

# **Electricity Information Disclosure 2016**

**29/08/2016**

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## Introduction

This disclosure of information is submitted by Powerco Limited (“Powerco”) pursuant to subpart 9 of Part 4 of the Commerce Act 1986 (“Act”) and in accordance with the Commerce Commission’s Electricity Distribution Information Disclosure Determination 2012 (“IDD”) and all its subsequent amendments including the 2015 information disclosure amendments.

Part 4 of the Act provides a regulatory regime for electricity lines services and sets out the requirements of information disclosure regulation. The purpose of the information disclosure regulation is to ensure that sufficient information is readily available to enable interested persons to assess whether the purpose of Part 4 of the Act is being met. The purpose of Part 4 is to promote the long-term benefit of consumers by promoting outcomes that are consistent with those produced in competitive markets.

For the purpose of regulatory compliance, Powerco is a provider of “electricity lines services”, as defined by section 52C of the Act, and is required to comply with the requirements of Part 4 of the Act.

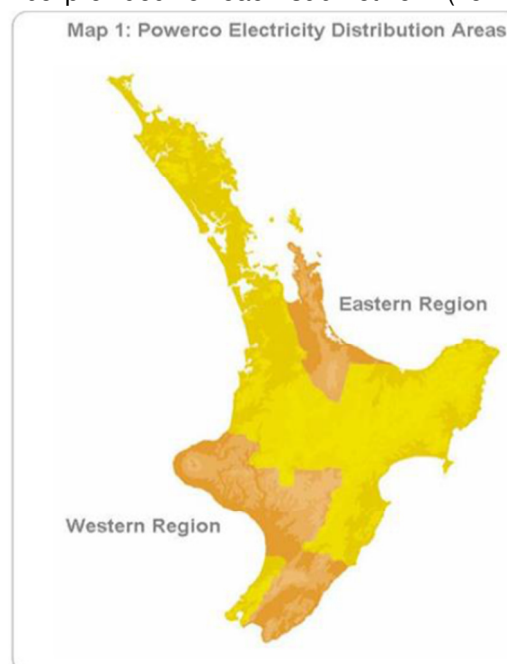
The IDD requires disclosure of the following information for the 2016 disclosure year:

Schedule	Information provided
1	Analytical Ratios
2	Return on investment
3	Regulatory profit
4	Regulatory asset base (rolled forward)
5a	Regulatory tax allowance
5b	Related party transactions
5c	Term credit spread differential
5d	Report on cost allocation
5e	Report on asset allocation
6a	Capital expenditure
6b	Operational expenditure
7	Actual capital and operational expenditure compared to forecast
8	Billed quantities and line charge revenues
9a	Asset register
9b	Asset age profile
9c	Overhead line and underground cable information
9d	Embedded networks
9e	Network demand
10	Network reliability

The IDD also requires that network and billed quantity information be provided for each sub-network (i.e. each geographically separate part) of a supplier's network. Powerco has two sub-networks which it terms the Eastern Region and Western Region of the North Island. These regions are shown in Map 1.

The following schedules are provided separately for Powerco Limited, Powerco's Western Network and Powerco's Eastern Network:

Schedule 8	Billed quantities and line charge revenue
Schedule 9a	Asset register
Schedule 9b	Asset age profile
Schedule 9c	Overhead line and underground cable information
Schedule 9e	Network demand
Schedule 10	Network reliability



Schedules 14 and 15 provide mandatory and voluntary notes to accompany the schedules relating to the current disclosure year.

Directors' certification of the 2016 information disclosure is provided at the end of this document.

Further information on Powerco's long term forecasts are included in our Asset Management Plan available on our website at <http://www.powerco.co.nz>.

# Schedule 1: Analytical Ratios

Company Name **Powerco Limited**  
For Year Ended **31 March 2016**

## 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.

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### 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)
<b>Operational expenditure</b>	15,311	210	76,541	2,486	22,408
Network	6,460	89	32,296	1,049	9,455
Non-network	8,850	121	44,245	1,437	12,953
<b>Expenditure on assets</b>	28,689	393	143,423	4,658	41,987
Network	27,407	376	137,012	4,450	40,110
Non-network	1,283	18	6,412	208	1,877

### 1(ii): Revenue metrics

	Revenue per GWh energy delivered to ICPs (\$/GWh)	Revenue per average no. of ICPs (\$/ICP)
<b>Total consumer line charge revenue</b>	82,540	1,131
Standard consumer line charge revenue	98,204	1,006
Non-standard consumer line charge revenue	36,284	123,948

### 1(iii): Service intensity measures

Demand density	32	Maximum coincident system demand per km of circuit length (for supply) (kW/km)
Volume density	162	Total energy delivered to ICPs per km of circuit length (for supply) (MWh/km)
Connection point density	12	Average number of ICPs per km of circuit length (for supply) (ICPs/km)
Energy intensity	13,705	Total energy delivered to ICPs per average number of ICPs (kWh/ICP)

### 1(iv): Composition of regulatory income

	(\$000)	% of revenue
Operational expenditure	69,365	19.06%
Pass-through and recoverable costs excluding financial incentives and wash-ups	113,314	31.13%
Total depreciation	59,697	16.40%
Total revaluations	8,575	2.36%
Regulatory tax allowance	29,143	8.01%
Regulatory profit/(loss) including financial incentives and wash-ups	101,060	27.76%
<b>Total regulatory income</b>	<b>364,003</b>	

### 1(v): Reliability

Interruption rate	17.70	Interruptions per 100 circuit km
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## Schedule 2: Return on Investment

Company Name **Powerco Limited**  
 For Year Ended **31 March 2016**

### 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

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	CY-2 31 Mar 14	CY-1 31 Mar 15	Current Year CY 31 Mar 16
	%	%	%
<b>2(i): Return on Investment</b>			
<b>ROI – comparable to a post tax WACC</b>			
Reflecting all revenue earned	6.87%	5.64%	6.36%
Excluding revenue earned from financial incentives	6.87%	5.64%	6.36%
Excluding revenue earned from financial incentives and wash-ups	6.87%	5.64%	6.36%
<b>Mid-point estimate of post tax WACC</b>	5.43%	6.10%	5.37%
25th percentile estimate	4.71%	5.39%	4.66%
75th percentile estimate	6.14%	6.82%	6.09%
<b>ROI – comparable to a vanilla WACC</b>			
Reflecting all revenue earned	7.55%	6.43%	7.01%
Excluding revenue earned from financial incentives	7.55%	6.43%	7.01%
Excluding revenue earned from financial incentives and wash-ups	7.55%	6.43%	7.01%
<b>WACC rate used to set regulatory price path</b>	8.77%	8.77%	7.19%
<b>Mid-point estimate of vanilla WACC</b>	6.11%	6.89%	6.02%
25th percentile estimate	5.39%	6.17%	5.30%
75th percentile estimate	6.83%	7.60%	6.74%
<b>2(ii): Information Supporting the ROI</b>			
			(\$000)
Total opening RAB value	1,476,717		
plus Opening deferred tax	(39,998)		
<b>Opening RIV</b>		1,436,719	
<b>Line charge revenue</b>		373,944	
Expenses cash outflow	182,679		
add Assets commissioned	113,407		
less Asset disposals	11,131		
add Tax payments	19,822		
less Other regulated income	(9,941)		
<b>Mid-year net cash outflows</b>		314,717	
<b>Term credit spread differential allowance</b>		–	
Total closing RAB value	1,528,013		
less Adjustment resulting from asset allocation	141		
less Lost and found assets adjustment	–		
plus Closing deferred tax	(49,319)		
<b>Closing RIV</b>		1,478,552	
<b>ROI – comparable to a vanilla WACC</b>			7.01%
Leverage (%)			44%
Cost of debt assumption (%)			5.26%
Corporate tax rate (%)			28%
<b>ROI – comparable to a post tax WACC</b>			6.36%

61	<b>2(iii): Information Supporting the Monthly ROI</b>						
62							
63	Opening RIV						N/A
64							
65							
66		Line charge revenue	Expenses cash outflow	Assets commissioned	Asset disposals	Other regulated income	Monthly net cash outflows
67	April						-
68	May						-
69	June						-
70	July						-
71	August						-
72	September						-
73	October						-
74	November						-
75	December						-
76	January						-
77	February						-
78	March						-
79	<b>Total</b>	-	-	-	-	-	-
80							
81	Tax payments						N/A
82							
83	Term credit spread differential allowance						N/A
84							
85	Closing RIV						N/A
86							
87							
88	Monthly ROI – comparable to a vanilla WACC						N/A
89							
90	Monthly ROI – comparable to a post tax WACC						N/A
91							
92	<b>2(iv): Year-End ROI Rates for Comparison Purposes</b>						
93							
94	Year-end ROI – comparable to a vanilla WACC						6.77%
95							
96	Year-end ROI – comparable to a post tax WACC						6.12%
97							
98	<i>* 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.</i>						
99							
100	<b>2(v): Financial Incentives and Wash-Ups</b>						
101							
102	Net recoverable costs allowed under incremental rolling incentive scheme					-	
103	Purchased assets – avoided transmission charge					-	
104	Energy efficiency and demand incentive allowance					-	
105	Quality incentive adjustment					-	
106	Other financial incentives					-	
107	<b>Financial incentives</b>						-
108							
109	<b>Impact of financial incentives on ROI</b>						-
110							
111	Input methodology claw-back					-	
112	Recoverable customised price-quality path costs					-	
113	Catastrophic event allowance					-	
114	Capex wash-up adjustment					-	
115	Transmission asset wash-up adjustment					-	
116	2013–2015 NPV wash-up allowance					-	
117	Reconsideration event allowance					-	
118	Other wash-ups					-	
119	<b>Wash-up costs</b>						-
120							
121	<b>Impact of wash-up costs on ROI</b>						-

A monthly ROI must only be calculated if during the first three months or last three months of the 2015 disclosure year, the value of assets commissioned by Powerco had exceeded 10% of the total opening regulatory asset base values. These criteria are not met and Powerco has elected to report the ROI for the full disclosure year only.

## Schedule 3: Regulatory Profit

Company Name **Powerco Limited**  
For Year Ended **31 March 2016**

### 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.

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7	<b>3(i): Regulatory Profit</b>	(\$000)
8	<b>Income</b>	
9	Line charge revenue	373,944
10	plus Gains / (losses) on asset disposals	(10,968)
11	plus Other regulated income (other than gains / (losses) on asset disposals)	1,027
12		
13	<b>Total regulatory income</b>	<b>364,003</b>
14	<b>Expenses</b>	
15	less Operational expenditure	69,365
16		
17	less Pass-through and recoverable costs excluding financial incentives and wash-ups	113,314
18		
19	<b>Operating surplus / (deficit)</b>	<b>181,325</b>
20		
21	less Total depreciation	59,697
22		
23	plus Total revaluations	8,575
24		
25	<b>Regulatory profit / (loss) before tax</b>	<b>130,203</b>
26		
27	less Term credit spread differential allowance	-
28		
29	less Regulatory tax allowance	29,143
30		
31	<b>Regulatory profit/(loss) including financial incentives and wash-ups</b>	<b>101,060</b>
32		
33	<b>3(ii): Pass-through and Recoverable Costs excluding Financial Incentives and Wash-Ups</b>	(\$000)
34	<b>Pass through costs</b>	
35	Rates	1,545
36	Commerce Act levies	542
37	Industry levies	1,301
38	CPP specified pass through costs	-
39	<b>Recoverable costs excluding financial incentives and wash-ups</b>	
40	Electricity lines service charge payable to Transpower	94,539
41	Transpower new investment contract charges	6,013
42	System operator services	-
43	Distributed generation allowance	9,374
44	Extended reserves allowance	-
45	Other recoverable costs excluding financial incentives and wash-ups	-
46	<b>Pass-through and recoverable costs excluding financial incentives and wash-ups</b>	<b>113,314</b>
47		



		(\$000)	
		CY-1 31 Mar 15	CY 31 Mar 16
48	<b>3(iii): Incremental Rolling Incentive Scheme</b>		
49			
50			
51	Allowed controllable opex	-	-
52	Actual controllable opex	-	-
53			
54	Incremental change in year		-
55			
56			Previous years' incremental change adjusted for inflation
57	CY-5            31 Mar 11	-	-
58	CY-4            31 Mar 12	-	-
59	CY-3            31 Mar 13	-	-
60	CY-2            31 Mar 14	-	-
61	CY-1            31 Mar 15	-	-
62	<b>Net incremental rolling incentive scheme</b>		-
63			
64	<b>Net recoverable costs allowed under incremental rolling incentive scheme</b>		-
65	<b>3(iv): Merger and Acquisition Expenditure</b>		
70			(\$000)
66	Merger and acquisition expenditure		-
67			
68	<i>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)</i>		
69	<b>3(v): Other Disclosures</b>		
70			(\$000)
71	Self-insurance allowance		-

## Schedule 4: Value of Regulatory Asset Base

Company Name **Powerco Limited**  
For Year Ended **31 March 2016**

### 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.

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

	RAB	RAB	RAB	RAB	RAB	
	for year ended	31 Mar 12	31 Mar 13	31 Mar 14	31 Mar 15	31 Mar 16
		(\$000)	(\$000)	(\$000)	(\$000)	(\$000)
7	<b>Total opening RAB value</b>	1,341,797	1,362,264	1,385,118	1,439,789	1,476,717
11	less Total depreciation	57,706	58,272	59,857	57,918	59,697
14	plus Total revaluations	20,912	11,627	21,063	1,198	8,575
16	plus Assets commissioned	66,670	77,635	101,470	102,247	113,407
18	less Asset disposals	9,497	8,111	8,275	8,941	11,131
20	plus Lost and found assets adjustment	-	-	-	-	-
22	plus Adjustment resulting from asset allocation	88	(25)	270	342	141
24	<b>Total closing RAB value</b>	1,362,264	1,385,118	1,439,789	1,476,717	1,528,013

#### 4(ii): Unallocated Regulatory Asset Base

	Unallocated RAB *	RAB	
	(\$000)	(\$000)	
29	<b>Total opening RAB value</b>	1,481,786	1,476,717
31	less Total depreciation	60,750	59,697
33	plus Total revaluations	8,603	8,575
35	plus Assets commissioned (other than below)	114,963	113,306
36	Assets acquired from a regulated supplier	-	-
37	Assets acquired from a related party	101	101
38	<b>Assets commissioned</b>	115,064	113,407
40	less Asset disposals (other than below)	11,131	11,131
41	Asset disposals to a regulated supplier	-	-
42	Asset disposals to a related party	-	-
43	<b>Asset disposals</b>	11,131	11,131
45	plus Lost and found assets adjustment	-	-
47	plus Adjustment resulting from asset allocation	-	141
49	<b>Total closing RAB value</b>	1,533,572	1,528,013

\* 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

54	CPI <sub>4</sub>	1,200	
55	CPI <sub>4</sub> <sup>-4</sup>	1,193	
56	Revaluation rate (%)	0.59%	
59	<b>Total opening RAB value</b>	1,481,786	1,476,717
61	less Opening value of fully depreciated, disposed and lost assets	15,505	15,237
63	<b>Total opening RAB value subject to revaluation</b>	1,466,281	1,461,480
64	<b>Total revaluations</b>	8,603	8,575

## 4(iv): Roll Forward of Works Under Construction

	Unallocated works under construction	Allocated works under construction
Works under construction—preceding disclosure year	49,780	48,794
plus Capital expenditure	113,271	111,991
less Assets commissioned	115,064	113,407
plus Adjustment resulting from asset allocation		9
<b>Works under construction - current disclosure year</b>	<b>47,987</b>	<b>47,387</b>
Highest rate of capitalised finance applied		6.57%

## 4(v): Regulatory Depreciation

	Unallocated RAB * (\$000)	RAB (\$000)
Depreciation - standard	54,463	54,387
Depreciation - no standard life assets	6,287	5,310
Depreciation - modified life assets	-	-
Depreciation - alternative depreciation in accordance with CPP	-	-
<b>Total depreciation</b>	<b>60,750</b>	<b>59,697</b>

## 4(vi): Disclosure of Changes to Depreciation Profiles

Asset or assets with changes to depreciation*	Reason for non-standard depreciation (text entry)	(\$000 unless otherwise specified)		
		Depreciation charge for the period (RAB)	Closing RAB value under 'non-standard' depreciation	Closing RAB value under 'standard' depreciation
Remote Area Power Supply (RAPs)	No standard life	4	20	24

\* include additional rows if needed

## 4(vii): Disclosure by Asset Category

	(\$000 unless otherwise specified)									
	Subtransmission on lines	Subtransmission on cables	Zone substations	Distribution and LV lines	Distribution and LV cables	Distribution and transformers	Distribution switchgear	Other network assets	Non-network assets	Total
<b>Total opening RAB value</b>	65,878	28,397	144,512	381,954	316,656	243,355	111,187	155,936	28,845	1,476,717
less Total depreciation	2,019	865	6,760	13,904	14,814	7,926	5,311	3,222	4,876	59,697
plus Total revaluations	383	166	860	2,222	1,855	1,421	672	847	149	8,575
plus Assets commissioned	5,900	338	15,157	30,185	11,778	19,568	17,831	5,245	7,406	113,407
less Asset disposals	321	-	2,068	3,588	367	2,389	2,011	387	-	11,131
plus Lost and found assets adjustment	-	-	-	-	-	-	-	-	-	-
plus Adjustment resulting from asset allocation	-	-	-	-	-	-	-	-	141	141
plus Asset category transfers	(1,388)	(172)	1,396	(5,472)	(2,270)	(2,427)	2,007	8,325	-	0
<b>Total closing RAB value</b>	<b>68,432</b>	<b>27,864</b>	<b>153,097</b>	<b>391,395</b>	<b>312,838</b>	<b>251,601</b>	<b>124,375</b>	<b>166,744</b>	<b>31,665</b>	<b>1,528,013</b>
<b>Asset Life</b>										
Weighted average remaining asset life	42	40	31	36	31	36	29	43	21	(years)
Weighted average expected total asset life	60	51	50	59	48	53	39	45	28	(years)

## Schedule 5a: Regulatory Tax Allowance

Company Name **Powerco Limited**  
For Year Ended **31 March 2016**

### 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.

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		(\$000)	
7	<b>5a(i): Regulatory Tax Allowance</b>		
8	Regulatory profit / (loss) before tax		130,203
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	140	*
12	Amortisation of initial differences in asset values	10,569	
13	Amortisation of revaluations	4,155	
14			14,864
15			
16	less Total revaluations	8,575	
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	-	*
20	Notional deductible interest	32,410	
21			40,985
22			
23	<b>Regulatory taxable income</b>		104,082
24			
25	less Utilised tax losses	-	
26	Regulatory net taxable income		104,082
27			
28	Corporate tax rate (%)	28%	
29	<b>Regulatory tax allowance</b>		29,143
30			
31	* Workings to be provided in Schedule 14		
32	<b>5a(ii): Disclosure of Permanent Differences</b>		
33	In Schedule 14, Box 5, provide descriptions and workings of items recorded in the asterisked categories in Schedule 5a(i).		
34	<b>5a(iii): Amortisation of Initial Difference in Asset Values</b>		(\$000)
35			
36	Opening unamortised initial differences in asset values	285,373	
37	less Amortisation of initial differences in asset values	10,569	
38	plus Adjustment for unamortised initial differences in assets acquired	-	
39	less Adjustment for unamortised initial differences in assets disposed	3,189	
40	Closing unamortised initial differences in asset values		271,615
41			
42	Opening weighted average remaining useful life of relevant assets (years)		27
43			
44	<b>5a(iv): Amortisation of Revaluations</b>		(\$000)
45			
46	Opening sum of RAB values without revaluations	1,380,085	
47			
48	Adjusted depreciation	55,542	
49	Total depreciation	59,697	
50	Amortisation of revaluations		4,155
51			
52	<b>5a(v): Reconciliation of Tax Losses</b>		(\$000)
53			
54	Opening tax losses	-	
55	plus Current period tax losses	-	
56	less Utilised tax losses	-	
57	Closing tax losses		-

58	<b>5a(vi): Calculation of Deferred Tax Balance</b>		(\$000)
59			
60	Opening deferred tax	(39,998)	
61			
62	plus Tax effect of adjusted depreciation	15,552	
63			
64	less Tax effect of tax depreciation	22,428	
65			
66	plus Tax effect of other temporary differences*	95	
67			
68	less Tax effect of amortisation of initial differences in asset values	2,959	
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	(422)	
73			
74	plus Deferred tax cost allocation adjustment	(3)	
75			
76	<b>Closing deferred tax</b>		<b>(49,319)</b>
77			
78	<b>5a(vii): Disclosure of Temporary Differences</b>		
79			
80	<i>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).</i>		
81	<b>5a(viii): Regulatory Tax Asset Base Roll-Forward</b>		
82			(\$000)
83	Opening sum of regulatory tax asset values	930,565	
84	less Tax depreciation	80,099	
85	plus Regulatory tax asset value of assets commissioned	111,431	
86	less Regulatory tax asset value of asset disposals	9,624	
87	plus Lost and found assets adjustment	-	
88	plus Adjustment resulting from asset allocation	130	
89	plus Other adjustments to the RAB tax value	-	
90	<b>Closing sum of regulatory tax asset values</b>		<b>952,402</b>

# Schedule 5b: Related Party Transactions

Company Name **Powerco Limited**  
 For Year Ended **31 March 2016**

## SCHEDULE 5b: REPORT ON RELATED PARTY TRANSACTIONS

This schedule provides information on the valuation of related party transactions, in accordance with section 2.3.6 and 2.3.7 of the ID 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

### 7 5b(i): Summary—Related Party Transactions

(\$000)

8 Total regulatory income	-
9 Operational expenditure	-
10 Capital expenditure	-
11 Market value of asset disposals	-
12 Other related party transactions	101

### 13 5b(ii): Entities Involved in Related Party Transactions

Name of related party	Related party relationship
15 Powerline Limited (trading as Basepower)	Wholly owned subsidiary of Powerco
16	
17	
18	
19	

\* include additional rows if needed

### 21 5b(iii): Related Party Transactions

Name of related party	Related party transaction type	Description of transaction	Value of transaction (\$000)	Basis for determining value
23 Powerline Limited (trading as Basepower)	Sales	Supplies remote area power and storage units	101	IM clause 2.2.11(5)(a)(i)
24				
25				
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\* include additional rows if needed

# Schedule 5c: Term Credit Spread Differential

Company Name **Powerco Limited**  
For Year Ended **31 March 2016**

## 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 (may be Commission only)

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	Cost of executing an interest rate swap	Debt issue cost readjustment
2005 Guaranteed Bonds - 2	28/09/2005	26/09/2005	12	6.74%	50,000,000	49,859,540	75,000	9,587	(102,083)
USPP (2003) US\$65m/NZ\$109.3m	25/11/2003	24/09/2003	13	BKBM+0.88%	109,298,806	96,734,335	163,948	0	(235,413)
USPP (2011) US\$72m/NZ\$91.4m	7/06/2011	7/06/2011	9	BKBM+1.945%	91,370,558	109,482,635	137,056	0	(142,132)
USPP (2011) US\$90m/NZ\$114.2m	7/06/2011	7/06/2011	12	BKBM+1.835%	114,213,198	139,805,945	171,320	0	(233,185)
USPP (2011) US\$83m/NZ\$105.3m	7/06/2011	7/06/2011	15	BKBM+1.980%	105,329,949	130,721,984	157,995	0	(245,770)
2011 Wholesale Bond - Fixed rate	20/12/2011	20/12/2011	7	6.31%	65,000,000	65,695,939	97,500	13,127	(65,000)
2011 Wholesale Bond - Floating rate	20/12/2011	20/12/2011	7	BKBM + 2.60%	35,000,000	35,374,736	52,500	7,068	(35,000)
USPP(2013) US\$25m/NZ\$30.4m	23/01/2013	1/11/2012	12	BKBM + 2.20%	30,439,547	35,697,700	45,659	0	(62,147)
USPP(2013) US\$80m/NZ\$97.4m	23/01/2013	1/11/2012	15	BKBM + 2.21%	97,406,551	112,313,228	146,110	0	(227,282)
NZD USPP(2014) NZ\$135m	15/10/2014	3/07/2014	12.5	6.62%	135,000,000	136,073,034	202,500	20,411	(283,500)
2015 Wholesale Bond - Fixed rate	28/09/2015	16/09/2015	7	4.76%	150,000,000	149,696,075	225,000	22,454	(150,000)
						1,061,455,152	1,474,588	72,648	(1,781,513)

\* include additional rows if needed

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

Gross term credit spread differential		(234,277)
Total book value of interest bearing debt	1,267,763,245	
Leverage	44%	
Average opening and closing RAB values	1,502,365,195	
Attribution Rate (%)		52%
Term credit spread differential allowance		-

## Schedule 5d: Cost Allocations

Company Name **Powerco Limited**  
For Year Ended **31 March 2016**

### 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)
7	<b>Service interruptions and emergencies</b>					
11	Directly attributable		6,732			
12	Not directly attributable	-	-	-	-	-
13	<b>Total attributable to regulated service</b>		6,732			
14	<b>Vegetation management</b>					
15	Directly attributable		6,026			
16	Not directly attributable	-	-	-	-	-
17	<b>Total attributable to regulated service</b>		6,026			
18	<b>Routine and corrective maintenance and inspection</b>					
19	Directly attributable		9,822			
20	Not directly attributable	-	-	-	-	-
21	<b>Total attributable to regulated service</b>		9,822			
22	<b>Asset replacement and renewal</b>					
23	Directly attributable		6,688			
24	Not directly attributable	-	-	-	-	-
25	<b>Total attributable to regulated service</b>		6,688			
26	<b>System operations and network support</b>					
27	Directly attributable		10,096			
28	Not directly attributable	-	687	151	839	-
29	<b>Total attributable to regulated service</b>		10,784			
30	<b>Business support</b>					
31	Directly attributable		5,311			
32	Not directly attributable	-	23,705	5,089	28,794	-
33	<b>Total attributable to regulated service</b>		29,016			
34						
35	<b>Operating costs directly attributable</b>		44,675			
36	<b>Operating costs not directly attributable</b>	-	24,393	5,240	29,633	-
37	<b>Operational expenditure</b>		69,068			
38						



39 **5d(ii): Other Cost Allocations**

40 **Pass through and recoverable costs**

(\$000)

41 **Pass through costs**

42	Directly attributable	3,245
43	Not directly attributable	143
44	<b>Total attributable to regulated service</b>	<b>3,388</b>

45 **Recoverable costs**

46	Directly attributable	109,926
47	Not directly attributable	-
48	<b>Total attributable to regulated service</b>	<b>109,926</b>

50 **5d(iii): Changes in Cost Allocations\* †**

(\$000)

51 **Change in cost allocation 1**

			CY-1	Current Year (CY)
53	Cost category			
54	Original allocator or line items	Original allocation		
55	New allocator or line items	New allocation		
		Difference	-	-

56 Rationale for change

(\$000)

61 **Change in cost allocation 2**

			CY-1	Current Year (CY)
62	Cost category			
63	Original allocator or line items	Original allocation		
64	New allocator or line items	New allocation		
		Difference	-	-

65 Rationale for change

(\$000)

70 **Change in cost allocation 3**

			CY-1	Current Year (CY)
71	Cost category			
72	Original allocator or line items	Original allocation		
73	New allocator or line items	New allocation		
		Difference	-	-

74 Rationale for change

77 \* 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.  
 78 † include additional rows if needed  
 79

## Schedule 5e: Asset Allocations

Company Name **Powerco Limited**  
 For Year Ended **31 March 2016**

### 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

7	<b>5e(i): Regulated Service Asset Values</b>	
8		Value allocated (\$000s)
9		Electricity distribution services
10	<b>Subtransmission lines</b>	
11	Directly attributable	68,432
12	Not directly attributable	-
13	<b>Total attributable to regulated service</b>	68,432
14	<b>Subtransmission cables</b>	
15	Directly attributable	27,864
16	Not directly attributable	-
17	<b>Total attributable to regulated service</b>	27,864
18	<b>Zone substations</b>	
19	Directly attributable	153,098
20	Not directly attributable	-
21	<b>Total attributable to regulated service</b>	153,098
22	<b>Distribution and LV lines</b>	
23	Directly attributable	391,395
24	Not directly attributable	-
25	<b>Total attributable to regulated service</b>	391,395
26	<b>Distribution and LV cables</b>	
27	Directly attributable	312,839
28	Not directly attributable	-
29	<b>Total attributable to regulated service</b>	312,839
30	<b>Distribution substations and transformers</b>	
31	Directly attributable	251,602
32	Not directly attributable	-
33	<b>Total attributable to regulated service</b>	251,602
34	<b>Distribution switchgear</b>	
35	Directly attributable	124,375
36	Not directly attributable	-
37	<b>Total attributable to regulated service</b>	124,375
38	<b>Other network assets</b>	
39	Directly attributable	166,744
40	Not directly attributable	-
41	<b>Total attributable to regulated service</b>	166,744
42	<b>Non-network assets</b>	
43	Directly attributable	8,321
44	Not directly attributable	23,343
45	<b>Total attributable to regulated service</b>	31,664
46		
47	<b>Regulated service asset value directly attributable</b>	1,504,670
48	<b>Regulated service asset value not directly attributable</b>	23,343
49	<b>Total closing RAB value</b>	1,528,013

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

		(\$000)	
		CY-1	Current Year (CY)
<b>Change in asset value allocation 1</b>			
Asset category	—	Original allocation	—
Original allocator or line items	—	New allocation	—
New allocator or line items	—	Difference	—
Rationale for change			

		(\$000)	
		CY-1	Current Year (CY)
<b>Change in asset value allocation 2</b>			
Asset category		Original allocation	
Original allocator or line items		New allocation	
New allocator or line items		Difference	—
Rationale for change			

		(\$000)	
		CY-1	Current Year (CY)
<b>Change in asset value allocation 3</b>			
Asset category		Original allocation	
Original allocator or line items		New allocation	
New allocator or line items		Difference	—
Rationale for change			

\* 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 † include additional rows if needed

# Schedule 6a: Capital Expenditure

Company Name **Powerco Limited**  
For Year Ended **31 March 2016**

## 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		(\$000)	(\$000)
7	<b>6a(i): Expenditure on Assets</b>		
8	Consumer connection		32,468
9	System growth		21,707
10	Asset replacement and renewal		52,530
11	Asset relocations		2,350
12	Reliability, safety and environment:		
13	Quality of supply	7,984	
14	Legislative and regulatory	-	
15	Other reliability, safety and environment	7,126	
16	<b>Total reliability, safety and environment</b>		15,110
17	<b>Expenditure on network assets</b>		124,165
18	Expenditure on non-network assets		5,810
19			
20	<b>Expenditure on assets</b>		129,975
21	plus Cost of financing		1,976
22	less Value of capital contributions		19,961
23	plus Value of vested assets		-
24			
25	<b>Capital expenditure</b>		111,991
26	<b>6a(ii): Subcomponents of Expenditure on Assets (where known)</b>		(\$000)
27	Energy efficiency and demand side management, reduction of energy losses		704
28	Overhead to underground conversion		403
29	Research and development		-
30	<b>6a(iii): Consumer Connection</b>		
31	Consumer types defined by EDB*	(\$000)	(\$000)
32	Small	11,667	
33	Commercial	14,116	
34	Industrial	6,684	
35			
36			
37	* include additional rows if needed		
38	<b>Consumer connection expenditure</b>		32,468
39			
40	less Capital contributions funding consumer connection expenditure	18,589	
41	<b>Consumer connection less capital contributions</b>		13,879
42	<b>6a(iv): System Growth and Asset Replacement and Renewal</b>		
43		System Growth	Asset Replacement and Renewal
44		(\$000)	(\$000)
45	Subtransmission	5,237	4,620
46	Zone substations	4,783	5,626
47	Distribution and LV lines	5,993	27,097
48	Distribution and LV cables	2,291	2,823
49	Distribution substations and transformers	591	7,547
50	Distribution switchgear	50	3,730
51	Other network assets	2,763	1,087
52	<b>System growth and asset replacement and renewal expenditure</b>	21,707	52,530
53	less Capital contributions funding system growth and asset replacement and renewal	-	21
54	<b>System growth and asset replacement and renewal less capital contributions</b>	21,707	52,508
55			
56	<b>6a(v): Asset Relocations</b>		
57	Project or programme*	(\$000)	(\$000)
58	NZTA Devon Road	421	
59	Papamoa Roundabout	201	
60	Oakura Underground lines	192	
61	Tauranga Cable overlay Relocation	145	
62	Taranaki Retirement Development	122	
63	* include additional rows if needed		
64	All other projects or programmes - asset relocations	1,268	
65	<b>Asset relocations expenditure</b>		2,350
66	less Capital contributions funding asset relocations	1,350	
67	<b>Asset relocations less capital contributions</b>		1,000

68	<b>6a(vi): Quality of Supply</b>			
69				
70		<i>Project or programme*</i>	<b>(\$000)</b>	<b>(\$000)</b>
71		Automation Projects	4,289	
72		Distribution Backfeed enhancement	1,108	
73		Subtransmission & Zone Security Enhancement	238	
74		Putaruru GXP	12	
75		Voltage Regulation	410	
76				
77		<i>* include additional rows if needed</i>		
78		Quality of supply expenditure All other projects programmes - quality of supply	1,927	7,984
79	less			
80		Quality of supply less capital c Capital contributions funding quality of supply	-	7,984
81	<b>6a(vii): Legislative and Regulatory</b>			
82				<b>(\$000)</b>
83		<i>Project or programme*</i>	<b>(\$000)</b>	
84		Nil projects or programmes	-	
85				
86				
87				
88				
89		<i>* include additional rows if needed</i>		
90		Legislative and regulatory expenditure All other projects or programmes - legislative and regulatory	-	-
91	less			
92		Legislative and regulatory less Capital contributions funding legislative and regulatory	-	-
93	<b>6a(viii): Other Reliability, Safety and Environment</b>			
94				<b>(\$000)</b>
95		<i>Project or programme*</i>	<b>(\$000)</b>	
96		LV safety improvements	1,052	
97		Oil containment	240	
98		Switchgear safety replacement	1,231	
99		Zone sub seismic and safety	311	
100		Zone sub equipment upgrades	36	
		New Cable and overhead line	825	
		Norfolk Zone substation Protection Upgrade	197	
		Linton GXP Feeder Backup Protection	335	
		Ohakune and Matatoa Terminal Equipment Installation	202	
101				
102		Other reliability, safety and environment <i>* include additional rows if needed</i>		7,126
103	less	All other projects or programmes - other reliability, safety and environment	2,696	
104		Other reliability, safety and environment less capital contributions		7,126
105		Capital contributions funding other reliability, safety and environment	-	
106	<b>6a(ix): Non-Network Assets</b>			
107	<b>Routine expenditure</b>			
108				<b>(\$000)</b>
109		<i>Project or programme*</i>	<b>(\$000)</b>	
110		IT Renewal	688	
111		JDE Upgrade	181	
112		Site improvement capex	125	
113		Email platform upgrade	103	
114				
115				
116		Routine expenditure <i>* include additional rows if needed</i>		1,572
117		Atypical expenditure All other projects or programmes - routine expenditure	475	
118				<b>(\$000)</b>
119				
120		<i>Project or programme*</i>	<b>(\$000)</b>	
121		Data centre	2,373	
122		Upgrade Network Operations Centre & Data centre	596	
123		Improve network operations (OMS)	431	
124				
125				
126		Atypical expenditure <i>* include additional rows if needed</i>		4,238
127		All other projects or programmes - atypical expenditure	839	
128		Expenditure on non-network assets		5,810

## Schedule 6b: Operational Expenditure

Company Name **Powerco Limited**For Year Ended **31 March 2016**

### 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	<b>6b(i): Operational Expenditure</b>			
8	Service interruptions and emergencies	6,732		
9	Vegetation management	6,026		
10	Routine and corrective maintenance and inspection	9,822		
11	Asset replacement and renewal	6,688		
12	<b>Network opex</b>		29,268	
13	System operations and network support	10,784		
14	Business support	29,313		
15	<b>Non-network opex</b>		40,097	
16				
17	<b>Operational expenditure</b>		69,365	
18	<b>6b(ii): Subcomponents of Operational Expenditure (where known)</b>			
19	Energy efficiency and demand side management, reduction of energy losses		-	
20	Direct billing*		-	
21	Research and development		401	
22	Insurance		1,032	
23	* Direct billing expenditure by suppliers that directly bill the majority of their consumers			

## Schedule 7: Forecast v Actual Expenditure

Company Name **Powerco Limited**  
For Year Ended **31 March 2016**

### 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

	Target (\$000) <sup>1</sup>	Actual (\$000)	% variance
<b>7(i): Revenue</b>			
Line charge revenue	368,823	373,944	1.4%
<b>7(ii): Expenditure on Assets</b>	<b>Forecast (\$000) <sup>2</sup></b>	<b>Actual (\$000)</b>	<b>% variance</b>
Consumer connection	18,658	32,468	74%
System growth	26,090	21,707	(17%)
Asset replacement and renewal	44,535	52,530	18%
Asset relocations	2,530	2,350	(7%)
Reliability, safety and environment:			
Quality of supply	12,370	7,984	(35%)
Legislative and regulatory	–	–	–
Other reliability, safety and environment	6,463	7,126	10%
<b>Total reliability, safety and environment</b>	<b>18,833</b>	<b>15,110</b>	<b>(20%)</b>
<b>Expenditure on network assets</b>	<b>110,647</b>	<b>124,165</b>	<b>12%</b>
Expenditure on non-network assets	9,379	5,810	(38%)
Expenditure on assets	120,026	129,975	8%
<b>7(iii): Operational Expenditure</b>			
Service interruptions and emergencies	7,314	6,732	(8%)
Vegetation management	4,700	6,026	28%
Routine and corrective maintenance and inspection	9,093	9,822	8%
Asset replacement and renewal	8,588	6,688	(22%)
<b>Network opex</b>	<b>29,695</b>	<b>29,268</b>	<b>(1%)</b>
System operations and network support	10,431	10,784	3%
Business support	32,734	29,313	(10%)
<b>Non-network opex</b>	<b>43,165</b>	<b>40,097</b>	<b>(7%)</b>
<b>Operational expenditure</b>	<b>72,860</b>	<b>69,365</b>	<b>(5%)</b>
<b>7(iv): Subcomponents of Expenditure on Assets (where known)</b>			
Energy efficiency and demand side management, reduction of energy losses	1,400	704	(50%)
Overhead to underground conversion	300	403	34%
Research and development	–	–	–
<b>7(v): Subcomponents of Operational Expenditure (where known)</b>			
Energy efficiency and demand side management, reduction of energy losses	165	–	(100%)
Direct billing	–	–	–
Research and development	492	401	(18%)
Insurance	916	1,032	13%

<sup>1</sup> From the nominal dollar target revenue for the disclosure year disclosed under clause 2.4.3(3) of this determination

<sup>2</sup> 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)

# Schedule 8: Billed Quantities and Line Charge Revenue

Company Name **Powerco Limited**  
 For Year Ended **31 March 2016**  
 Network / Sub-Network Name **Powerco Limited**

## 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)	Unit charging basis (eg, days, kW of demand, kVA of capacity, etc)	Billed quantities by price component						
						Price component	Fixed	Fixed	Variable	Demand	Demand	Power Factor
						ICP days	kVA of capacity	kWh	kW of demand	kVA of demand	kVAh of demand	Fixture count
Unmetered	Streetlights	Standard	501	3,069		-	-	3,069,168	-	-	-	8,939,274
Small	Residential/Small Commercial	Standard	328,134	2,601,196		115,285,572	-	2,728,316,646	3,877,291	-	-	-
Medium	Commercial	Standard	1,342	245,296		452,357	-	245,295,791	-	395,235	15,178	-
Large	Large Commercial/Industrial	Standard	266	534,806		-	2,970,033	534,805,533	-	1,739,504	3,445	-
Large	Large Commercial/Industrial	Non-standard	336	1,146,092		114,558	-	1,146,092,411	-	-	133,781	-
Standard consumer totals						115,737,929	2,970,033	3,511,487,138	3,877,291	2,134,739	18,623	8,939,274
Non-standard consumer totals						114,558	-	1,146,092,411	-	-	133,781	-
Total for all consumers						115,852,487	2,970,033	4,657,579,549	3,877,291	2,134,739	18,757	8,939,274

Add extra rows for additional consumer groups or price category codes as necessary

### 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)	Rate (eg, \$ per day, \$ per kWh, etc)	Line charge revenues (\$000) by price component						
								Price component	Fixed	Fixed	Variable	Demand	Demand	Power Factor
								\$/ICP/Day	\$/kVA of capacity	\$/kWh	\$/kW of demand	\$/kVA of demand	\$/kVAh of demand	\$/streetlight/day
Streetlights		Standard	1,828	-	1,153	675		-	-	348	-	-	-	1,480
Small	Residential/Small Commercial	Standard	282,980	-	205,076	77,914		33,381	-	180,670	68,939	-	-	-
Medium	Commercial	Standard	21,268	-	15,992	5,276		5,854	-	8,652	-	6,655	106	-
Large	Large Commercial/Industrial	Standard	26,275	-	16,192	10,083		-	5,642	297	-	20,312	24	-
Large	Large Commercial/Industrial	Non-standard	41,585	-	20,055	21,529		40,648	-	-	-	-	936	-
Standard consumer totals			\$332,359	-	\$238,412	\$93,947		\$39,235	\$5,642	\$189,966	\$68,939	\$26,967	\$130	\$1,480
Non-standard consumer totals			\$41,585	-	\$20,055	\$21,529		\$40,648	-	-	-	-	\$936	-
Total for all consumers			\$373,944	-	\$258,468	\$115,476		\$79,883	\$5,642	\$189,966	\$68,939	\$26,967	\$1,067	\$1,480

Add extra rows for additional consumer groups or price category codes as necessary

### 8(iii): Number of ICPs directly billed

Number of directly billed ICPs at year end  Check  OK





Company Name **Powerco Limited**  
 For Year Ended **31 March 2016**  
 Network / Sub-Network Name **Eastern Region**

**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)
V01, V02, T01, T02	Streetlights	Standard	501	3,069
V05, V06, T05, T06	Residential/Small Commercial	Standard	150,733	1,155,549
V24, V28, T22, T24, T41	Commercial	Standard	1,114	147,879
T43	Large Commercial/Industrial	Standard	23	5,453
V40, T50, V60, T60	Large Commercial/Industrial	Non-standard	310	956,850
Add extra rows for additional consumer groups or price category codes as necessary				
Standard consumer totals			152,369	1,311,949
Non-standard consumer totals			310	956,850
Total for all consumers			152,679	2,268,799

Billed quantities by price component							
Price component	Fixed	Fixed	Variable	Demand	Demand	Power Factor	Fixed
	ICP days	kVA of capacity	kWh	kW of demand	kVA of demand	kVAh of demand	Fixture count
			3,069,168				8,939,274
	59,688,612		1,155,548,512				
	369,668		147,878,726				15,178
		101,400	5,452,692				3,445
	104,127		956,849,874				123,249
	54,058,280	101,400	1,311,949,098			18,623	8,939,274
	104,127		956,849,874				
	54,162,407	101,400	2,268,798,972			141,872	8,939,274

**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)
V01, V02, T01, T02	Streetlights	Standard	\$1,828		1,153	675
V05, V06, T05, T06	Residential/Small Commercial	Standard	\$125,966		89,487	36,479
V24, V28, T22, T24, T41	Commercial	Standard	\$13,819		10,783	3,036
T43	Large Commercial/Industrial	Standard	\$508		412	97
V40, T50, V60, T60	Large Commercial/Industrial	Non-standard	\$35,430		17,125	18,304
Standard consumer totals			\$142,122		\$101,835	\$40,287
Non-standard consumer totals			\$35,430		\$17,125	\$18,304
Total for all consumers			\$177,551		\$118,960	\$58,591

Line charge revenues (\$000) by price component							
Price component	Fixed	Fixed	Variable	Demand	Demand	Power Factor	Fixed
	\$/ICP/Day	\$/kVA of capacity	\$/kWh	\$/kW of demand	\$/kVA of demand	\$/kVAh of demand	\$/streetlight/day
			348				1,480
	28,731		97,235				
	5,061		8,652				106
		188	297				24
	34,567						863
	\$33,793	\$188	\$106,531				\$130
	\$34,567						\$863
	\$68,360	\$188	\$106,531				\$993

**8(ii): Number of ICPs directly billed**

Number of directly billed ICPs at year end  Check  OK

# Schedule 9a: Asset Register

Company Name	Powerco Limited
For Year Ended	31 March 2016
Network / Sub-network Name	Powerco Limited

## 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

sch ref	Voltage	Asset category	Asset class	Units	Items at start			Data accuracy (1-4)
					of year (quantity)	Items at end of year (quantity)	Net change	
8	All	Overhead Line	Concrete poles / steel structure	No.	220,472	222,299	1,827	4
9	All	Overhead Line	Wood poles	No.	40,138	38,440	(1,698)	3
11	All	Overhead Line	Other pole types	No.	5,400	4,947	(453)	2
12	HV	Subtransmission Line	Subtransmission OH up to 66kV conductor	km	1,506	1,499	(7)	4
13	HV	Subtransmission Line	Subtransmission OH 110kV+ conductor	km	-	-	-	4
14	HV	Subtransmission Cable	Subtransmission UG up to 66kV (XLPE)	km	121	122	2	3
15	HV	Subtransmission Cable	Subtransmission UG up to 66kV (Oil pressurised)	km	20	20	(0)	4
16	HV	Subtransmission Cable	Subtransmission UG up to 66kV (Gas pressurised)	km	-	-	-	4
17	HV	Subtransmission Cable	Subtransmission UG up to 66kV (PILC)	km	6	6	0	4
18	HV	Subtransmission Cable	Subtransmission UG 110kV+ (XLPE)	km	-	-	-	4
19	HV	Subtransmission Cable	Subtransmission UG 110kV+ (Oil pressurised)	km	-	-	-	4
20	HV	Subtransmission Cable	Subtransmission UG 110kV+ (Gas Pressurised)	km	-	-	-	4
21	HV	Subtransmission Cable	Subtransmission UG 110kV+ (PILC)	km	-	-	-	4
22	HV	Subtransmission Cable	Subtransmission submarine cable	km	-	-	-	4
23	HV	Zone substation Buildings	Zone substations up to 66kV	No.	136	135	(1)	2
24	HV	Zone substation Buildings	Zone substations 110kV+	No.	-	-	-	4
25	HV	Zone substation switchgear	50/66/110kV CB (Indoor)	No.	-	-	-	4
26	HV	Zone substation switchgear	50/66/110kV CB (Outdoor)	No.	14	18	4	4
27	HV	Zone substation switchgear	33kV Switch (Ground Mounted)	No.	20	23	3	3
28	HV	Zone substation switchgear	33kV Switch (Pole Mounted)	No.	870	860	(10)	3
29	HV	Zone substation switchgear	33kV RMU	No.	6	6	-	4
30	HV	Zone substation switchgear	22/33kV CB (Indoor)	No.	96	98	2	3
31	HV	Zone substation switchgear	22/33kV CB (Outdoor)	No.	190	195	5	3
32	HV	Zone substation switchgear	3.3/6.6/11/22kV CB (ground mounted)	No.	797	825	28	3
33	HV	Zone substation switchgear	3.3/6.6/11/22kV CB (pole mounted)	No.	54	54	-	3
34	HV	Zone Substation Transformer	Zone Substation Transformers	No.	197	206	9	3
35	HV	Distribution Line	Distribution OH Open Wire Conductor	km	14,764	14,755	(9)	4
36	HV	Distribution Line	Distribution OH Aerial Cable Conductor	km	-	-	-	4
37	HV	Distribution Line	SWER conductor	km	86	79	(7)	4
38	HV	Distribution Cable	Distribution UG XLPE or PVC	km	1,721	1,762	41	3
39	HV	Distribution Cable	Distribution UG PILC	km	213	211	(2)	3
40	HV	Distribution Cable	Distribution Submarine Cable	km	11	11	(0)	4
41	HV	Distribution switchgear	3.3/6.6/11/22kV CB (pole mounted) - reclosers and sectionalisers	No.	453	533	80	3
42	HV	Distribution switchgear	3.3/6.6/11/22kV CB (Indoor)	No.	323	353	30	3
43	HV	Distribution switchgear	3.3/6.6/11/22kV Switches and fuses (pole mounted)	No.	37,832	38,188	356	3
44	HV	Distribution switchgear	3.3/6.6/11/22kV Switch (ground mounted) - except RMU	No.	2,367	2,397	30	3
45	HV	Distribution switchgear	3.3/6.6/11/22kV RMU	No.	2,070	2,037	(33)	3
46	HV	Distribution Transformer	Pole Mounted Transformer	No.	27,873	28,362	489	2
47	HV	Distribution Transformer	Ground Mounted Transformer	No.	7,845	8,008	163	2
48	HV	Distribution Transformer	Voltage regulators	No.	105	112	7	4
49	HV	Distribution Substations	Ground Mounted Substation Housing	No.	5,407	5,154	(253)	2
50	LV	LV Line	LV OH Conductor	km	5,439	5,421	(19)	2
51	LV	LV Cable	LV UG Cable	km	3,945	4,018	73	2
52	LV	LV Street lighting	LV OH/UG Streetlight circuit	km	2,737	2,779	42	2
53	LV	Connections	OH/UG consumer service connections	No.	259,824	263,576	3,752	2
54	All	Protection	Protection relays (electromechanical, solid state and numeric)	No.	2,512	2,366	(146)	3
55	All	SCADA and communications	SCADA and communications equipment operating as a single system	Lot	1	1	-	4
56	All	Capacitor Banks	Capacitors including controls	No.	49	48	(1)	4
57	All	Load Control	Centralised plant	Lot	37	38	1	3
58	All	Load Control	Relays	No.	2,259	2,312	53	3
59	All	Civils	Cable Tunnels	km	-	-	-	4

Company Name	Powerco Limited
For Year Ended	31 March 2016
Network / Sub-network Name	Western Region

**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

sch ref	Voltage	Asset category	Asset class	Units	Items at start	Items at end of	Net change	Data accuracy
					of year (quantity)	year (quantity)		(1-4)
8	All	Overhead Line	Concrete poles / steel structure	No.	140,942	142,223	1,281	4
10	All	Overhead Line	Wood poles	No.	34,569	33,260	(1,309)	3
11	All	Overhead Line	Other pole types	No.	2,280	2,039	(241)	2
12	HV	Subtransmission Line	Subtransmission OH up to 66kV conductor	km	961	955	(6)	4
13	HV	Subtransmission Line	Subtransmission OH 110kV+ conductor	km	-	-	-	4
14	HV	Subtransmission Cable	Subtransmission UG up to 66kV (XLPE)	km	41	41	0	3
15	HV	Subtransmission Cable	Subtransmission UG up to 66kV (Oil pressurised)	km	20	20	(0)	4
16	HV	Subtransmission Cable	Subtransmission UG up to 66kV (Gas pressurised)	km	-	-	-	4
17	HV	Subtransmission Cable	Subtransmission UG up to 66kV (PILC)	km	6	6	0	4
18	HV	Subtransmission Cable	Subtransmission UG 110kV+ (XLPE)	km	-	-	-	4
19	HV	Subtransmission Cable	Subtransmission UG 110kV+ (Oil pressurised)	km	-	-	-	4
20	HV	Subtransmission Cable	Subtransmission UG 110kV+ (Gas Pressurised)	km	-	-	-	4
21	HV	Subtransmission Cable	Subtransmission UG 110kV+ (PILC)	km	-	-	-	4
22	HV	Subtransmission Cable	Subtransmission submarine cable	km	-	-	-	4
23	HV	Zone substation Buildings	Zone substations up to 66kV	No.	79	77	(2)	2
24	HV	Zone substation Buildings	Zone substations 110kV+	No.	-	-	-	4
25	HV	Zone substation switchgear	50/66/110kV CB (Indoor)	No.	-	-	-	4
26	HV	Zone substation switchgear	50/66/110kV CB (Outdoor)	No.	-	-	-	4
27	HV	Zone substation switchgear	33kV Switch (Ground Mounted)	No.	10	12	2	3
28	HV	Zone substation switchgear	33kV Switch (Pole Mounted)	No.	543	527	(16)	3
29	HV	Zone substation switchgear	33kV RMU	No.	5	5	-	4
30	HV	Zone substation switchgear	22/33kV CB (Indoor)	No.	63	64	1	3
31	HV	Zone substation switchgear	22/33kV CB (Outdoor)	No.	98	106	8	3
32	HV	Zone substation switchgear	3.3/6.6/11/22kV CB (ground mounted)	No.	460	470	10	3
33	HV	Zone substation switchgear	3.3/6.6/11/22kV CB (pole mounted)	No.	53	53	-	3
34	HV	Zone Substation Transformer	Zone Substation Transformers	No.	111	114	3	3
35	HV	Distribution Line	Distribution OH Open Wire Conductor	km	10,123	10,121	(2)	4
36	HV	Distribution Line	Distribution OH Aerial Cable Conductor	km	-	-	-	4
37	HV	Distribution Line	SWER conductor	km	17	17	-	4
38	HV	Distribution Cable	Distribution UG XLPE or PVC	km	590	605	15	3
39	HV	Distribution Cable	Distribution UG PILC	km	104	103	(1)	3
40	HV	Distribution Cable	Distribution Submarine Cable	km	-	-	-	4
41	HV	Distribution switchgear	3.3/6.6/11/22kV CB (pole mounted) - reclosers and sec	No.	266	293	27	3
42	HV	Distribution switchgear	3.3/6.6/11/22kV CB (Indoor)	No.	148	168	20	3
43	HV	Distribution switchgear	3.3/6.6/11/22kV Switches and fuses (pole mounted)	No.	23,286	23,489	203	3
44	HV	Distribution switchgear	3.3/6.6/11/22kV Switch (ground mounted) - except RM	No.	1,114	1,011	(103)	3
45	HV	Distribution switchgear	3.3/6.6/11/22kV RMU	No.	774	829	55	3
46	HV	Distribution Transformer	Pole Mounted Transformer	No.	18,681	19,210	529	2
47	HV	Distribution Transformer	Ground Mounted Transformer	No.	3,084	3,152	68	2
48	HV	Distribution Transformer	Voltage regulators	No.	65	69	4	4
49	HV	Distribution Substations	Ground Mounted Substation Housing	No.	2,208	2,002	(206)	2
50	LV	LV Line	LV OH Conductor	km	3,469	3,464	(5)	2
51	LV	LV Cable	LV UG Cable	km	2,118	2,148	30	2
52	LV	LV Street lighting	LV OH/UG Streetlight circuit	km	1,343	1,349	6	2
53	LV	Connections	OH/UG consumer service connections	No.	147,900	145,220	(2,680)	2
54	All	Protection	Protection relays (electromechanical, solid state and i	No.	1,437	1,316	(121)	3
55	All	SCADA and communications	SCADA and communications equipment operating as a	Lot	1	1	-	4
56	All	Capacitor Banks	Capacitors including controls	No.	4	4	-	4
57	All	Load Control	Centralised plant	Lot	25	26	1	3
58	All	Load Control	Relays	No.	1,168	1,165	(3)	3
59	All	Civils	Cable Tunnels	km	-	-	-	4

Company Name **Powerco Limited**For Year Ended **31 March 2016**Network / Sub-network Name **Eastern Region****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	Items at end of	Net change	Data accuracy
					of year (quantity)	year (quantity)		(1-4)
9	All	Overhead Line	Concrete poles / steel structure	No.	79,530	80,076	546	4
10	All	Overhead Line	Wood poles	No.	5,569	5,180	(389)	3
11	All	Overhead Line	Other pole types	No.	3,120	2,908	(212)	2
12	HV	Subtransmission Line	Subtransmission OH up to 66kV conductor	km	545	545	(0)	4
13	HV	Subtransmission Line	Subtransmission OH 110kV+ conductor	km	-	-	-	4
14	HV	Subtransmission Cable	Subtransmission UG up to 66kV (XLPE)	km	80	81	1	3
15	HV	Subtransmission Cable	Subtransmission UG up to 66kV (Oil pressurised)	km	-	-	-	4
16	HV	Subtransmission Cable	Subtransmission UG up to 66kV (Gas pressurised)	km	-	-	-	4
17	HV	Subtransmission Cable	Subtransmission UG up to 66kV (PILC)	km	-	-	-	4
18	HV	Subtransmission Cable	Subtransmission UG 110kV+ (XLPE)	km	-	-	-	4
19	HV	Subtransmission Cable	Subtransmission UG 110kV+ (Oil pressurised)	km	-	-	-	4
20	HV	Subtransmission Cable	Subtransmission UG 110kV+ (Gas Pressurised)	km	-	-	-	4
21	HV	Subtransmission Cable	Subtransmission UG 110kV+ (PILC)	km	-	-	-	4
22	HV	Subtransmission Cable	Subtransmission submarine cable	km	-	-	-	4
23	HV	Zone substation Buildings	Zone substations up to 66kV	No.	57	58	1	2
24	HV	Zone substation Buildings	Zone substations 110kV+	No.	-	-	-	4
25	HV	Zone substation switchgear	50/66/110kV CB (Indoor)	No.	-	-	-	4
26	HV	Zone substation switchgear	50/66/110kV CB (Outdoor)	No.	14	18	4	4
27	HV	Zone substation switchgear	33kV Switch (Ground Mounted)	No.	10	11	1	3
28	HV	Zone substation switchgear	33kV Switch (Pole Mounted)	No.	327	333	6	3
29	HV	Zone substation switchgear	33kV RMU	No.	1	1	-	4
30	HV	Zone substation switchgear	22/33kV CB (Indoor)	No.	33	34	1	3
31	HV	Zone substation switchgear	22/33kV CB (Outdoor)	No.	92	89	(3)	3
32	HV	Zone substation switchgear	3.3/6.6/11/22kV CB (ground mounted)	No.	337	355	18	3
33	HV	Zone substation switchgear	3.3/6.6/11/22kV CB (pole mounted)	No.	1	1	-	3
34	HV	Zone Substation Transformer	Zone Substation Transformers	No.	86	92	6	3
35	HV	Distribution Line	Distribution OH Open Wire Conductor	km	4,641	4,634	(7)	4
36	HV	Distribution Line	Distribution OH Aerial Cable Conductor	km	-	-	-	4
37	HV	Distribution Line	SWER conductor	km	69	61	(7)	4
38	HV	Distribution Cable	Distribution UG XLPE or PVC	km	1,131	1,157	26	3
39	HV	Distribution Cable	Distribution UG PILC	km	109	109	(1)	3
40	HV	Distribution Cable	Distribution Submarine Cable	km	11	11	(0)	4
41	HV	Distribution switchgear	3.3/6.6/11/22kV CB (pole mounted) - reclosers and sec	No.	187	240	53	3
42	HV	Distribution switchgear	3.3/6.6/11/22kV CB (Indoor)	No.	175	185	10	3
43	HV	Distribution switchgear	3.3/6.6/11/22kV Switches and fuses (pole mounted)	No.	14,546	14,699	153	3
44	HV	Distribution switchgear	3.3/6.6/11/22kV Switch (ground mounted) - except RM	No.	1,253	1,386	133	3
45	HV	Distribution switchgear	3.3/6.6/11/22kV RMU	No.	1,296	1,208	(88)	3
46	HV	Distribution Transformer	Pole Mounted Transformer	No.	9,192	9,152	(40)	2
47	HV	Distribution Transformer	Ground Mounted Transformer	No.	4,761	4,856	95	2
48	HV	Distribution Transformer	Voltage regulators	No.	40	43	3	4
49	HV	Distribution Substations	Ground Mounted Substation Housing	No.	3,199	3,152	(47)	2
50	LV	LV Line	LV OH Conductor	km	1,970	1,956	(14)	2
51	LV	LV Cable	LV UG Cable	km	1,827	1,870	42	2
52	LV	LV Street lighting	LV OH/UG Streetlight circuit	km	1,394	1,430	36	2
53	LV	Connections	OH/UG consumer service connections	No.	111,924	118,356	6,432	2
54	All	Protection	Protection relays (electromechanical, solid state and i	No.	1,075	1,050	(25)	3
55	All	SCADA and communications	SCADA and communications equipment operating as a	Lot	1	1	-	4
56	All	Capacitor Banks	Capacitors including controls	No.	45	44	(1)	4
57	All	Load Control	Centralised plant	Lot	12	12	-	3
58	All	Load Control	Relays	No.	1,091	1,147	56	3
59	All	Civils	Cable Tunnels	km	-	-	-	4









## Schedule 9c: Overhead Lines and Underground Cables

Company Name **Powerco Limited**

For Year Ended **31 March 2016**

Network / Sub-network Name **Powerco Limited**

### 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

		Overhead (km)	Underground (km)	Total circuit length (km)
9				
10	<b>Circuit length by operating voltage (at year end)</b>			
11	> 66kV	–	–	–
12	50kV & 66kV	163	6	169
13	33kV	1,336	143	1,479
14	SWER (all SWER voltages)	79	–	79
15	22kV (other than SWER)	121	1	122
16	6.6kV to 11kV (inclusive—other than SWER)	14,634	1,983	16,617
17	Low voltage (< 1kV)	5,421	4,018	9,438
18	<b>Total circuit length (for supply)</b>	21,754	6,150	27,904
19				
20	Dedicated street lighting circuit length (km)	1,078	1,701	2,779
21	Circuit in sensitive areas (conservation areas, iwi territory etc) (km)			–
22				
23	<b>Overhead circuit length by terrain (at year end)</b>			
24	Urban	2,469		11%
25	Rural	7,792		36%
26	Remote only	–		–
27	Rugged only	11,174		51%
28	Remote and rugged	319		1%
29	Unallocated overhead lines	–		–
30	<b>Total overhead length</b>	21,754		100%
31				
32				
33	Length of circuit within 10km of coastline or geothermal areas (where known)	11,050		40%
34				
35	Overhead circuit requiring vegetation management	21,754		100%

Company Name	Powerco Limited
For Year Ended	31 March 2016
Network / Sub-network Name	Western Region

**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

	Overhead (km)	Underground (km)	Total circuit length (km)
9			
10	<b>Circuit length by operating voltage (at year end)</b>		
11	–	–	–
12	–	–	–
13	955	68	1,022
14	17	–	17
15	121	1	122
16	10,000	706	10,707
17	3,464	2,148	5,612
18	<b>14,557</b>	<b>2,923</b>	<b>17,480</b>
19			
20	754	595	1,349
21			–
22			
23	<b>Overhead circuit length by terrain (at year end)</b>		
24	1,584		11%
25	4,378		30%
26	–		–
27	8,276		57%
28	319		2%
29	–		–
30	<b>14,557</b>		<b>100%</b>
31			
32			
33	5,294		30%
34			
35	14,557		100%

Company Name **Powerco Limited**For Year Ended **31 March 2016**Network / Sub-network Name **Eastern Region****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

		Overhead (km)	Underground (km)	Total circuit length (km)
9				
10	<b>Circuit length by operating voltage (at year end)</b>			
11	> 66kV	–	–	–
12	50kV & 66kV	163	6	169
13	33kV	381	76	457
14	SWER (all SWER voltages)	61	–	61
15	22kV (other than SWER)	–	–	–
16	6.6kV to 11kV (inclusive—other than SWER)	4,634	1,277	5,911
17	Low voltage (< 1kV)	1,956	1,870	3,826
18	<b>Total circuit length (for supply)</b>	7,196	3,227	10,424
19				
20	Dedicated street lighting circuit length (km)	324	1,106	1,430
21	Circuit in sensitive areas (conservation areas, iwi territory etc) (km)			–
22				
23	<b>Overhead circuit length by terrain (at year end)</b>			
24	Urban	885		12%
25	Rural	3,413		47%
26	Remote only	–		–
27	Rugged only	2,898		40%
28	Remote and rugged	–		–
29	Unallocated overhead lines	–		–
30	<b>Total overhead length</b>	7,196		100%
31				
32				
33	Length of circuit within 10km of coastline or geothermal areas (where known)	5,757		55%
34				
35	Overhead circuit requiring vegetation management	7,196		100%

# Schedule 9d: Embedded Networks

Company Name **Powerco Limited**  
 For Year Ended **31 March 2016**

## 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			
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

Powerco has no networks embedded in another network

# Schedule 9e: Demand

Company Name **Powerco Limited**

For Year Ended **31 March 2016**

Network / Sub-network Name **Powerco Limited**

## 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

8	<b>9e(i): Consumer Connections</b>		
9	<i>Number of ICPs connected in year by consumer type</i>		
10	<i>Consumer types defined by EDB*</i>	<b>Number of connections (ICPs)</b>	
11	Residential/Small Commercial	4,301	
12	Commercial	45	
13	Large Commercial/Industrial	19	
14			
15			
16	<i>* include additional rows if needed</i>		
17	<b>Connections total</b>	4,365	
18			
19	<b>Distributed generation</b>		
20	Number of connections made in year	731	connections
21	Capacity of distributed generation installed in year	2.56	MVA
22	<b>9e(ii): System Demand</b>		
23			
24		<b>Demand at time of maximum coincident demand (MW)</b>	
25	<b>Maximum coincident system demand</b>		
26	GXP demand	811	
27	plus Distributed generation output at HV and above	95	
28	<b>Maximum coincident system demand</b>	906	
29	less Net transfers to (from) other EDBs at HV and above	–	
30	<b>Demand on system for supply to consumers' connection points</b>	906	
31	<b>Electricity volumes carried</b>	<b>Energy (GWh)</b>	
32	Electricity supplied from GXPs	4,473	
33	less Electricity exports to GXPs	309	
34	plus Electricity supplied from distributed generation	645	
35	less Net electricity supplied to (from) other EDBs	–	
36	<b>Electricity entering system for supply to consumers' connection points</b>	4,809	
37	less Total energy delivered to ICPs	4,530	
38	<b>Electricity losses (loss ratio)</b>	279	5.8%
39			
40	<b>Load factor</b>	0.61	
41	<b>9e(iii): Transformer Capacity</b>		
42		<b>(MVA)</b>	
43	Distribution transformer capacity (EDB owned)	3,096	
44	Distribution transformer capacity (Non-EDB owned, estimated)	118	
45	<b>Total distribution transformer capacity</b>	3,214	
46			
47	<b>Zone substation transformer capacity</b>	2,127	

Company Name **Powerco Limited**For Year Ended **31 March 2016**Network / Sub-network Name **Eastern Region****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

8	<b>9e(i): Consumer Connections</b>		
9	<i>Number of ICPs connected in year by consumer type</i>		
10	<i>Consumer types defined by EDB*</i>	<b>Number of connections (ICPs)</b>	
11	Residential/Small Commercial	2,874	
12	Commercial	43	
13	Large Commercial/Industrial	11	
14			
15			
16	<i>* include additional rows if needed</i>		
17	<b>Connections total</b>	2,928	
18			
19	<b>Distributed generation</b>		
20	Number of connections made in year	380	connections
21	Capacity of distributed generation installed in year	1.17	MVA
22	<b>9e(ii): System Demand</b>		
23			
24		<b>Demand at time of maximum coincident demand (MW)</b>	
25	<b>Maximum coincident system demand</b>		
26	GXP demand	426	
27	plus Distributed generation output at HV and above	37	
28	<b>Maximum coincident system demand</b>	463	
29	less Net transfers to (from) other EDBs at HV and above	-	
30	<b>Demand on system for supply to consumers' connection points</b>	463	
31	<b>Electricity volumes carried</b>	<b>Energy (GWh)</b>	
32	Electricity supplied from GXPs	2,493	
33	less Electricity exports to GXPs	276	
34	plus Electricity supplied from distributed generation	165	
35	less Net electricity supplied to (from) other EDBs	-	
36	<b>Electricity entering system for supply to consumers' connection points</b>	2,382	
37	less Total energy delivered to ICPs	2,269	
38	<b>Electricity losses (loss ratio)</b>	113	4.8%
39			
40	<b>Load factor</b>	0.59	
41	<b>9e(iii): Transformer Capacity</b>		
42		<b>(MVA)</b>	
43	Distribution transformer capacity (EDB owned)	1,511	
44	Distribution transformer capacity (Non-EDB owned, estimated)	40	
45	<b>Total distribution transformer capacity</b>	1,551	
46			
47	<b>Zone substation transformer capacity</b>	1,069	

Company Name **Powerco Limited**For Year Ended **31 March 2016**Network / Sub-network Name **Western Region****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

8	<b>9e(i): Consumer Connections</b>		
9	Number of ICPs connected in year by consumer type		
10			
11	<i>Consumer types defined by EDB*</i>	<b>Number of connections (ICPs)</b>	
12	Residential/Small Commercial	1,427	
13	Commercial	2	
14	Large Commercial/Industrial	8	
15			
16	<i>* include additional rows if needed</i>		
17	<b>Connections total</b>	<b>1,437</b>	
18			
19	<b>Distributed generation</b>		
20	Number of connections made in year	351	connections
21	Capacity of distributed generation installed in year	1.39	MVA
22	<b>9e(ii): System Demand</b>		
23			
24			
25		<b>Demand at time of maximum coincident demand (MW)</b>	
26	<b>Maximum coincident system demand</b>		
27	GXP demand	380	
28	plus Distributed generation output at HV and above	67	
29	<b>Maximum coincident system demand</b>	<b>447</b>	
30	less Net transfers to (from) other EDBs at HV and above	-	
31	<b>Demand on system for supply to consumers' connection points</b>	<b>447</b>	
32			
33	<b>Electricity volumes carried</b>	<b>Energy (GWh)</b>	
34	Electricity supplied from GXPs	1,980	
35	less Electricity exports to GXPs	33	
36	plus Electricity supplied from distributed generation	480	
37	less Net electricity supplied to (from) other EDBs	-	
38	<b>Electricity entering system for supply to consumers' connection points</b>	<b>2,427</b>	
39	less Total energy delivered to ICPs	2,262	
40	<b>Electricity losses (loss ratio)</b>	<b>165</b>	<b>6.8%</b>
41			
42	<b>Load factor</b>	<b>0.62</b>	
43			
44	<b>9e(iii): Transformer Capacity</b>	<b>(MVA)</b>	
45	Distribution transformer capacity (EDB owned)	1,585	
46	Distribution transformer capacity (Non-EDB owned, estimated)	78	
47	<b>Total distribution transformer capacity</b>	<b>1,663</b>	
48			
49	<b>Zone substation transformer capacity</b>	<b>1,057</b>	

# Schedule 10: Reliability

Company Name	Powerco Limited
For Year Ended	31 March 2016
Network / Sub-network Name	Powerco Limited

## SCHEDULE 10: REPORT ON NETWORK RELIABILITY

This schedule requires a summary of the key measures of network reliability (Interruptions, SAIFI, SAIDI 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					
8	<b>10(i): Interruptions</b>				
9	<b>Interruptions by class</b>	<b>Number of interruptions</b>			
10	Class A (planned interruptions by Transpower)	4			
11	Class B (planned interruptions on the network)	1,544			
12	Class C (unplanned interruptions on the network)	2,830			
13	Class D (unplanned interruptions by Transpower)	10			
14	Class E (unplanned interruptions of EDB owned generation)	–			
15	Class F (unplanned interruptions of generation owned by others)	–			
16	Class G (unplanned interruptions caused by another disclosing entity)	–			
17	Class H (planned interruptions caused by another disclosing entity)	–			
18	Class I (interruptions caused by parties not included above)	551			
19	<b>Total</b>	<b>4,939</b>			
20					
21	<b>Interruption restoration</b>	<b>≤3Hrs</b>	<b>&gt;3hrs</b>		<b>Total</b>
22	Class C interruptions restored within	2,203	627		
23					
24	<b>SAIFI and SAIDI by class</b>	<b>SAIFI</b>	<b>SAIDI</b>		
25	Class A (planned interruptions by Transpower)	0.04	8.4		
26	Class B (planned interruptions on the network)	0.23	48.1		
27	Class C (unplanned interruptions on the network)	1.96	171.9		
28	Class D (unplanned interruptions by Transpower)	0.26	26.8		
29	Class E (unplanned interruptions of EDB owned generation)	–	–		
30	Class F (unplanned interruptions of generation owned by others)	–	–		
31	Class G (unplanned interruptions caused by another disclosing entity)	–	–		
32	Class H (planned interruptions caused by another disclosing entity)	–	–		
33	Class I (interruptions caused by parties not included above)	0.09	17.9		
34	<b>Total</b>	<b>2.57</b>	<b>273.2</b>		
35					
36	<b>Normalised SAIFI and SAIDI</b>	<b>Normalised SAIFI</b>	<b>Normalised SAIDI</b>		
37	Classes B & C (interruptions on the network)	2.19	200.0		
38					
39	<b>Quality path normalised reliability limit</b>	<b>SAIFI reliability limit</b>	<b>SAIDI reliability limit</b>		
40	SAIFI and SAIDI limits applicable to disclosure year*	2.52	210.6		
41	* not applicable to exempt EDBs				
42	<b>10(ii): Class C Interruptions and Duration by Cause</b>				
43					
44	<b>Cause</b>	<b>SAIFI</b>	<b>SAIDI</b>		
45	Lightning	0.02	1.1		
46	Vegetation	0.12	13.3		
47	Adverse weather	0.02	3.1		
48	Adverse environment	0.01	5.3		
49	Third party interference	0.25	26.0		
50	Wildlife	0.10	5.6		
51	Human error	0.09	9.7		
52	Defective equipment	0.70	70.3		
53	Cause unknown	0.65	37.5		
54					
55	<b>10(iii): Class B Interruptions and Duration by Main Equipment Involved</b>				
56					
57	<b>Main equipment involved</b>	<b>SAIFI</b>	<b>SAIDI</b>		
58	Subtransmission lines	0.01	0.2		
59	Subtransmission cables	–	–		
60	Subtransmission other	0.00	0.2		
61	Distribution lines (excluding LV)	0.15	35.5		
62	Distribution cables (excluding LV)	0.01	1.7		
63	Distribution other (excluding LV)	0.06	10.4		
64					
65	<b>10(iv): Class C Interruptions and Duration by Main Equipment Involved</b>				
66					
67	<b>Main equipment involved</b>	<b>SAIFI</b>	<b>SAIDI</b>		
68	Subtransmission lines	0.36	32.3		
69	Subtransmission cables	0.02	0.9		
70	Subtransmission other	0.12	3.3		
71	Distribution lines (excluding LV)	1.26	112.2		
72	Distribution cables (excluding LV)	0.08	9.0		
73	Distribution other (excluding LV)	0.12	14.1		
74					
75	<b>10(v): Fault Rate</b>				
76					
77	<b>Main equipment involved</b>	<b>Number of Faults</b>	<b>Circuit length (km)</b>	<b>Fault rate (faults per 100km)</b>	
78	Subtransmission lines	141	1,699	8.30	
79	Subtransmission cables	3	150	2.00	
80	Subtransmission other	10			
81	Distribution lines (excluding LV)	3,373	14,634	23.05	
82	Distribution cables (excluding LV)	77	1,983	3.88	
83	Distribution other (excluding LV)	264			
84	<b>Total</b>	<b>3,868</b>			



Company Name	Powerco Limited
For Year Ended	31 March 2016
Network / Sub-network Name	Western Region

**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)	3
Class B (planned interruptions on the network)	787
Class C (unplanned interruptions on the network)	1,865
Class D (unplanned interruptions by Transpower)	6
Class E (unplanned interruptions of EDB owned generation)	-
Class F (unplanned interruptions of generation owned by others)	-
Class G (unplanned interruptions caused by another disclosing entity)	-
Class H (planned interruptions caused by another disclosing entity)	-
Class I (interruptions caused by parties not included above)	331
<b>Total</b>	<b>2,992</b>

**Interruption restoration**

	≤3Hrs	>3hrs
Class C interruptions restored within	1,468	397

**SAIFI and SAIDI by class**

	SAIFI	SAIDI
Class A (planned interruptions by Transpower)	0.04	2.1
Class B (planned interruptions on the network)	0.24	51.8
Class C (unplanned interruptions on the network)	2.10	191.6
Class D (unplanned interruptions by Transpower)	0.17	16.2
Class E (unplanned interruptions of EDB owned generation)	-	-
Class F (unplanned interruptions of generation owned by others)	-	-
Class G (unplanned interruptions caused by another disclosing entity)	-	-
Class H (planned interruptions caused by another disclosing entity)	-	-
Class I (interruptions caused by parties not included above)	0.11	22.3
<b>Total</b>	<b>2.66</b>	<b>283.9</b>

**Normalised SAIFI and SAIDI**

	Normalised SAIFI	Normalised SAIDI
Classes B & C (interruptions on the network)	2.34	201.8

**Quality path normalised reliability limit**

	SAIFI reliability limit	SAIDI reliability limit
SAIFI and SAIDI limits applicable to disclosure year*	-	-
* not applicable to exempt EDBs		

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

	SAIFI	SAIDI
Lightning	0.01	0.9
Vegetation	0.15	15.2
Adverse weather	0.03	4.7
Adverse environment	0.01	9.5
Third party interference	0.24	19.5
Wildlife	0.08	4.5
Human error	0.07	17.7
Defective equipment	0.74	67.7
Cause unknown	0.78	51.9

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

	SAIFI	SAIDI
Subtransmission lines	0.02	0.3
Subtransmission cables	-	-
Subtransmission other	0.00	0.4
Distribution lines (excluding LV)	0.15	38.4
Distribution cables (excluding LV)	0.01	1.9
Distribution other (excluding LV)	0.06	10.7

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

	SAIFI	SAIDI
Subtransmission lines	0.35	29.7
Subtransmission cables	0.02	0.4
Subtransmission other	0.08	2.1
Distribution lines (excluding LV)	1.40	131.1
Distribution cables (excluding LV)	0.09	5.6
Distribution other (excluding LV)	0.16	22.5

**10(v): Fault Rate****Main equipment involved**

	Number of Faults	Circuit length (km)	Fault rate (faults per 100km)
Subtransmission lines	106	1,093	9.70
Subtransmission cables	2	69	2.92
Subtransmission other	5		
Distribution lines (excluding LV)	2,316	10,000	23.16
Distribution cables (excluding LV)	34	706	4.81
Distribution other (excluding LV)	143		
<b>Total</b>	<b>2,606</b>		

Company Name	Powerco Limited
For Year Ended	31 March 2016
Network / Sub-network Name	Eastern Region

**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

8	<b>10(i): Interruptions</b>			
9	<b>Interruptions by class</b>	<b>Number of interruptions</b>		
10	Class A (planned interruptions by Transpower)	1		
11	Class B (planned interruptions on the network)	757		
12	Class C (unplanned interruptions on the network)	965		
13	Class D (unplanned interruptions by Transpower)	4		
14	Class E (unplanned interruptions of EDB owned generation)	–		
15	Class F (unplanned interruptions of generation owned by others)	–		
16	Class G (unplanned interruptions caused by another disclosing entity)	–		
17	Class H (planned interruptions caused by another disclosing entity)	–		
18	Class I (interruptions caused by parties not included above)	220		
19	<b>Total</b>	<b>1,947</b>		
20				
21	<b>Interruption restoration</b>	<b>≤3Hrs</b>	<b>&gt;3hrs</b>	
22	Class C interruptions restored within	735	230	
23				
24	<b>SAIFI and SAIDI by class</b>	<b>SAIFI</b>	<b>SAIDI</b>	
25	Class A (planned interruptions by Transpower)	0.04	15.9	
26	Class B (planned interruptions on the network)	0.22	43.9	
27	Class C (unplanned interruptions on the network)	1.79	149.0	
28	Class D (unplanned interruptions by Transpower)	0.36	39.3	
29	Class E (unplanned interruptions of EDB owned generation)	–	–	
30	Class F (unplanned interruptions of generation owned by others)	–	–	
31	Class G (unplanned interruptions caused by another disclosing entity)	–	–	
32	Class H (planned interruptions caused by another disclosing entity)	–	–	
33	Class I (interruptions caused by parties not included above)	0.05	12.7	
34	<b>Total</b>	<b>2.46</b>	<b>260.7</b>	
35				
36	<b>Normalised SAIFI and SAIDI</b>	<b>Normalised SAIFI</b>	<b>Normalised SAIDI</b>	
37	Classes B & C (interruptions on the network)	2.00	192.9	
38				
39	<b>Quality path normalised reliability limit</b>	<b>SAIFI reliability limit</b>	<b>SAIDI reliability limit</b>	
40	SAIFI and SAIDI limits applicable to disclosure year*	–	–	
41	* not applicable to exempt EDBs			
42	<b>10(ii): Class C Interruptions and Duration by Cause</b>			
43				
44	<b>Cause</b>	<b>SAIFI</b>	<b>SAIDI</b>	
45	Lightning	0.04	1.4	
46	Vegetation	0.09	11.0	
47	Adverse weather	0.02	1.2	
48	Adverse environment	0.00	0.4	
49	Third party interference	0.26	33.6	
50	Wildlife	0.12	6.9	
51	Human error	0.11	0.4	
52	Defective equipment	0.65	73.3	
53	Cause unknown	0.50	20.8	
54				
55	<b>10(iii): Class B Interruptions and Duration by Main Equipment Involved</b>			
56				
57	<b>Main equipment involved</b>	<b>SAIFI</b>	<b>SAIDI</b>	
58	Subtransmission lines	0.01	0.1	
59	Subtransmission cables	–	–	
60	Subtransmission other	–	–	
61	Distribution lines (excluding LV)	0.14	32.2	
62	Distribution cables (excluding LV)	0.01	1.5	
63	Distribution other (excluding LV)	0.05	10.0	
64				
65	<b>10(iv): Class C Interruptions and Duration by Main Equipment Involved</b>			
66				
67	<b>Main equipment involved</b>	<b>SAIFI</b>	<b>SAIDI</b>	
68	Subtransmission lines	0.36	35.4	
69	Subtransmission cables	0.02	1.4	
70	Subtransmission other	0.16	4.7	
71	Distribution lines (excluding LV)	1.09	90.2	
72	Distribution cables (excluding LV)	0.08	13.0	
73	Distribution other (excluding LV)	0.07	4.3	
74				
75	<b>10(v): Fault Rate</b>			
76				
77	<b>Main equipment involved</b>	<b>Number of Faults</b>	<b>Circuit length (km)</b>	<b>Fault rate (faults per 100km)</b>
78	Subtransmission lines	35	606	5.78
79	Subtransmission cables	1	81	1.23
80	Subtransmission other	5		
81	Distribution lines (excluding LV)	1,057	4,634	22.81
82	Distribution cables (excluding LV)	43	1,277	3.37
83	Distribution other (excluding LV)	121		
84	<b>Total</b>	<b>1,262</b>		

## Schedule 14: Mandatory Explanatory Notes

This schedule requires EDBs to provide explanatory notes to information provided in accordance with clauses 2.3.1, 2.4.21, 2.4.22, and subclauses 2.5.1(1)(f) and 2.5.2(1)(e).

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

### Return on Investment (Schedule 2)

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

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

Our disclosed ROI under both a Vanilla and Post tax approach for 2016 is higher than 2015 primarily as a result of:

- Higher CPI in this regulatory year (0.59% in 2016 compared to 0.08% in 2015). This resulted in an increase in revaluations from \$1.2m in 2015 to \$8.6m in 2016.
- An 11% increase in commissioned assets over the prior year (\$113.3 million in 2016 compared to \$102.2 million in 2015)
- A 5% increase in operating surplus over the prior year (\$181.3 million in 2016 compared to \$173.3 million in 2015).

### Regulatory Profit (Schedule 3)

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

- a description of material items included in other regulated income (other than gains / (losses) on asset disposals), as disclosed in 3(i) of Schedule 3
- information on reclassified items in accordance with subclause 2.7.1(2).

#### Box 2: Explanatory comment on regulatory profit

Regulatory profit for the year to 31 March 2016 is above expectations. This is a result of higher revenue than expected, driven by strong ICP growth and higher than expected volume growth. (Refer to box 13 for further information.) Lower than expected operating expenditure in the non-network area further contributed to the higher regulatory profit in this assessment period.

Other regulated income is largely income received to reimburse Powerco's operational costs that arise from network damage caused by a third party (e.g. income received from insurers or directly from the third parties). This amount varies between years as Powerco has no control over the events that lead to this income.

During the regulatory period, insurance proceeds of \$527k were received in relation to a substation fire in Manawatu that occurred in July 2015.

There have been no reclassified items.

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

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

- information on reclassified items in accordance with subclause 2.7.1(2)
- any other commentary on the benefits of the merger and acquisition expenditure to the EDB.

**Box 3: Explanatory comment on merger and acquisition expenditure**

No merger and acquisition expenditure has been incurred during the disclosure year.

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

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

**Box 4: Explanatory comment on the value of the regulatory asset based (rolled forward)**

The Regulatory Asset Base (RAB) has increased by \$51.5m during the 2016 disclosure year. This increase was higher than 2015 primarily due to higher commissioned assets and higher revaluation rate in 2016 compared to 2015.

Due to ongoing data quality checks and updates to asset category mapping there are reclassifications in the Asset category transfer line in Schedule 4(vii).

Details of the movements are detailed below<sup>1</sup>.

Subtransmission lines (\$000)	Subtransmission cables (\$000)	Zone substations (\$000)	Distribution and LV Lines (\$000)	Distribution & LV cables (\$000)	Distribution substations & transformers (\$000)	Distribution Switchgear (\$000)	Other network assets (\$000)
(\$252)	(\$107)	\$4,316	\$343	(\$1)	\$1,343	\$5,442	(\$11,086)

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

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

- Income not included in regulatory profit / (loss) before tax but taxable;
- Expenditure or loss in regulatory profit / (loss) before tax but not deductible;
- Income included in regulatory profit / (loss) before tax but not taxable;
- Expenditure or loss deductible but not in regulatory profit / (loss) before tax.

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

\$0.140m of expenditure in regulatory profit but not deductible for tax related to entertainment expenditure.

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

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

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

Temporary differences amount to \$341,000 (\$95,000 tax effect) and relate to—

- the provisions for employee entitlements \$338,000
- contractor provisions (\$338,000)

<sup>1</sup> This table considers real changes in classification only.

- ACC provisions \$36,000
- Substation electricity consumption provisions \$300,000
- Other provisions \$5,000

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

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

#### Box 7: Related party transactions

There are no further related party transactions, other than those disclosed in schedule 5b.

### Cost allocation (Schedule 5d)

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

#### Box 8: Cost allocation

Powerco has adopted a fully distributed cost approach to allocate shared costs and shared assets between Powerco's gas distribution business and electricity distribution business.

Costs have been allocated on the following basis:

- direct allocation of all components of financial statement items which are directly attributable to the specific business; and
- for any components of financial statement items that are not directly attributable to a specific business, costs have been allocated between the businesses using allocators that are based on key cost drivers such as directly allocated distribution revenue, employee numbers and the carrying value of network fixed assets.

There have been no changes to the cost allocators applied in the current disclosure year.

### Asset allocation (Schedule 5e)

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

#### Box 9: Commentary on asset allocation

Non-network assets have been allocated to the regulatory asset base (RAB) based on the split of accounting net book value between the electricity and gas businesses.

There have been no reclassifications in the period reported.

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

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

- a description of the materiality threshold applied to identify material projects and programmes described in Schedule 6a;
- information on reclassified items in accordance with subclause 2.7.1(2),

#### Box 10: Explanation of capital expenditure for the disclosure year

Total capital expenditure (capex) during this period exceeded our 2015 AMP forecast by 4%, reflecting an

ongoing focus on investing to enable growth, alongside an increasing focus on renewal related expenditure as an increasing proportion of assets reach the end of their service life.

The higher than anticipated connection numbers and volume growth in this disclosure period has necessitated increased investment levels and resulted in expenditure levels exceeding those forecast.

#### Materiality threshold

In addition to the programmes outlined in previous AMPs, a material project is defined as any project where

- for Quality of Supply, the value exceeds 5% of the expenditure category's total value;
- Asset Relocations projects where the total value of the project exceeds \$100k;
- Other Reliability, Safety and Environment projects or programmes where expenditure exceeds \$150k; and
- Non-network expenditure programmes exceeding \$300k.

#### Reclassified items

Powerco has reclassified one item of capital expenditure in FY16. This relates to a reclassification of communications related expenditure incurred in FY14, moving \$367k from renewal capex to growth capex in FY16. This reclassification is in line with Commission guidance for this type of expenditure.

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

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

- Commentary on assets replaced or renewed with asset replacement and renewal operational expenditure, as reported in 6b(i) of Schedule 6b;
- Information on reclassified items in accordance with subclause 2.7.1(2);
- Commentary on any material atypical expenditure included in operational expenditure disclosed in Schedule 6b, including the value of the expenditure the purpose of the expenditure, and the operational expenditure categories the expenditure relates to.

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

Total operational expenditure was in line with Powerco's 2015 AMP Update, reflecting a need for ongoing operational focus in light of an increasing number of assets operating near the end of their service life, and emergent issues with vegetation management.

Further information regarding opex expenditure for the disclosure year is contained in box 12.

#### Reclassified items

\$81k of expenditure incurred during a storm event in FY14 was reclassified from asset replacement and renewal capex to asset replacement and renewal opex during FY16 as the costs incurred were ultimately operational expenditure

#### Atypical expenditure

There have been no material items of atypical expenditure.

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

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

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

### Expenditure on Assets

Total expenditure for the period exceeded that set out in Powerco's 2015 AMP Update. The largest contributor to the increased expenditure was the higher than anticipated customer connection expenditure during the period. This resulted in total expenditure being 8% (\$9.9m) above our total forecast position.

We have reported a shift in the 'mix' of investment between categories as we moved to lift our focus on renewal based expenditure in line with our evolving Asset Management strategies. The expenditure outcomes seen over the period are consistent with the strategies and thinking set out in our 2016 AMP.

The following commentary is provided on each category showing a forecast to actual variance greater 5% (subject to being material in dollar terms).

### Consumer Connection

Consumer connection expenditure exceeded the forecast by \$13.8m (74%). Expenditure was driven by increased rates of customer connection and customer upgrades not foreshadowed in original forecasts.

Higher than anticipated customer connection expenditure was noted across all customer expenditure categories (residential, commercial and industrial) with additional costs weighted towards asset upgrades to support commercial and industrial load growth in the dairy and horticultural sectors.

Note this increase in expenditure is partially offset by a corresponding increase in capital contributions shown in schedule 6a(i) Expenditure on assets.

### System Growth

System growth expenditure is less than forecast by \$4.4m (17%). Decreased expenditure in this area reflects a targeted shift in the 'mix' of works in the period towards renewal, as well as some practical delays in a number of growth related projects due to land access constraints.

### Asset Replacement and Renewal

Capital expenditure on asset replacement and renewal exceeded the forecast by \$8m (18%) in FY16. This reflects a targeted shift in the 'mix' of works towards renewal; a step informed by recent asset management analysis suggesting a progressive increase in expenditure is required in this category.

For example, during the 2016 assessment period asset replacement and renewal expenditure has increased due to:

- an increased focus on—
  - defective equipment as we respond to an increasing number of assets, particularly distribution overhead assets reaching the end of their serviceable life on our networks;
  - proactive replacement of end of life distribution and low voltage lines and feeders where these assets failed to meet our targeted service levels;
- replacement of poles and overhead structures (typically older assets approaching end of life) where necessary to support the ongoing rollout of ultrafast broadband fibre
- replacement of assets on our Whanganui network following a flooding event with impacted substations and lines in the area.

### Asset Relocations

Capital expenditure on asset relocations was less than forecast by \$180k (7%). This was because expenditure for the NZTA Devon Road project, New Plymouth, was forecast at \$672k for FY16 but only \$421k was spent

### Reliability, Safety and Environment (RSE)

Total expenditure on Reliability, safety and environment was \$3.7m (20%) lower than forecast. This reflected a targeted shift in the 'mix' of investment from RSE towards Renewal. This expenditure, while targeted to secure safety and reliability benefits in the period, was primarily driven by renewal needs.

### Non-network Capex

Expenditure in this category was \$3.6m (39%) under that forecast for the period. The variance resulted primarily from the deferral of a planned upgrade of the Network Operations Centre pending further consideration of Powerco's wider facilities strategy.

### Operational Expenditure (Opex)

Actual operational expenditure of \$69.1m was within 5% (\$3.8m) of forecast with under expenditure driven primarily by lower than forecast expenditure in the non-network area.

Whilst network operational expenditure was in line with forecast, we rebalanced expenditure across categories to take advantage of lower than anticipated reactive costs due to favourable weather.

The following commentary is provided for each category where the variance against target exceeds 5% (subject to the difference being material in dollar terms).

### Service Interruptions and Emergencies

Service interruptions and emergencies expenditure was \$582k (8%) less than forecast. This was due to calmer than normal weather resulting in fewer storms and lower-than-average low voltage fault volumes in FY16.

### Vegetation Management

Expenditure on Vegetation management exceeded the forecast by \$1.3m (28%). This reflects our updated asset management analysis, which suggests increased future focus is required in this area. Powerco took advantage of the increased operation flexibility associated with favourable weather patterns to target known issues associated with trees.

### Routine and Corrective Maintenance and Inspection

Expenditure on Routine and corrective maintenance and inspection work exceeded the forecast by \$729k (8%). This work was required to address increasing rates of defective equipment and vegetation related issues.

### Asset Replacement and Renewal

Asset replacement and renewal expenditure was \$1.9m (22%) lower than forecast. This was due to the lower than normal level of low voltage faults and interruption volumes, resulting in fewer components needing to be replaced in a reactive manner.

### Non-network Opex

Powerco's total Non-network operational expenditure in the disclosure period was 8% below that forecast in the 2015 AMP update.

## Information relating to revenues and quantities for the disclosure year

In the box below provide-

- a comparison of the target revenue disclosed before the start of the disclosure year, in accordance with clause 2.4.1 and subclause 2.4.3(3) to total billed line charge revenue for the disclosure year, as disclosed in Schedule 8; and
- explanatory comment on reasons for any material differences between target revenue and total billed line charge revenue.

### Box 13: Explanatory comment relating to revenue for the disclosure year

Powerco's revenue for FY16 was \$373.9m, compared to the targeted revenue of \$368.8m. Electricity revenue was higher than expected due to strong ICP growth resulting from increased sub-division



developments and higher than expected volume growth due to the pro-longed cold snaps over the winter months during FY16.

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

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

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

Powerco's SAIDI and SAIFI (Class B and Class C) were relatively low in FY16 and reflect a relatively low incidence of storm weather across the Powerco network in this period. Only one major storm event occurred in mid June 2015. This affected the Taranaki and Wanganui areas where heavy rain caused multiple slips and flooding both in the urban centre at Wanganui and also in the remote and hilly sections of both regions. Powerco's historical average is around three major storms per year.

As signalled in Powerco's 2016 Asset Management Plan<sup>2</sup>, while our headline reliability performance, (as measured by SAIDI and SAIFI) is relatively stable, underlying reliability performance at specific locations across our networks is deteriorating due to a combination of declining asset condition and reducing security headroom. The AMP 2016 signals the need to increase the level of investment in asset renewal and security upgrades described in the Asset Management Plan. Actual capital expenditure in these categories in FY16 is higher than originally forecast.

The relatively benign weather that contributed to a lower unplanned SAIDI position at year end also allowed operational resources to be focused on planned works. Maintaining appropriate levels of network reliability for our customers, over the long term, has meant that the level of our annual planned work has needed to progressively increase over the last five years. In the 2015 Assessment Period, planned work accounted for 46 planned SAIDI minutes of work and in the 2016 Assessment period this increased to 48 planned SAIDI minutes. The general trend of a reducing SAIFI has continued this year. This trend is mainly due to our successful deployment of distribution automation.

#### Calculating reliability results

Powerco has well developed processes to capture outage / interruption information and ensure the accuracy of these records. In utilising this data to complete schedule 10 the following key calculation steps are applied—

- To calculate SAIDI and SAIFI customer connection numbers ("ICPs") are calculated from the Geographic Information System ("GIS") for the transformers affected. ICPs are updated to the GIS daily from the Electricity Registry;
- The customer connection number used in the annual calculation of SAIDI and SAIFI is the average of customer numbers at the end of each month of the Assessment year. The sum of all customer minutes interrupted is divided by the average customer connection numbers to derive the annual SAIDI minutes and SAIFI value; and
- Calculation of the final year result is completed using the outage / interruption records in the Outage Management Database noting refinements to the data to correct for a number of practical delays affecting the recorded restoration time for many faults; these include SCADA polling delays, voice communication constraints and clock time coding discrepancies. Consistent with previous reporting periods, an adjustment of three minutes per interruption is made across all fault records to correct for these discrepancies.

#### The normalised results for Powerco

In Schedule 10 Powerco is required to report the reliability limits established under the 2015 Default Price-Quality Path Determination (DPP) for Powerco Limited. The comparative actual normalised results must apply the methodology contained in the Information Disclosure Determination.

The methodology for calculating SAIDI and SAIFI between the DPP and Information Disclosure

<sup>2</sup> Powerco's full Asset Management Plan is available from our website [www.Powerco.co.nz](http://www.Powerco.co.nz).

Determinations is significantly different and the actual normalised results (row 37 of schedule 10) reported in this information disclosure should not be compared to the quality path normalised reliability limit reported in line 40 of schedule 10.

The Commerce Commission is aware of the inherent inconsistency in the Information Disclosure Determination and will consider this issue in future amendments to the Information Disclosure Determination.<sup>3</sup>

Powerco's normalised reliability results prepared on the same basis as the reliability limit for the quality path for 2016 are:

Measure	Actual Results	Limit
SAIDI	178.441	210.629
SAIFI	2.071	2.520

#### The normalised results for Powerco's sub-networks

When calculating the normalised SAIDI and SAIFI for the sub-networks for the purposes of Information Disclosure, Powerco has derived normalised datasets for each sub-network using boundary values calculated using the reference dataset (2005-2009 disclosure years) for each sub-network. This approach follows one of the two options provided by the Commerce Commission in its Issues Register for Electricity and Gas Information Disclosure<sup>4</sup>. Powerco has chosen this option as we consider it provides a more meaningful analysis of the actual performance of each sub-network than the alternative option of applying a Powerco wide network boundary value to the sub-networks.

## Insurance cover

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

- The EDB's approaches and practices in regard to the insurance of assets used to provide electricity distribution services, including the level of insurance;
- In respect of any self insurance, the level of reserves, details of how reserves are managed and invested, and details of any reinsurance.

### **Box 15: Explanation of insurance cover**

Powerco holds significant insurance cover relating to material damage and business interruption, targeted at key assets. This includes full cover for buildings and contents, substations and IS server equipment, and natural disaster cover for distribution transformers and SCADA equipment.

Powerco continues to prudently insure our network and other assets where it is economically feasible to do so, in line with good industry practice. Cover for poles, wires and pipes (commonly referred to as transmission and distribution cover) is, for all practical purposes, unavailable in NZ. Where it may be available in small amounts across our geographic region, the cost is considered to be uneconomic versus the risk, as there is a restricted retained limit and a premium cost of 10-15% of the sum insured.

To manage the immediate financial exposure to a catastrophic event affecting uninsured assets, the company maintains headroom in its debt facilities as explained below. The geographically diverse nature of Powerco's assets, and the resilience of those assets, also provides some practical mitigation of seismic risks.

Powerco maintains debt facilities, in excess of net (drawn) debt, that would be available for use should events occur which require extra funds to be made available quickly. This headroom amount is in excess of our day-to-day working capital requirements.

The value of this facility headroom, currently \$70 million, is based primarily on an assessment of the

<sup>3</sup> Commerce commission's issues register for gas and electricity information disclosure, item number 447

<sup>4</sup> Commerce commission's issues register for gas and electricity information disclosure, item number 231

uninsured damage to Powerco's network assets undertaken by Marsh Risk Consulting. This analysis reviewed the catastrophic risk and expected loss from a catastrophic event, and was last assessed at \$50-70 million.

Insurance costs are allocated to Powerco's separate businesses following Powerco's allocation policies discussed earlier in this document.

### **Amendments to previously disclosed information**

In the box below, provide information about amendments to previously disclosed information disclosed in accordance with clause 2.12.1 in the last 7 years, including:

- a description of each error; and
- for each error, reference to the web address where the disclosure made in accordance with clause 2.12.1 is publicly disclosed.

#### **Box 16: Disclosure of amendment to previously disclosed information**

There have been no amendments to previously disclosed information.

## Schedule 15 Voluntary Explanatory Notes

This section includes notes, which supplement the mandatory notes set out in Schedule 14, provide additional information to aid understanding of the required disclosure schedules.

### Finance Schedules

#### Weighted average remaining useful life of assets (schedule 4)

The weighted average remaining useful life of assets has been calculated in accordance with Schedule 16 of the IDD which specifies the weighting be based on opening RAB values. Opening RAB is a depreciated value which skews the weighted average remaining useful life value towards the newer, and consequently, higher value longer remaining life assets. This measure is therefore not a true reflection of the age of Powerco's assets.

It is also important to note that asset age, particularly total average remaining asset life, is not a key driver of the need to replace network assets. Good asset management practice would suggest this is primarily driven by overall asset health – i.e. condition/performance/criticality. For this reason, Powerco's forecast investment profiles set out in the company's current Asset Management Plan are not directly linked to addressing specific movements in average asset age although this is one of a number of key considerations.

#### Overhead to underground conversion (schedule 6a)

Powerco does not collect information separately where the conversion from overhead line to underground cable forms part of a larger project. The capital expenditure for this metric reported in schedule 6a is for those projects that are only converting overhead distribution to underground.

### Billed Quantities and Revenues (schedule 8)

#### Billed Quantities

Powerco operates an ICP (individual connection point) pricing methodology for the Eastern region and a GXP (grid exit point) pricing methodology for the Western region. Schedule 8 requires the reporting of energy delivered to ICPs and also the billed quantities by price component.

Under the GXP pricing methodology, the actual energy delivered to ICPs differs from the chargeable kWh quantities detailed in the billed quantities section of Schedule 8, which is based on GXP quantities delivered.

Powerco's Western Region uses volumes reconciled at each GXP to determine billable charges. Consequently, Powerco does not hold information on the energy delivered to ICPs for the Western Region. Powerco has obtained retailer submission data from the Reconciliation Manager to complete this metric.

#### Consumer types

The IDD permits Powerco to define the appropriate consumer types that are typical of the consumers connected to our network.

Powerco has three major types of consumer groups:

- residential/ small commercial;
- commercial; and
- industrial.

The Industrial consumer group is further separated into those on standard and non-standard contracts.

Table one illustrates the application of these consumer groups to our pricing groups for the 2016 assessment period.

**Table One: Price groups assigned to consumer groups**

Consumer Group	Eastern Region Price Categories	Western Region Price Categories
Residential/Small Commercial	0-69 KVA (V05, V06, T05, T06 tariff groups)	<301 kVA (E1 tariff group)
Commercial	69-299 kVA (V24, V28, T22, T24, T41 tariff groups)	100-300 kVA (E100 tariff group)
Large Commercial/Industrial (standard)	≥300kVA (T43 tariff group)	>300kVA (E300 tariff group)
Large Commercial/Industrial (non-standard)	≥300kVA (T50, T60, V40, V60 tariff groups)	≥300kVA (Special)

## ICP numbers

When reporting Powerco's ICPs, Powerco has included ready, inactive and active ICPs in the disclosed number.

## Transmission line charge revenue

Transmission line charge revenue reflects Powerco's recovery, via prices, of recoverable costs and pass-through costs in FY16. Recoverable costs are mostly transmission costs. Pass-through costs include rates and levies. Further information on Powerco's recoverable and pass-through costs included in prices is available in the annual Electricity Default Price-Quality compliance statement available on Powerco's website.

## Asset Information (schedules 9a-9c)

Powerco's network is made up of fifteen discrete, legacy lines networks that have been amalgamated over time. This diversity of networks has created on-going data and systems integration and improvement challenges for Powerco.

Powerco has invested in both systems and data cleansing programmes over the past decade to help align and cleanse the data, resulting in material and progressive improvements in the quality and completeness of our asset related data sets.

Whilst we believe that the quality of our data is now adequate for business purposes, and in line with the levels of quality available by other electricity distributors, there are some known limitations to our current data set as set out in schedules 9a and 9b; key points are noted as follows:

- The underlying GIS data comprises a comprehensive set of network information that is generally complete and consistently applied. However, a small proportion of the asset data is either internally conflicting or not wholly reliable and, for a small number of asset categories, there are also gaps in the attribute information.
- Ongoing programmes of work are underway to improve the completeness and accuracy of our asset data. This work may impact the future reporting of quantities reflected in the schedules, most significantly for OH/UG consumer service connections.
- The asset age profile (Schedule 9b) includes some default ages in each asset class. For some asset classes (particularly poles and switches), an installation date estimate has been made at some time after the initial data capture. While based on the best information available, these estimates are likely to contain some inaccuracies.

## Asset Age

- Powerco asset data modelling is applied to determine the most likely installation date where that information is not directly recorded. For example, conductor dates can be inferred from associated poles and adjacent conductor when a direct conductor age is not recorded. As a result, the dataset does not contain assets in the age-unknown category.

- Some date information is known to have been defaulted, and this is reported as such.

## Network Asset Classification

The programmes we have put in place to ensure on-going improvement of asset data over time, as well as the process of clarification used by the Commission to ensure data is calculated on a consistent basis between companies, means that from time to time we re-categorise small numbers of assets to reflect the latest guidance and latest available data.

There are no material changes to asset classifications in the assessment period.

## Asset Categorisation

Powerco operates network assets, as set out in table 2, which do not clearly fit in to a specified category. These assets have been included in the category that most closely relates to the asset type and function.

**Table Two: asset categorisation**

Asset Type	Included in	
	Asset category	Asset class
Ground mounted 33/66kV fuses	Zone substation switchgear	33kV switch (ground mounted)
Pole mounted 33/66kV fuses	Zone substation switchgear	33kV switch (pole mounted)
33kV reclosers	Zone substation switchgear	22/33kV CB(outdoor)
Reclosers in zone substations	Zone substation switchgear	3.3/6.6/11/22kV CB (pole mounted)
Ground mounted 3.3/6.6/11/22kv fuses	Distribution switchgear	3.3/6.6/11/22kv switch (ground mounted) except RMU
Pole mounted distribution conversion and SWER isolation transformers	Distribution transformer	Pole mounted transformer
Ground mounted distribution conversion and SWER isolation transformers	Distribution transformer	Ground mounted transformer
Ground mounted subtransmission switchgear(not in zone substations)	Zone substation switchgear	33kV switch (ground mounted)
Pole mounted subtransmission switchgear(not in zone substations)	Zone substation switchgear	33kV switch (pole mounted)
Protection system pilots	Not included <sup>5</sup>	Not included

## Service Connections

Service connections are calculated for Schedules 9a and 9b based on the guidance provided by the Commerce Commission in their issues register for electricity and gas businesses.

For completeness we note that streetlight connections are not considered a service connection.

<sup>5</sup> Refer to the information disclosure determination issues register published by the Commerce Commission

## **SCADA and Communications equipment operating as a single system**

The entire Powerco network operates from a single SCADA and communications system.

An average installation date has been calculated in response to Commission's issues register item #443.

### **Low voltage circuit length**

Powerco notes that low voltage circuit length has been calculated in accordance with updated disclosure information provided by the Commission. This updated definition requires low voltage service lines in transport corridors (other than road crossings) to be excluded from the calculation. For completeness Powerco considers that this definition understates the practical circuit length under management by Powerco.

### **Circuits in sensitive areas**

Powerco does not record sensitive area geography. Therefore no circuit length is reported for this criterion.

### **Circuit length under vegetation management**

Powerco's vegetation management policy applies to the overhead electricity network. Subject to annual budget constraints, this strategy involves an intensive trimming period in high criticality areas until the areas are under control and then a reduction to a sustainable level of vegetation management to maintain clearance from the lines.

## **Transformer capacity (schedule 9e)**

### **Distribution transformer capacity**

The disclosed Powerco owned distribution transformer capacity includes transformers that are recorded in the GIS as network connected. In accordance with Powerco's operational approach to ownership, transformers with no clear owner (where the GIS ownership field is null or unknown) are included as Powerco owned for disclosure purposes.

Assumptions have been made for operational distribution substations where installed capacity is not known.

### **Zone substation transformer capacity**

Powerco owns transformers provided by various suppliers with ratings calculated at varying temperatures. The capacity reported in the information disclosure uses a standardised rating for continuous operation at 20°C.

## **Amendments to formulae in the schedules**

There have been no amendments to the templates provided by the Commerce Commission for the 2016 Information Disclosure.

# Certificate for year-end disclosures

## CERTIFICATE FOR YEAR-END DISCLOSURES

Pursuant to clause 2.9.2 of section 2.9

We, Murray Bain and Michael John Bessell,

being directors of Powerco Limited certify that, having made all reasonable enquiry, to the best of our knowledge—

- a) The information prepared for the purposes of clauses 2.3.1, 2.3.2, 2.4.21, 2.4.22, 2.5.1, 2.5.2 and 2.7.1 of the Electricity Distribution Information Disclosure 2012 in all material respects complies with that determination; and
- b) The historical information used in the preparation of Schedules 8, 9a, 9b, 9c, 9d, 9e, 10, and 14 has been properly extracted from the Powerco Limited's accounting and other records sourced from its financial and non-financial systems; and that sufficient appropriate records have been retained.

*Murray Bain*

Director

*Michael Bessell*

Director

29.8.16

Date

29.8.16

Date





**INDEPENDENT AUDITOR'S REPORT  
TO THE DIRECTORS OF POWERCO LIMITED AND THE COMMERCE COMMISSION**

**Report on the Disclosure Information prepared in accordance with the Electricity  
Distribution Information Disclosure Determination 2012 (consolidated in 2015)**

We have been engaged by the Board of Directors of Powerco Limited ('the Company') to conduct a reasonable assurance engagement to provide an opinion on whether schedules 1, 2, 3, 4, 5a-5g, 6a, 6b, 7, the SAIDI and SAIFI information disclosed in Schedule 10 and the explanatory notes disclosed in boxes 1 to 12 of Schedule 14 of the Company for the disclosure year ended 31 March 2016 ('the Disclosure Information') have been prepared, in all material respects, in accordance with the Electricity Distribution Information Disclosure Determination 2012 (consolidated in 2015) ('the Determination').

***Responsibilities of the Board of Directors for the Disclosure Information***

The Board of Directors is responsible for the preparation of the Disclosure Information in accordance with the Determination. This responsibility includes the design, implementation and maintenance of internal control relevant to the Company's compliance with the Determination.

***Auditor's responsibility***

Our responsibility is to express an opinion on whether the Disclosure Information has been prepared, in all material respects, in accordance with the Determination.

We conducted our engagement in accordance with the International Standard on Assurance Engagements (New Zealand) 3000: *Assurance Engagements Other Than Audits or Reviews of Historical Financial Information* issued by the New Zealand Auditing and Assurance Standards Board and the Standard on Assurance Engagements 3100: *Compliance Engagements* issued by the External Reporting Board, to provide reasonable assurance that the Company has complied with the Determination. Our procedures included:

- reviewing the methodologies used in preparing the Disclosure Information and confirming that they are in accordance with the requirements set out in the Determination;
- identifying key inputs to the information;
- ensuring the information used in preparing the Disclosure Information has been properly extracted from the Company's accounting and other records, sourced from its financial and non-financial systems; and
- ensuring the calculations are mathematically correct.

These procedures have been undertaken to form an opinion as to whether the Disclosure Information has been prepared, in all material respects, in accordance with the Determination for the period 1 April 2015 to 31 March 2016.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

***Inherent limitations***

Because of the inherent limitations in internal control systems, it is possible that fraud, error or non-compliance may occur and not be detected. As the procedures performed for this engagement are not performed continuously throughout the period 1 April 2015 to 31 March 2016 and the procedures performed in respect of the Company's compliance with the Determination in preparing the Disclosure Information are undertaken on a test basis, our assurance engagement cannot be relied on to detect all instances where the Company may not have complied with the Determination.

Our opinion has been formed on the above basis.



### ***Our Independence and Quality Control***

We have complied with the independence and other ethical requirements of the Professional and Ethical Standard 1 (Revised): *Code of Ethics for Assurance Practitioners* issued by the New Zealand Auditing and Assurance Standards Board, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

Other than in our capacity as independent auditor, we have no relationship with or interests in the Company.

The firm applies Professional and Ethical Standard 3 (Amended): *Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and Other Assurance Engagements* issued by the New Zealand Auditing and Assurance Standards Board, and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

### ***Use of report***

This report is provided solely for your exclusive use and solely for the purpose of providing you with independent audit assurance whether the Disclosure Information has been prepared, in all material respects, in accordance with the Determination. Our report is not to be used for any other purpose, recited or referred to in any document, copied or made available (in whole or in part) to any other person without our prior written express consent. We accept or assume no duty, responsibility or liability to any other party in connection with the report or this engagement, including without limitation, liability for negligence in relation to the opinion expressed in this report.

### ***Opinion***

This opinion has been formed on the basis of, and is subject to, the inherent limitations outlined elsewhere in this independent assurance report.

In our opinion:

- As far as appears from an examination of them, proper records to enable the complete and accurate compilation of the Disclosure Information have been kept by the Company;
- As far as appears from an examination of the records, the information used in the preparation of the Disclosure Information has been properly extracted from the Company's accounting and other records and has been sourced, where appropriate, from the Company's financial and non-financial systems; and
- The Company has complied with the Determination, in all material respects, in preparing the Disclosure Information.

In forming our opinion we have obtained sufficient recorded evidence and all the explanations we have required.

### **Chartered Accountants**

29 August 2016

Wellington, New Zealand

This reasonable assurance report relates to the Disclosure Information of Powerco Limited for the year ended 31 March 2016 included on Powerco Limited's website. The Board of Directors are responsible for the maintenance and integrity of the Company's website. We have not been engaged to report on the integrity of the Company's website. We accept no responsibility for any changes that may have occurred to the Disclosure Information since they were initially presented on the website. The reasonable assurance report refers only to the Disclosure Information named above. It does not provide an opinion on any other information which may have been hyperlinked to/from this Disclosure Information. If readers of this report are concerned with the inherent risks arising from electronic data communication they should refer to the published hard copy of the Disclosure Information and related reasonable assurance report dated 29 August 2016 to confirm the information included in the Disclosure Information presented on this website.