhead length)**	
35	Overhead circuit requiring vegetation management	8,182	100%	

Company Name	**Vector**
For Year Ended	**31 March 2019**
Network / Sub-network Name	**Southern**

SCHEDULE 9c: REPORT ON OVERHEAD LINES AND UNDERGROUND CABLES

This schedule requires a summary of the key characteristics of the overhead line and underground cable network. All units relating to cable and line assets, that are expressed in km, refer to circuit lengths.

sch ref				
9				
10	**Circuit length by operating voltage (at year end)**	**Overhead (km)**	**Underground (km)**	**Total circuit length (km)**
11	> 66kV	-	47	47
12	50kV & 66kV	-	-	-
13	33kV	48	273	321
14	SWER (all SWER voltages)	-	-	-
15	22kV (other than SWER)	3	181	184
16	6.6kV to 11kV (inclusive—other than SWER)	885	2,208	3,092
17	Low voltage (< 1kV)	1,900	3,757	5,657
18	**Total circuit length (for supply)**	2,835	6,466	9,302
19				
20	Dedicated street lighting circuit length (km)	5	255	260
21	Circuit in sensitive areas (conservation areas, iwi territory etc) (km)			2,272
22				
23	**Overhead circuit length by terrain (at year end)**	**Circuit length (km)**	**(% of total overhead length)**	
24	Urban	2,366	83%	
25	Rural	469	17%	
26	Remote only	-	-	
27	Rugged only	-	-	
28	Remote and rugged	-	-	
29	Unallocated overhead lines	-	-	
30	**Total overhead length**	2,835	100%	
31				
32		**Circuit length (km)**	**(% of total circuit length)**	
33	Length of circuit within 10km of coastline or geothermal areas (where known)	9,276	99.7%	
34		**Circuit length (km)**	**(% of total overhead length)**	
35	Overhead circuit requiring vegetation management	2,835	100%	

Company Name	**Vector**
For Year Ended	**31 March 2019**
Network / Sub-network Name	**Northern**

SCHEDULE 9c: REPORT ON OVERHEAD LINES AND UNDERGROUND CABLES

This schedule requires a summary of the key characteristics of the overhead line and underground cable network. All units relating to cable and line assets, that are expressed in km, refer to circuit lengths.

sch ref				
9				
10	**Circuit length by operating voltage (at year end)**	**Overhead (km)**	**Underground (km)**	**Total circuit length (km)**
11	> 66kV	27	–	27
12	50kV & 66kV	–	–	–
13	33kV	318	148	466
14	SWER (all SWER voltages)	–	–	–
15	22kV (other than SWER)	–	–	–
16	6.6kV to 11kV (inclusive—other than SWER)	2,873	1,467	4,340
17	Low voltage (< 1kV)	2,128	2,445	4,573
18	**Total circuit length (for supply)**	5,346	4,060	9,406
19				
20	Dedicated street lighting circuit length (km)	12	190	203
21	Circuit in sensitive areas (conservation areas, iwi territory etc) (km)			1,694
22				
23	**Overhead circuit length by terrain (at year end)**	**Circuit length (km)**	**(% of total overhead length)**	
24	Urban	2,300	43%	
25	Rural	3,047	57%	
26	Remote only	–	–	
27	Rugged only	–	–	
28	Remote and rugged	–	–	
29	Unallocated overhead lines	–	–	
30	**Total overhead length**	5,346	100%	
31				
32		**Circuit length (km)**	**(% of total circuit length)**	
33	Length of circuit within 10km of coastline or geothermal areas (where known)	9,350	99.40%	
34		**Circuit length (km)**	**(% of total overhead length)**	
35	Overhead circuit requiring vegetation management	5,346	100%	

Company Name	**Vector**
For Year Ended	**31 March 2019**

SCHEDULE 9d: REPORT ON EMBEDDED NETWORKS

This schedule requires information concerning embedded networks owned by an EDB that are embedded in another EDB's network or in another embedded network.

sch ref

	Location *	Number of ICPs served	Line charge revenue ($000)
8			
9	None		
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			

** Extend embedded distribution networks table as necessary to disclose each embedded network owned by the EDB which is embedded in another EDB's network or in another embedded network*

Company Name	**Vector**
For Year Ended	**31 March 2019**
Network / Sub-network Name	**Combined**

SCHEDULE 9e: REPORT ON NETWORK DEMAND

This schedule requires a summary of the key measures of network utilisation for the disclosure year (number of new connections including distributed generation, peak demand and electricity volumes conveyed).

sch ref

9e(i): Consumer Connections

Number of ICPs connected in year by consumer type

*Consumer types defined by EDB**	Number of connections (ICPs)
Residential	6,562
Commercial	4,041

** include additional rows if needed*

Connections total	10,603

Distributed generation

Number of connections made in year	467	**connections**
Capacity of distributed generation installed in year	2.34	**MVA**

9e(ii): System Demand

		Demand at time of maximum coincident demand (MW)	
	Maximum coincident system demand		
	GXP demand	1,809	
plus	Distributed generation output at HV and above	12	
	Maximum coincident system demand	1,821	
less	Net transfers to (from) other EDBs at HV and above	-	
	Demand on system for supply to consumers' connection points	1,821	

		Energy (GWh)	
	Electricity volumes carried		
	Electricity supplied from GXPs	8,673	
less	Electricity exports to GXPs	-	
plus	Electricity supplied from distributed generation	130	
less	Net electricity supplied to (from) other EDBs	-	
	Electricity entering system for supply to consumers' connection points	8,802	
less	Total energy delivered to ICPs	8,496	
	Electricity losses (loss ratio)	307	3.5%
	Load factor	0.55	

9e(iii): Transformer Capacity

	(MVA)
Distribution transformer capacity (EDB owned)	4,496
Distribution transformer capacity (Non-EDB owned, estimated)	465
Total distribution transformer capacity	4,961
Zone substation transformer capacity	4,499

Company Name	**Vector**
For Year Ended	**31 March 2019**
Network / Sub-network Name	**Southern**

SCHEDULE 9e: REPORT ON NETWORK DEMAND

This schedule requires a summary of the key measures of network utilisation for the disclosure year (number of new connections including distributed generation, peak demand and electricity volumes conveyed).

sch ref

9e(i): Consumer Connections

Number of ICPs connected in year by consumer type

*Consumer types defined by EDB**	Number of connections (ICPs)
Residential	4,016
Commercial	2,001

** include additional rows if needed*

Connections total	6,017

Distributed generation

Number of connections made in year	186	**connections**
Capacity of distributed generation installed in year	0.92	**MVA**

9e(ii): System Demand

		Demand at time of maximum coincident demand (MW)	
	Maximum coincident system demand		
	GXP demand	1,141	
plus	Distributed generation output at HV and above	4	
	Maximum coincident system demand	1,144	
less	Net transfers to (from) other EDBs at HV and above	-	
	Demand on system for supply to consumers' connection points	1,144	

		Energy (GWh)	
	Electricity volumes carried		
	Electricity supplied from GXPs	5,841	
less	Electricity exports to GXPs	-	
plus	Electricity supplied from distributed generation	53	
less	Net electricity supplied to (from) other EDBs	-	
	Electricity entering system for supply to consumers' connection points	5,894	
less	Total energy delivered to ICPs	5,715	
	Electricity losses (loss ratio)	179	3.0%
	Load factor	0.59	

9e(iii): Transformer Capacity

	(MVA)
Distribution transformer capacity (EDB owned)	2,836
Distribution transformer capacity (Non-EDB owned, estimated)	411
Total distribution transformer capacity	3,247
Zone substation transformer capacity	2,964

Company Name	**Vector**
For Year Ended	**31 March 2019**
Network / Sub-network Name	**Northern**

SCHEDULE 9e: REPORT ON NETWORK DEMAND

This schedule requires a summary of the key measures of network utilisation for the disclosure year (number of new connections including distributed generation, peak demand and electricity volumes conveyed).

sch ref

9e(i): Consumer Connections

Number of ICPs connected in year by consumer type

*Consumer types defined by EDB**	Number of connections (ICPs)
Residential	2,546
Commercial	2,040

** include additional rows if needed*

Connections total	4,586

Distributed generation

Number of connections made in year	281	**connections**
Capacity of distributed generation installed in year	1.41	**MVA**

9e(ii): System Demand

		Demand at time of maximum coincident demand (MW)	
	Maximum coincident system demand		
	GXP demand	714	
plus	Distributed generation output at HV and above	8	
	Maximum coincident system demand	722	
less	Net transfers to (from) other EDBs at HV and above	-	
	Demand on system for supply to consumers' connection points	722	

		Energy (GWh)	
	Electricity volumes carried		
	Electricity supplied from GXPs	2,832	
less	Electricity exports to GXPs	-	
plus	Electricity supplied from distributed generation	77	
less	Net electricity supplied to (from) other EDBs	-	
	Electricity entering system for supply to consumers' connection points	2,909	
less	Total energy delivered to ICPs	2,781	
	Electricity losses (loss ratio)	128	4.4%
	Load factor	0.46	

9e(iii): Transformer Capacity

	(MVA)
Distribution transformer capacity (EDB owned)	1,660
Distribution transformer capacity (Non-EDB owned, estimated)	389
Total distribution transformer capacity	2,049
Zone substation transformer capacity	1,535

Company Name	**Vector**
For Year Ended	**31 March 2019**
Network / Sub-network Name	**Combined**

SCHEDULE 10: REPORT ON NETWORK RELIABILITY

This schedule requires a summary of the key measures of network reliability (interruptions, SAIDI, SAIFI and fault rate) for the disclosure year. EDBs must provide explanatory comment on their network reliability for the disclosure year in Schedule 14 (Explanatory notes to templates). The SAIFI and SAIDI information is part of audited disclosure information (as defined in section 1.4 of the ID determination), and so is subject to the assurance report required by section 2.8.

sch ref

10(i): Interruptions

Interruptions by class	**Number of interruptions**
Class A (planned interruptions by Transpower)	2
Class B (planned interruptions on the network)	1,721
Class C (unplanned interruptions on the network)	2,092
Class D (unplanned interruptions by Transpower)	1
Class E (unplanned interruptions of EDB owned generation)	0
Class F (unplanned interruptions of generation owned by others)	0
Class G (unplanned interruptions caused by another disclosing entity)	0
Class H (planned interruptions caused by another disclosing entity)	0
Class I (interruptions caused by parties not included above)	0
Total	3,816

Interruption restoration	**≤3Hrs**	**>3hrs**
Class C interruptions restored within	1,071	1,021

SAIFI and SAIDI by class	**SAIFI**	**SAIDI**
Class A (planned interruptions by Transpower)	0	0
Class B (planned interruptions on the network)	0.37	89
Class C (unplanned interruptions on the network)	1.91	504.4
Class D (unplanned interruptions by Transpower)	0.01	0.2
Class E (unplanned interruptions of EDB owned generation)	0	0
Class F (unplanned interruptions of generation owned by others)	0	0
Class G (unplanned interruptions caused by another disclosing entity)	0	0
Class H (planned interruptions caused by another disclosing entity)	0	0
Class I (interruptions caused by parties not included above)	0	0
Total	2.29	593.6

Normalised SAIFI and SAIDI	**Normalised SAIFI**	**Normalised SAIDI**
Classes B & C (interruptions on the network) (under the 2015 DPP)	1.76	198.2
Classes B & C (interruptions on the network) (under the ID Determination 2012)	2.16	263.2

10(ii): Class C Interruptions and Duration by Cause

Cause	**SAIFI**	**SAIDI**
Lightning	0.07	6.0
Vegetation	0.41	234.5
Adverse weather	0.09	84.3
Adverse environment	0	0
Third party interference	0.26	32.7
Wildlife	0.07	5.5
Human error	0.03	1.3
Defective equipment	0.71	89.3
Cause unknown	0.27	50.4

10(iii): Class B Interruptions and Duration by Main Equipment Involved

Main equipment involved	**SAIFI**	**SAIDI**
Subtransmission lines	0	0.6
Subtransmission cables	0	0
Subtransmission other	0	0.3
Distribution lines (excluding LV)	0.14	40.0
Distribution cables (excluding LV)	0.02	3.7
Distribution other (excluding LV)	0.2	43.9

10(iv): Class C Interruptions and Duration by Main Equipment Involved

Main equipment involved	**SAIFI**	**SAIDI**
Subtransmission lines	0.28	19.7
Subtransmission cables	0.02	0.4
Subtransmission other	0.02	0.9
Distribution lines (excluding LV)	1.07	413.3
Distribution cables (excluding LV)	0.17	26.4
Distribution other (excluding LV)	0.34	43.3

10(v): Fault Rate

Main equipment involved	**Number of Faults**	**Circuit length (km)**	**Fault rate (faults per 100km)**
Subtransmission lines	46	395	11.63
Subtransmission cables	3	605	0.50
Subtransmission other	6		
Distribution lines (excluding LV)	1,290	3763	34.28
Distribution cables (excluding LV)	212	3718	5.70
Distribution other (excluding LV)	498		
Total	2,055		

Company Name	**Vector**
For Year Ended	**31 March 2019**
Network / Sub-network Name	**Southern**

SCHEDULE 10: REPORT ON NETWORK RELIABILITY

This schedule requires a summary of the key measures of network reliability (interruptions, SAIDI, SAIFI and fault rate) for the disclosure year. EDBs must provide explanatory comment on their network reliability for the disclosure year in Schedule 14 (Explanatory notes to templates). The SAIFI and SAIDI information is part of audited disclosure information (as defined in section 1.4 of the ID determination), and so is subject to the assurance report required by section 2.8.

sch ref

10(i): Interruptions

	Number of interruptions
Interruptions by class	
Class A (planned interruptions by Transpower)	
Class B (planned interruptions on the network)	925
Class C (unplanned interruptions on the network)	848
Class D (unplanned interruptions by Transpower)	0
Class E (unplanned interruptions of EDB owned generation)	0
Class F (unplanned interruptions of generation owned by others)	0
Class G (unplanned interruptions caused by another disclosing entity)	0
Class H (planned interruptions caused by another disclosing entity)	0
Class I (interruptions caused by parties not included above)	0
Total	1,773

	≤3Hrs	>3hrs
Interruption restoration		
Class C interruptions restored within	411	437

	SAIFI	SAIDI
SAIFI and SAIDI by class		
Class A (planned interruptions by Transpower)	0	0
Class B (planned interruptions on the network)	0.36	69.9
Class C (unplanned interruptions on the network)	1.62	406.2
Class D (unplanned interruptions by Transpower)	0	0
Class E (unplanned interruptions of EDB owned generation)	0	0
Class F (unplanned interruptions of generation owned by others)	0	0
Class G (unplanned interruptions caused by another disclosing entity)	0	0
Class H (planned interruptions caused by another disclosing entity)	0	0
Class I (interruptions caused by parties not included above)	0	0
Total	1.98	476.1

	Normalised SAIFI	Normalised SAIDI
Normalised SAIFI and SAIDI		
Classes B & C (interruptions on the network) (under the 2015 DPP)	1.46	145.4
Classes B & C (interruptions on the network) (under the ID Determination 2012)	1.98	247.0

10(ii): Class C Interruptions and Duration by Cause

	SAIFI	SAIDI
Cause		
Lightning	0.04	6.6
Vegetation	0.31	170.0
Adverse weather	0.05	55.5
Adverse environment	0	0
Third party interference	0.30	37.3
Wildlife	0.06	4.8
Human error	0.02	1.0
Defective equipment	0.68	88.1
Cause unknown	0.15	42.3

10(iii): Class B Interruptions and Duration by Main Equipment Involved

	SAIFI	SAIDI
Main equipment involved		
Subtransmission lines	0	0
Subtransmission cables	0	0
Subtransmission other	0	0
Distribution lines (excluding LV)	0.14	32.8
Distribution cables (excluding LV)	0.03	3.7
Distribution other (excluding LV)	0.19	32.4

10(iv): Class C Interruptions and Duration by Main Equipment Involved

	SAIFI	SAIDI
Main equipment involved		
Subtransmission lines	0.06	2.5
Subtransmission cables	0	0
Subtransmission other	0.04	1.3
Distribution lines (excluding LV)	0.87	316.1
Distribution cables (excluding LV)	0.25	36.7
Distribution other (excluding LV)	0.39	49.1

10(v): Fault Rate

	Number of Faults	Circuit length (km)	Fault rate (faults per 100km)
Main equipment involved			
Subtransmission lines	9	51	17.69
Subtransmission cables	0	455	–
Subtransmission other	4		
Distribution lines (excluding LV)	443	885	50.07
Distribution cables (excluding LV)	142	2253	6.30
Distribution other (excluding LV)	243		
Total	841		

Company Name	**Vector**
For Year Ended	**31 March 2019**
Network / Sub-network Name	**Northern**

SCHEDULE 10: REPORT ON NETWORK RELIABILITY

This schedule requires a summary of the key measures of network reliability (interruptions, SAIDI, SAIFI and fault rate) for the disclosure year. EDBs must provide explanatory comment on their network reliability for the disclosure year in Schedule 14 (Explanatory notes to templates). The SAIFI and SAIDI information is part of audited disclosure information (as defined in section 1.4 of the ID determination), and so is subject to the assurance report required by section 2.8.

sch ref

10(i): Interruptions

Interruptions by class	**Number of interruptions**
Class A (planned interruptions by Transpower)	2
Class B (planned interruptions on the network)	796
Class C (unplanned interruptions on the network)	1,244
Class D (unplanned interruptions by Transpower)	1
Class E (unplanned interruptions of EDB owned generation)	0
Class F (unplanned interruptions of generation owned by others)	0
Class G (unplanned interruptions caused by another disclosing entity)	0
Class H (planned interruptions caused by another disclosing entity)	0
Class I (interruptions caused by parties not included above)	0
Total	2,043

Interruption restoration	**≤3Hrs**	**>3hrs**
Class C interruptions restored within	660	584

SAIFI and SAIDI by class	**SAIFI**	**SAIDI**
Class A (planned interruptions by Transpower)	0	0
Class B (planned interruptions on the network)	0.39	117.1
Class C (unplanned interruptions on the network)	2.34	649
Class D (unplanned interruptions by Transpower)	0.03	0.5
Class E (unplanned interruptions of EDB owned generation)	0	0
Class F (unplanned interruptions of generation owned by others)	0	0
Class G (unplanned interruptions caused by another disclosing entity)	0	0
Class H (planned interruptions caused by another disclosing entity)	0	0
Class I (interruptions caused by parties not included above)	0	0
Total	2.76	766.6

Normalised SAIFI and SAIDI	**Normalised SAIFI**	**Normalised SAIDI**
Classes B & C (interruptions on the network) (under the 2015 DPP)	1.86	219.2
Classes B & C (interruptions on the network) (under the ID Determination 2012)	2.66	328.7

10(ii): Class C Interruptions and Duration by Cause

Cause	**SAIFI**	**SAIDI**
Lightning	0.12	5.1
Vegetation	0.56	329.6
Adverse weather	0.13	126.7
Adverse environment	0	0
Third party interference	0.19	25.9
Wildlife	0.10	6.6
Human error	0.03	1.7
Defective equipment	0.76	91.2
Cause unknown	0.44	62.3

10(iii): Class B Interruptions and Duration by Main Equipment Involved

Main equipment involved	**SAIFI**	**SAIDI**
Subtransmission lines	0	1.4
Subtransmission cables	0	0
Subtransmission other	0	0.8
Distribution lines (excluding LV)	0.15	50.6
Distribution cables (excluding LV)	0.02	3.6
Distribution other (excluding LV)	0.22	60.7

10(iv): Class C Interruptions and Duration by Main Equipment Involved

Main equipment involved	**SAIFI**	**SAIDI**
Subtransmission lines	0.60	45.1
Subtransmission cables	0.06	1.0
Subtransmission other	0	0.4
Distribution lines (excluding LV)	1.35	556.3
Distribution cables (excluding LV)	0.06	11.3
Distribution other (excluding LV)	0.26	34.8

10(v): Fault Rate

Main equipment involved	**Number of Faults**	**Circuit length (km)**	**Fault rate (faults per 100km)**
Subtransmission lines	37	345	10.74
Subtransmission cables	3	151	1.99
Subtransmission other	2		
Distribution lines (excluding LV)	847	2878	29.43
Distribution cables (excluding LV)	70	1464	4.78
Distribution other (excluding LV)	255		
Total	1,214		