Projected chargeable quantities

Orion adjusted it's pricing basis from 1 April 2009 and for the quantities affected, this spreadsheet provides our estimated historical quantities (on the new basis) for the period to 31 March 2009. Thereafter, quantities reflect actual chargeable quantities.

	Units	Estimated 04/05	Estimated 05/06	Estimated 06/07	Estimated 07/08	Estimated 08/09	Actual 09/10	Actual 10/11	Actual 11/12	Original Projection 11/12	Updated Projection 12/13 where available as at Aug 2012, in red	Projection notes (2012/13 budget projections)	
Streetlighting connections Fixed charge	Connections	38,399	39,245	40,135	40,896	41,500	42,016	42,375	42,707	42,939	13 248	5 year linear trend on monthl	ly nu
Peak charge (peak period demand)	Connections	2,730	3,000	2,271	2,787	1,990	2,736	1,971	2,274	2,351		5 year average (varies	y nu
Volume charge Working weekdays (7am - 9pm) Nights, weekends and holidays	MWh MWh	3,241 22,173	3,328 22,405	3,889 22,926	3,390 23,731	3,290 22,532	3,301 22,757	3,309 22,900	3,279 22,810	3,068 22,618		based on morning/ evening Simple 5 year linear trend Simple 5 year linear trend	
General Connections	MVVII	22,173	22,405	22,920	23,731	22,332	22,737	22,300	22,010	22,010	22,504	Simple 5 year linear trend	
Peak charge (peak period demand)	kW	414,626	437,684	466,538 OR and SPN load managemer	479,290	471,481	469,853	484,724	446,363	479,906	475,925	Simple 5 year linear trend - using the original projection for 11/12 with a reduction of 7% for the reduction in load	
Volume charge Working weekdays (7am - 9pm) Nights, weekends and holidays	MWh MWh	982,940 1,195,614	999,562 1,192,348	1,031,331 1,229,876	1,021,961 1,228,087	1,056,117 1,252,408	1,082,974 1,275,326	1,033,761 1,207,887	974,117 1,139,712	1,070,266 1,254,610		Simple 5 year linear trend - using the original projection	
Low power factor charge	kVAr	101 No history of quantities - assu	101 ume level and consistent with	101 threshold adjustment calculati	101 ons	101	0	0	0	0	0	Assume no customers have	this
Irrigation connections													
Capacity charge	kW	55,033	56,493 Based on historical connect	59,549 tions database query of eligible	61,278 e irrigation connections	62,766	68,609	69,213	70,446	68,541	70,446	Assume same as current year - will be some new	
Volume charge Working weekdays (7am - 9pm) Nights, weekends and holidays	MWh MWh	43,087 73,941	50,481 89,879	37,627 72,377	56,049 104,020	63,920 109,647	58,440 103,755	66,719 117,920	54,359 95,063	67,416 116,124		irrigators but also expect Simple 5 year linear trend Simple 5 year linear trend	
Rebates Power factor correction rebate Interruptibility rebate	kVAr kW	20,124 25,129	23,105 27,220 y to receive their interruptibility	24,296 39,299	25,029 36,083	26,094 37,785	27,293 38,763	27,387 39,510	27,530 40,964	28,367 40,284		Simple 5 year linear trend Simple 5 year linear trend	
Major customer connections & Embed Fixed charge	ded networks	Adjusting for our fill category	у со тесенче инен итетиривниу	repate separately									
Fixed (Standard connections)	Connections	390	395	395	395	410							
Fixed (Secondary connections) Dedicated Equipment	Connections By item (\$000)	18 1,287	18 1,301	17 1,298	17 1,299	17 1,719	408 17 1,748	416 16 1,820	366 14 1,654	416 16 1,805	14	Based on quantities billed YTBased on quantities billed YTBased on quantities billed YTD (Apr to June) and	
Peak charge (control period demand)	kVA	112,189 Adjusting to a	122,361 add extra 1,737 kVA (factored	122,589 I) to total for winter assessmen	118,251 t of HOR and SPN major con	115,943	124,192	116,648	107,898	121,646	89,667	Based on quantities billed YTD (Apr to June) and continuance	
Capacity charge Assessed capacity distribution Assessed capacity transmission	kVA kVA	204,723 216,077	212,142 225,859	212,413 226,819	209,390 223,645	211,683 225,594	212,797 227,952	210,496 223,165	201,250 201,210	228,322 227,017		Based on quantities billed YTD (Apr to June) and continuance	
Large capacity connections (Synlait) Distribution charge													
Administration Asset Charge	kVA kVA					4,800.0 40.95%	3,057.8 34.68%	3,445.0 26.35%	5,800 34.3%	5,800 5,800	5,800 5,800	Based on loading indication from Synlait (with increase	
Transmission charge Interconnection charge (winter) Interconnection charge (summer) Use of transmission connection assets	kVA kVA kVA					8.9 2978.4 7.40%	607.3 3,057.8 4.21%	926.8 3445 4.16%	2,864 5,800 7.79%	958.5 3,753.5 2,701.8		after winter) and assuming 2% load growth in non- Synlait load in the area	
Large capacity connections (Fonterra)						1.10,0	112170		1070	2,701.0	2,00010		
Distribution charge Administration Use of distribution assets	kVA kVA										4,500 4,500		
Transmission charge Interconnection charge (winter) Interconnection charge (summer) Use of transmission connection assets	kVA kVA kVA										500.0 4,000.0 4,000.0		
Export and generation													
Real power distribution component Reactive power distribution component Real power transmission component	kW kVAr kW	3,171.1 1,681.0 3,171.1	2,277.4 2,250.7 2,277.4	3,747.1 2,516.8 3,747.1	4,036.3 2,544.7 4,036.3	3,241.2 2,216.9 3,241.2	3,129.8 1,936.8 3,129.8	2,649.2 1,710.3 3,942.0	2,104.2 1,127.0 3,050.1	2,649.2 2,001.0 3,942.0	3,496.0	Average of last two years Average of last two years Average of last two years	Ave
Generation credits Miscellaneous	kWh	na	na	8,262	40,721	65,423	357,450	307,554	422,808	359,264		Known gen credit customers over 40 hours (half the 80 to 100 hour control period) at (9 retailers (including EASH)	'
Monthly invoice charge	Invoices/year	423	432	408	384	384	384	336	324	336	276	+ 14 direct (no charge to	_
Non chargeable projections Major customer GXP volumes													
Peak period contribution Working weekdays (7am - 9pm)	kW MWh	122,519 439,111	129,583 456,971	130,117 444,591	131,552 442,413	131,836 446,947	119,050 438,938	123,343 419,566	90,459 371,764	129,031 425,262.0	373,322	Consistent with measured re Simple 5 year linear trend	4
Nights, weekends and holidays Large Capacity GXP volumes	MWh	434,175	443,073	443,937	445,151	437,520	428,950	418,436	378,215	432,412.0		Simple 5 year linear trend	
Peak period contribution Working weekdays (7am - 9pm) Nights, weekends and holidays	kW MWh MWh					510 3,889 5,699	721 6,292 8,435	686 7,059 10,203	989 8,541 12,059	704 9,014 13,119	19,234	Synlait's unchanged, Fonterr Last years Synlait factored u Last years Synlait factored u	ıp
gives Network total GXP volumes Peak period contribution Working weekdays (7am - 9pm)	kW MWh	539,875 1,468,379	570,267 1,510,342	598,926 1,517,438	613,629 1,523,813	605,817 1,574,163	592,360 1,589,945	610,724 1,530,414	540,085 1,412,060	611,992 1,575,026	571,679 1,455,553	_	

Quantity Projections Page 1

1 2 3 4 5 6

CPP Resulting quantities

						CPP increments abov	e (below) underlyin	9					CPP Resulti	ng quantities			
Earthquake affected?	Earthquake affected comment	Projection notes (CPP projections)	CPP underlying growth rate % (same in all years)	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	Weights	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
				None	None	None	None	None	None								
No No	Will be some retirement of assets in suburban red-zone, but we assume this will take some time, not be absolute and be offset by	Maintain trends. Connection numbers increase steadily, volumes and peaks decrease reflecting energy efficiency and other tech improvements.	1.0% -0.6%							1.32% 0.20%	43,248 2,352	43,679 2,337	44,115 2,322	44,555 2,307	44,999 2,293	45,448 2,279	45,901 2,264
No No	developments in other areas.		-0.6% -0.6%							0.12% 0.10%	3,252 22,504	3,232 22,362	3,211 22,222	3,191 22,082	3,171 21,943	3,151 21,805	3,131 21,668
Yes	No reason to believe there will be a	Underlying (small) growth continues (base scenario)	0.076							0.1070	22,004	22,002	22,222	22,002	21,545	21,000	21,000
	material difference between growth rates going forward in peak and volume components.	supplemented by additional growth for a few years.	0.8%							37.76%	475,925	479,733	483,571	487,439	491,339	495,269	499,232
Yes Yes			0.8% 0.8%							36.82% 5.06%	1,000,022 1,158,986	1,008,022 1,168,257	1,016,086 1,177,603	1,024,215 1,187,024	1,032,408 1,196,520	1,040,668 1,206,093	1,048,993 1,215,741
No		Immaterial	0%							0.00%	0	0	0	0	0	0	0
No	Billed capacity volumes have continued to grow or at least have not reduced. Affected consumers would	Maintain trends. Capacity growth matched by volume growth.	1.3%	None	None	None	None	None	None	4.23%	70,446	71,383	72,332	73,294	74,269	75,257	76,257
No No	have strong incentives to disconnect	All growth aligned with assumed capacity growth All growth aligned with assumed capacity growth	1.3% 1.3%							2.20% 0.45%	59,723 103,188	60,517 104,560	61,322 105,951	62,138 107,360	62,964 108,788	63,801 110,234	64,650 111,700
No No	pre-quake levels.	All growth aligned with assumed capacity growth All growth aligned with assumed capacity growth	1.3% 1.3%							-0.59% -0.22%	28,555 42,067	28,935 42,626	29,320 43,193	29,709 43,768	30,105 44,350	30,505 44,940	30,911 45,537
Yes	Significant number of large connections demolished or to be. Mostly in the CBD. Others suffered	Underlying (small) growth continues for existing connections. Some destroyed will be replaced by equivalents via "Anchor" projects: Stadium, convention		6	5	5	8	3	0	0.15%	357	363	368	373	381	384	384
Yes Yes	some damage and /or economic affects, in partiocular inaccessability.	centre, sports ecntre etc. Others at some percentage of previous, including zero.		0 16,400	0 15,802	0 8,720	0 12,955	0 31,858	0	0.00% 1.24%	14 1,628,574	14 1,644,974	14 1,660,776	14 1,669,496	14 1,682,451	14 1,714,310	14 1,714,310
Yes		Recent trends imply underlying reduction. Assume zero for CPP/	0.0%	1,092	795	358	829	993	0	6.84%	89,667	90,759	91,554	91,912	92,742	93,734	93,734
Yes Yes		Use trend underlying growth.	0.3% NA	1,985	1,913	1,055	1,568	3,856	0	3.61%	197,105	199,090	201,002	202,058	203,626	207,482	207,482
No No		Maintain		None	None	None	None	None	None	0.11% 0.20%	5,800 5,800						
No No No																	
No No		Allow for known upgrade:double from 1 April 2013.	0%	4500 4500	0 0	0	0 0	0	0	0.15% 0.44%	4,500 4,500	9,000 9,000	9,000 9,000	9,000 9,000	9,000 9,000	9,000 9,000	9,000 9,000
No No No			NA NA NA														
Yes	Basically in proportion to major customer impacts as reflected in									-0.09%	2,377	2,401	2,424	2,436	2,455	2,502	2,502
Yes Yes Yes	asessed capacity.		NA							-0.02% -0.06%	1,419 256,000	1,433 258,578	1,447 261,062	1,454 262,433	1,466 264,469	1,493 269,477	1,493 269,477
777												,	- /	- 7	- ,	,	,
Yes	Not material		0%							0.00% 100.00%	276	276	276	276	276	276	276
									weighted (notional) "qua weighted quantity gr IM 5.		644,951	650,243 0.8%	655,518 0.8%	660,685 0.8%	665,995 0.8%	671,673 0.9%	676,792 0.8%

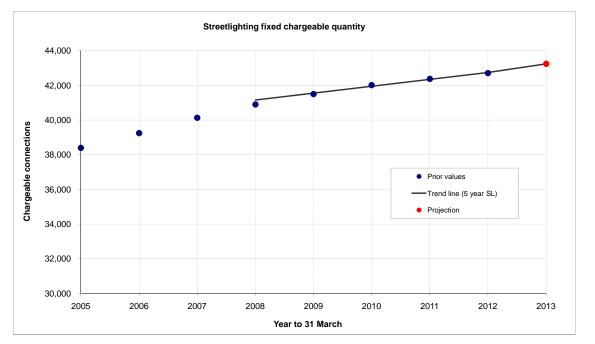
CPP Increments above (below) underlying

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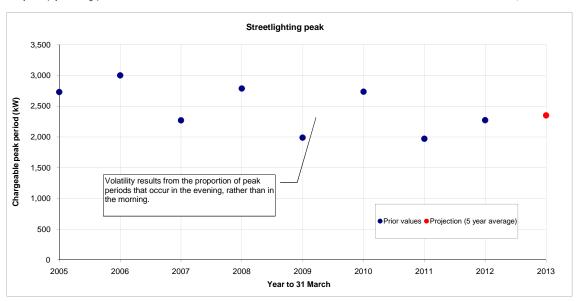
CPP Resulting growth % (by "demand group" IM 5.4.8(5)(c))

2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	Avg growth for category over period
1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	0.9%
-0.6%	-0.6%	-0.6%	-0.6%	-0.6%	-0.6%	
-0.6% -0.6%	-0.6% -0.6%	-0.6% -0.6%	-0.6% -0.6%	-0.6% -0.6%	-0.6% -0.6%	0.8%
						0.070
0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	
0.8% 0.8%	0.8% 0.8%	0.8% 0.8%	0.8% 0.8%	0.8% 0.8%	0.8% 0.8%	
1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%
1.3% 1.3%	1.3% 1.3%	1.3% 1.3%	1.3% 1.3%	1.3% 1.3%	1.3% 1.3%	
1.3% 1.3%	1.3% 1.3%	1.3% 1.3%	1.3% 1.3%	1.3% 1.3%	1.3% 1.3%	
						0.8%
1.7%	1.4%	1.4%	2.1%	0.8%	0.0%	
0.0% 1.0%	0.0% 1.0%	0.0% 0.5%	0.0% 0.8%	0.0% 1.9%	0.0% 0.0%	
1.2%	0.9%	0.4%	0.9%	1.1%	0.0%	
1.0%	1.0%	0.5%	0.8%	1.9%	0.0%	
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
						12.2%
100.0% 100.0%	0.0% 0.0%	0.0% 0.0%	0.0% 0.0%	0.0% 0.0%	0.0% 0.0%	.=/-
						0.9%
1.0% 1.0%	1.0% 1.0%	0.5% 0.5%	0.8% 0.8%	1.9% 1.9%	0.0% 0.0%	3.0,0
1.0%	1.0%	0.5%	0.8%	1.9%	0.0%	
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	



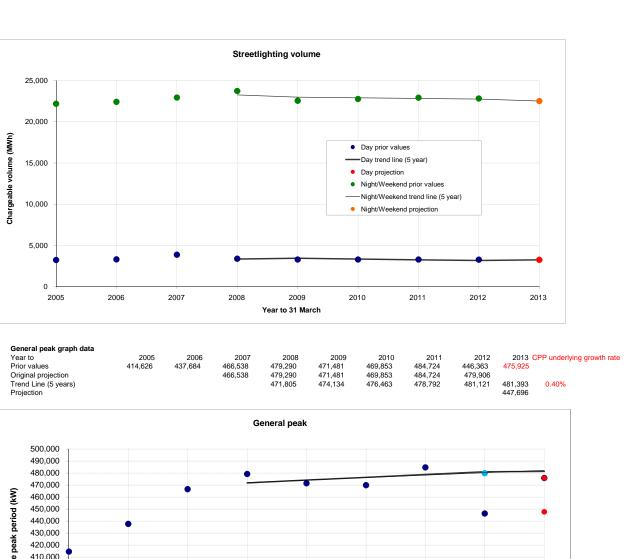


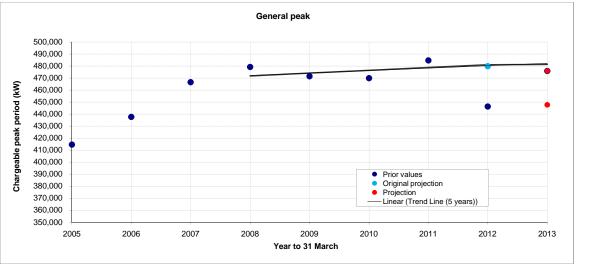
Streetlighting peak graph data Prior values 2,730 3,000 2,271 2,787 1,990 2,736 1,971 2,274 CPP underlying growth rate Projection (5 year average) 2,352 2,352 2,352 2,352 2,352

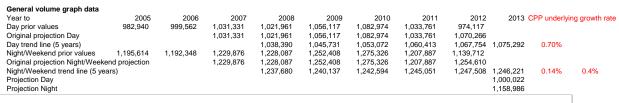


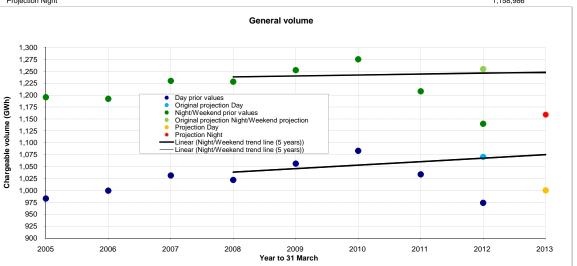
Streetlighting volume graph data										
Year to	2005	2006	2007	2008	2009	2010	2011	2012	2013	CPP underlying growth rate
Day prior values	3,241	3,328	3,889	3,390	3,290	3,301	3,309	3,279		
Day trend line (5 year)				3,354	3,456	3,363	3,269	3,175	3,252	-0.62%
Day projection									3,252	
Night/Weekend prior values	22,173	22,405	22,926	23,731	22,532	22,757	22,900	22,810		
Night/Weekend trend line (5 year)				23,241	22,983	22,902	22,821	22,739	22,504	-0.64%
Night/Weekend projection									22 504	

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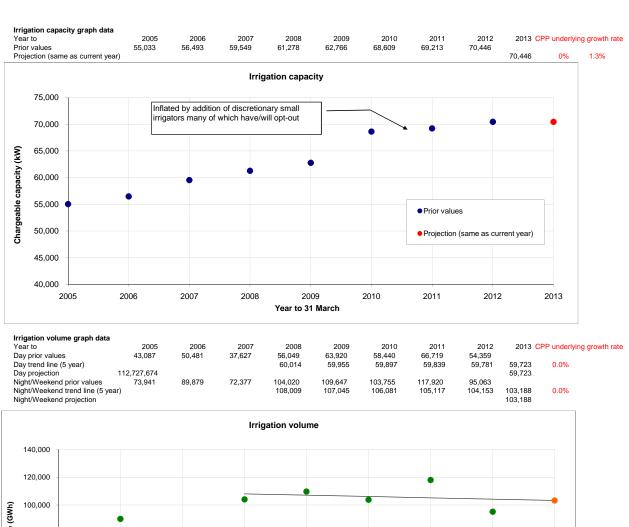


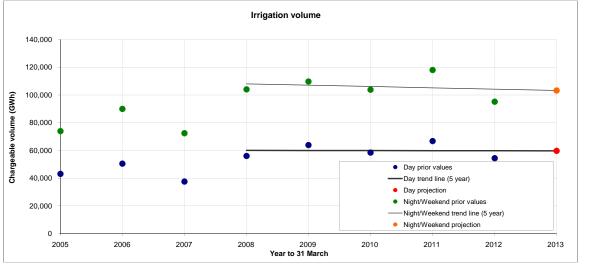




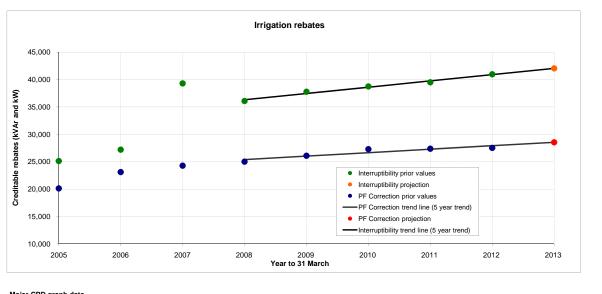


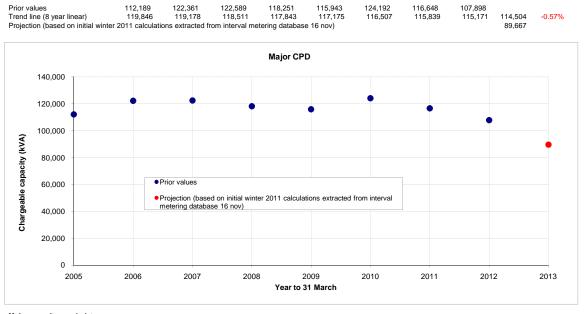
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Irrigation rebates graph data Year to PF Correction prior values 2009 26,094 26,037 2006 23,105 2005 2007 2010 2011 2012 2013 CPP underlying growth rate 20,124 24,296 27,293 26,667 PF Correction trend line (5 year trend) 25,408 27,296 27,926 28,555 PF Correction projection Interruptibility prior values 28,555 27,220 39,299 38,763 39,510 40,964 25,129 Interruptibility trend line (5 year trend) 37,472 39,770 42,067 36,324 38,621 40,918 Interruptibility projection



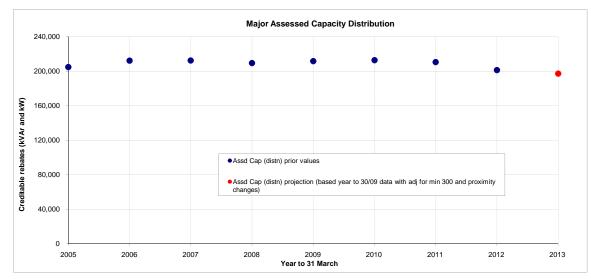


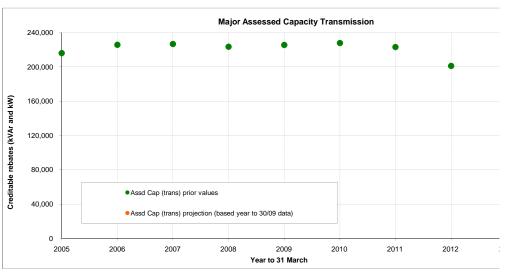
115,943 117,175

124,192 116,648 116,507 115,839 115,839

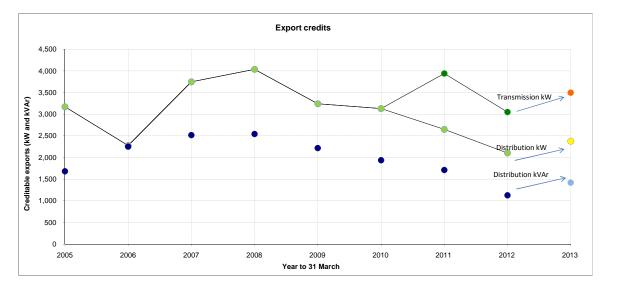
115,171 114,504 -0.57%

Major capacity graph data Year to Assd Cap (distn) prior values 2005 2006 2007 204,723 212,142 212,413 208,603 209,242 209,881 d year to 30/09 data with adj for min 300 and 216,077 225,859 226,819 225,965 224,629 223,294 2008 2009 209,390 211,683 210,521 211,160 proximity changes) 223,645 225,594 221,958 220,622 2010 212,797 211,799 2011 210,496 212,438 2013 CPP underlying growth rate 201,250 213,717 **0.30%** 197,105 Assd Cap (distn) trend line (7 y Assd Cap (distn) projection (bas 227,952 219,287 Assd Cap (trans) prior values 216,077 225, Assd Cap (trans) trend line (7) 225,965 224, Assd Cap (trans) projection (based year to 30/09 data) 223,165 201,210 216,616 215,280 -0.61% 191,689 217,951

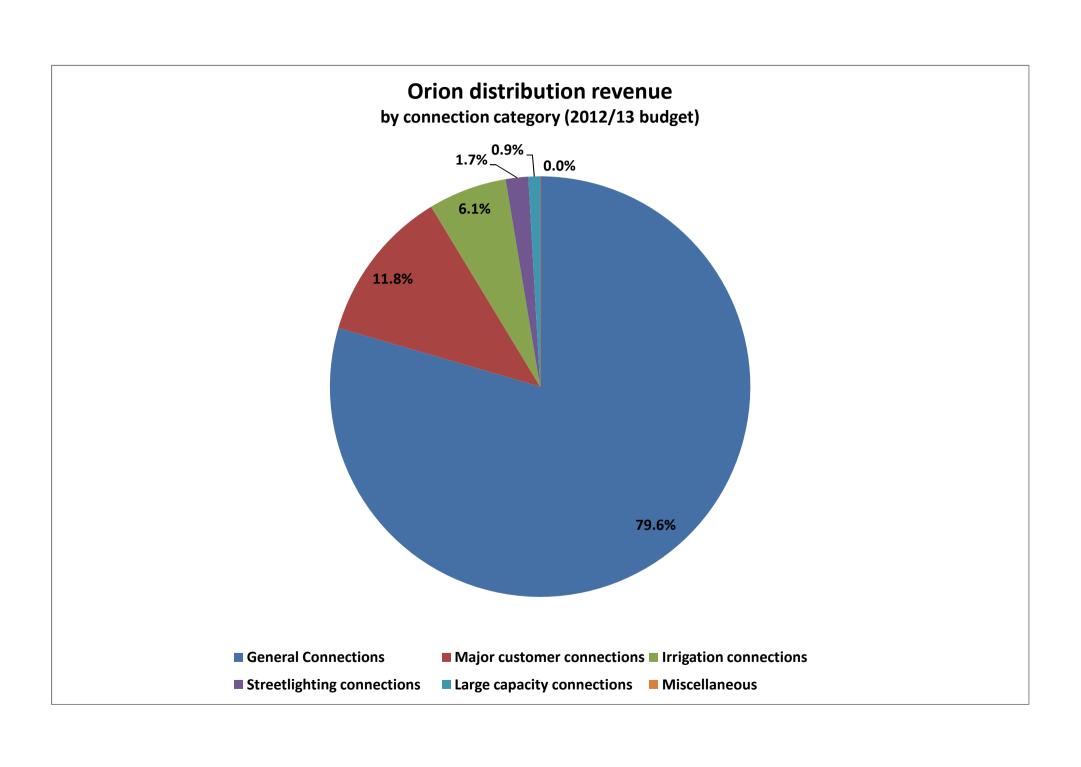


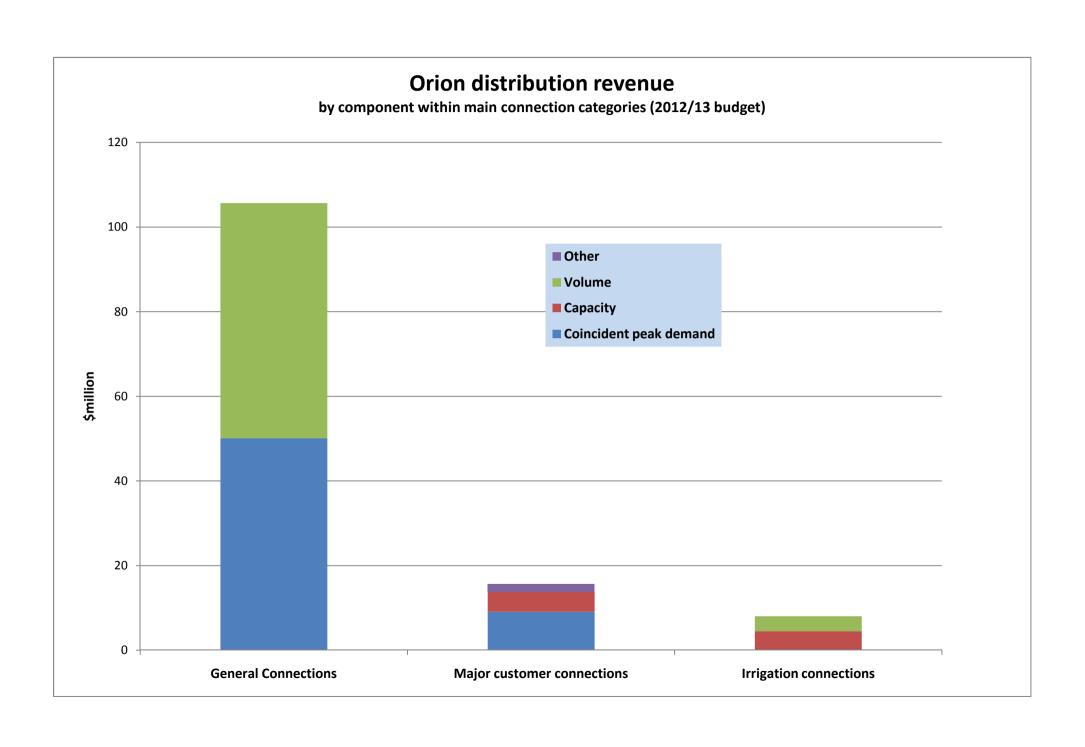


Export credit graph data Year to Export kW (distribution) Export kW (distribution) projection	2005 3,171	2006 2,277	2007 3,747	2008 4,036	2009 3,241	2010 3,130	2011 2,649	2012 2,104	2013 CPP underlying growth ra
Export kW (transmission) Export kW (transmission) projection	3,171	2,277	3,747	4,036	3,241	3,130	3,942	3,050	3,496
Export kVAr(distn) Export kVAr(distn) projection	1,681	2,251	2,517	2,545	2,217	1,937	1,710	1,127	1,419



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	Components		Revenue								
			ext Year Budge uantities, 12/13			Commonant weighte			Outomorphishts		
		Distn	Trans	Delv		Comp Distn	onent weig Trans	ihts Delv		ory weigh Trans	hts Delv
	Streetlighting connections										
1	Fixed charge	1,748	-	1,748		1.32%		0.87%			
2	Peak charge (peak period demand)	263	145	409		0.20%	0.22%	0.20%			
	Volume charge										
3	Working weekdays (7am - 9pm) Nights, weekends and holidays	159 130	68 72	227 202		0.12% 0.10%	0.10% 0.11%	0.11% 0.10%			
	Streetlighting total	2,300	285	2,586					1.7%	0.4%	1.3
	General Connections										
5	Peak charge	50,101	27,665	77,766		37.76%	41.09%	38.88%			
6	Volume charge Working weekdays (7am - 9pm)	48,861	21,050	69,912		36.82%	31.26%	34.95%			
7	Nights, weekends and holidays	6,711	3,686	10,396		5.06%	5.47%	5.20%			
	Low power factor charge General connections total	- 105,673	- 52,401	- 158,074		0.00%		0.00%	79.6%	77.8%	79.0
		103,073	J2,40 I	130,074					79.076	11.076	79.0
	Irrigation connections Capacity charge	5,607	273	5,880		4.23%	0.41%	2.94%			
	Volume charge										
10 11	Working weekdays (7am - 9pm) Nights, weekends and holidays	2,918 597	1,257 328	4,175 926		2.20% 0.45%	1.87% 0.49%	2.09% 0.46%			
	Rebates										
12 13	Power factor correction rebate Interruptibility rebate	(789) (293)		(789.0) (292.5)		-0.59% -0.22%		-0.39% -0.15%			
	Irrigation connections total	8,041	1,859	9,899		0.2270		0.1070	6.1%	2.8%	4.9
	Major customer connections & Embedded networks										
	Fixed charge Fixed (Standard connections)	198		198		0.15%		0.10%			
5	Fixed (Secondary connections) Dedicated Equipment	4 1,646		4 1,646		0.00% 1.24%		0.00% 0.82%			
	Peak charge (control period demand)	9,073	5,748	14,821		6.84%	8.54%	7.41%			
′		9,073	5,740	14,021		0.04 /6	0.34 //	7.41/0			
18	Capacity charge Assessed capacity distribution	4,795		4,795		3.61%		2.40%			
	Assessed capacity transmission Major customer connections total	15,716	6,596 12,345	6,596 28,061			9.80%	3.30%	11.8%	18.3%	14.09
	Large capacity connections										
	Synlait										
	Distribution charge Operations, maintenance & administration	148		148		0.11%		0.07%			
19 20	Asset charge	263		263		0.20%		0.07 %			
	Transmission charge										
	Interconnection charge (winter) Interconnection charge (summer)		122 156	122 156		0.00% 0.00%	0.18% 0.23%	0.06% 0.08%			
	Use of transmission connection assets Synlait total	411	56 333	56 743		0.00%	0.08%	0.03%			
	Fonterra										
21	Distribution charge Operations, maintenance & administration	199		199		0.15%		0.10%			
22	Asset charge	580		580		0.44%		0.29%			
	Transmission charge		20	20		0.000/	0.059/	0.000/			
	Interconnection charge (winter) Interconnection charge (summer)		32 209	32 209		0.00% 0.00%	0.05% 0.31%	0.02% 0.10%			
	Use of transmission connection assets Fonterra total	778	77 318	77 1,096		0.00%	0.11%	0.04%			
					i .						

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											100.0%
	Monthly invoice charge	b 		6		0.00%	0.00%	0.00%	0.0%	0.0%	0.0%
						0.000/	0.000/	0.000/	0.00/	0.00/	0.00/
		(== -7	(===)	(1.00)					0.270	0.070	0.270
Export and generation total									-0.2%	-0.3%	-0.2%
Generation credits		(77)	(77)			-0.06%	-0.11%	-0.08%			
Real power transmission component		-	(132)	(132)			-0.20%	-0.07%			
Reactive power distribution component		(24)	-	(24)		-0.02%		-0.01%			
Real power distribution component		(123)	-	(123)		-0.09%		-0.06%			
Export and generation											
	Reactive power distribution component Real power transmission component Generation credits Export and generation total Miscellaneous	Real power distribution component Reactive power distribution component Real power transmission component Generation credits Export and generation total Miscellaneous	Real power distribution component Reactive power distribution component Real power transmission component Real power transmission component Generation credits (77) Export and generation total (224) Miscellaneous Monthly invoice charge 6	Real power distribution component Reactive power distribution component Real power transmission component Real power transmission component Generation credits Generation credits (77) (77) Export and generation total Miscellaneous Monthly invoice charge 6	Real power distribution component (123) - (123) -0.09% Reactive power distribution component (24) - (24) -0.02% Real power transmission component - (132) (132) -0.20% Generation credits (77) (77) (154) -0.06% -0.11% Export and generation total (224) (209) (433) Miscellaneous Monthly invoice charge 6 6 0.00% 0.00%	Real power distribution component (123) - (123) -0.09% -0.06%	Real power distribution component (123) - (123) - (0.09% -0.06%	Real power distribution component (123) - (123) -0.09% -0.06% Reactive power distribution component (24) - (24) -0.02% -0.01% Real power transmission component - (132) (132) -0.20% -0.07% Generation credits (77) (77) (154) -0.06% -0.11% -0.08% Export and generation total (224) (209) (433) -0.2% -0.3%			

Summary

Summary					
	Share of distribution	revCoincident peak C	apacity	Volume	Other
General Connections	79.6%	50,101,100		55,571,604	-
Major customer connections	11.8%	9,073,210	4,794,775		1,848,369
Irrigation connections	6.1%		4,525,016	3,515,524	
Streetlighting connections	1.7%				
Large capacity connections	0.9%				
Miscellaneous	0.0%				
Export and generation	-0.2%				

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