

Revised Revenue Proposal Pro Forma Statements

INDEX

Historic Opex

Table	1.1	Historic Opex by Expenditure Category - Summary
	1.2	Historic Opex (any part year) - not used
	1.3	Historic Opex by Category Year 2004-05
	1.4	Historic Opex by Category Year 2005-06
	1.5	Historic Opex by Category Year 2006-07
	1.6	Historic Opex by Category Year 2007-08
	1.7	Historic Opex by Category Year 2008-09

Forecast Opex

Table	2.1	Forecast Opex by Expenditure Category - Summary
	2.2	Forecast Opex by Category Year 2009-10
	2.3	Forecast Opex by Category Year 2010-11
	2.4	Forecast Opex by Category Year 2011-12
	2.5	Forecast Opex by Category Year 2012-13
	2.6	Forecast Opex by Category Year 2013-14

Commentary

Table	5.1	Commentary on Opex
	5.2	Commentary on Historic Capex
	5.3	Commentary on Forecast Capex

Other matters

Table	7.1	Weighted Average Cost of Capital
	7.2	Depreciation
	7.3	Service Target Performance Incentive Scheme Parameters
	7.4	Opex Efficiency Carry Forward

Historic Capex

Table	3.1	Historic Capex by Project Category - Summary
	3.2	Historic Capex by Asset Class - Summary
	3.3	Historic Capex - Network - by project
	3.4	Historic Capex - Network Programs & Non-network

Forecast Capex

Table	4.1	Forecast Capex by Project Category - Summary
	4.2	Forecast Capex by Asset Class - Summary
	4.3	Forecast Capex - Network - by project
	4.4	Forecast Capex - Network Programs & Non-network

Instructions/ Definitions

Table	6.1	Opex instructions & definitions
	6.2	Historic Capex Instructions & definitions
	6.3	Forecast Capex Instructions & definitions

1.1 HISTORIC OPEX by expenditure category

Opex
Commentary -
Table 5.1

Opex
Instructions -
Table 6.1

Home

(\$M, Nominal for 2004-07 then 2008 Dollars)	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	Total	Key cost drivers and explanation for material differences over time
Maintenance							
Lines							
Labour	5.77	5.15	6.36	5.14	5.85	28.27	
Materials and Expense	2.22	2.41	2.98	2.60	2.77	12.98	
Sub-Totals	7.99	7.56	9.34	7.74	8.62	41.25	
Substations							
Labour	15.05	14.88	14.89	13.80	15.45	74.07	
Materials and Expense	7.82	7.92	9.61	7.08	7.13	39.56	
Sub-Totals	22.87	22.81	24.50	20.88	22.58	113.63	
Communications							
Labour	3.93	3.40	3.75	3.91	3.60	18.59	
Materials and Expense	0.68	1.30	1.36	0.76	1.39	5.49	
Sub-Totals	4.61	4.70	5.11	4.67	4.99	24.08	
Secondary Systems							
Labour	3.92	3.65	3.87	3.73	4.37	19.53	
Materials and Expense	0.48	0.66	0.42	0.90	0.48	2.94	
Sub-Totals	4.40	4.31	4.29	4.62	4.85	22.47	
Land and Easements							
Labour	4.62	3.83	3.75	3.48	4.14	19.81	
Materials and Expense	7.34	9.84	8.14	11.99	9.50	46.80	
Sub-Totals	11.95	13.67	11.89	15.46	13.63	66.61	
SUMMARY							
Sub Total Labour	33.29	30.91	32.61	30.05	33.41	160.28	
Sub Total Materials and Expense	18.54	22.13	22.51	23.32	21.27	107.77	
Total Maintenance	51.83	53.05	55.13	53.37	54.67	268.05	The maintenance cost has minor fluctuations from year to year due to the cyclical nature of the work and growth in the asset base
Maintenance Support & Asset Management	7.88	9.62	11.59	7.67	9.72	46.48	Increased expenditure in 06/07 due to one-off communications costs
Total Maintenance Support & Asset Management	7.88	9.62	11.59	7.67	9.72	46.48	
Operations / Control Room	7.94	7.68	8.51	7.33	7.77	39.22	Cost savings due to the implementation of Virtual control room and changes to shift staffing
Total Operations	7.94	7.68	8.51	7.33	7.77	39.22	
Grid Planning	4.18	4.82	3.74	4.80	3.55	21.08	
Total Grid Planning	4.18	4.82	3.74	4.80	3.55	21.08	
Insurance	5.90	5.86	5.78	5.66	5.90	29.10	Insurance estimates are based on a Broker Assessment
Rates & Taxes	1.41	2.84	3.09	3.02	3.21	13.56	
Total Taxes and Insurance	7.31	8.70	8.87	8.68	9.11	42.66	
Property Management	4.52	4.61	3.73	3.02	3.37	19.26	
Environmental	2.11	2.92	2.57	2.26	2.59	12.45	
Total Property Management	6.63	7.53	6.30	5.29	5.96	31.71	
Corporate Governance	9.36	5.78	6.00	7.04	6.04	34.23	Increased cost in 04/05 due to the write-off of extra-ordinary items
Customer Relations	2.45	3.48	3.26	2.71	1.78	13.69	
Regulatory	1.97	1.63	1.99	2.64	3.23	11.46	Fluctuations due to project costs and cyclical expenditure
Total Corporate and Regulatory Management	13.79	10.90	11.25	12.39	11.06	59.39	
Finance	3.66	3.74	3.84	3.85	3.84	18.92	
Information Technology	10.84	11.20	10.32	10.33	10.56	53.25	Rationalisation of IT Outsourcing
HR & Payroll	3.17	3.49	3.55	3.67	3.59	17.48	
Total Business Management	17.68	18.43	17.71	17.86	17.98	89.66	
TOTAL CONTROLLABLE OPEX	117.23	120.73	123.09	117.38	119.83	598.25	
OTHER OPEX							
Debt Raising						0.00	
Equity Raising						0.00	
Self-insurance				2.33	1.91	4.24	
Network Support					45.70	45.70	
TOTAL OTHER OPEX	0.00	0.00	0.00	2.33	47.61	49.94	
TOTAL REGULATORY OPEX	117.23	120.73	123.09	119.71	167.44	648.19	
Revenue Cap Allowance							
Controllable Opex	117.45	120.46	122.96	127.79	127.46	616.11	
Debt Raising	1.48	1.55	1.62	1.75	1.88	8.28	
Equity Raising							
Self-insurance	0.77	0.80	0.82	0.85	0.85	4.08	
Network Support							
Total Revenue Cap Allowance	119.70	122.81	125.40	130.39	130.19	628.48	

Table 1.2 Historic Controllable Opex (Any part year) - NOT USED

[Opex Commentary - Table 5.1](#)

[Opex Instructions - Table 6.1](#)

[Home](#)

Opex Commentary - Table 5.1
Opex Instructions - Table 6.1

Home

Table 1.5 Historic Controllable Opex by Category Year 2006-07

2006-2007							
	Field Maintenance			Operations and Maintenance Support	Corporate Support		TOTAL
	Routine	Defects	Major Operating Projects		Network	Non-Network	
Maintenance							
Lines							
Labour	2.70	2.71	0.95				6.36
Materials and Expense	1.16	1.08	0.74				2.98
Sub-Totals	3.86	3.79	1.69	0.00	0.00	0.00	9.34
Substations							
Labour	6.00	7.14	1.75				14.89
Materials and Expense	0.65	6.45	2.51				9.61
Sub-Totals	6.65	13.59	4.26	0.00	0.00	0.00	24.50
Communications							
Labour	1.25	2.49	0.00				3.75
Materials and Expense	0.04	1.32	0.00				1.36
Sub-Totals	1.29	3.82	0.00	0.00	0.00	0.00	5.11
Secondary Systems							
Labour	3.04	0.83	0.00				3.87
Materials and Expense	0.00	0.42	0.00				0.42
Sub-Totals	3.03	1.25	0.00	0.00	0.00	0.00	4.29
Land and Easements							
Labour	2.50	1.25	0.00				3.75
Materials and Expense	5.19	2.95	0.00				8.14
Sub-Totals	7.69	4.20	0.00	0.00	0.00	0.00	11.89
SUMMARY							
Sub Total Labour	15.49	14.43	2.70	0.00	0.00	0.00	32.61
Sub Total Materials and Expense	7.03	12.22	3.26	0.00	0.00	0.00	22.51
Total Maintenance	22.52	26.65	5.96	0.00	0.00	0.00	55.13
Maintenance Support & Asset Management				11.59			11.59
Total Maintenance Support & Asset Management	0.00	0.00	0.00	11.59	0.00	0.00	11.59
Operations / Control Room				8.51			8.51
Total Operations	0.00	0.00	0.00	8.51	0.00	0.00	8.51
Grid Planning					3.74		3.74
Total Grid Planning	0.00	0.00	0.00	0.00	3.74	0.00	3.74
Insurance					5.78		5.78
Rates & Taxes					3.09		3.09
Total Taxes and Insurance	0.00	0.00	0.00	0.00	8.87	0.00	8.87
Property Management					3.73		3.73
Environmental					2.57		2.57
Total Property Management	0.00	0.00	0.00	0.00	6.30	0.00	6.30
Corporate Governance						6.00	6.00
Customer Relations					3.26		3.26
Regulatory					1.99		1.99
Total Corporate and Regulatory Management	0.00	0.00	0.00	0.00	5.25	6.00	11.25
Finance						3.84	3.84
Information Technology						10.32	10.32
HR & Payroll						3.55	3.55
Total Business Management	0.00	0.00	0.00	0.00	0.00	17.71	17.71
TOTAL CONTROLLABLE OPEX	22.52	26.65	5.96	20.09	24.15	23.71	123.09
OTHER OPEX							
Debt Raising							0.00
Equity Raising							0.00
Self-insurance							0.00
Network Support							0.00
TOTAL OTHER OPEX	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL REGULATORY OPEX	22.52	26.65	5.96	20.09	24.15	23.71	123.09

Table 2.1 Forecast Controllable Opex by Category - Summary

Opex
Commentary -
Table 5.1

Opex
Instructions -
Table 6.1

Home

(\$M, 2008 dollars)	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	Total	Key cost drivers and explanation for material differences over time
Maintenance							
Lines							
Labour	6.81	7.78	6.63	8.20	7.88	37.30	
Materials and Expense	3.10	3.26	2.76	3.28	3.12	15.52	
Sub-Totals	9.91	11.04	9.39	11.48	11.00	52.82	
Substations							
Labour	16.77	19.59	21.47	22.08	22.81	102.73	
Materials and Expense	6.72	7.79	8.37	8.41	8.65	39.94	
Sub-Totals	23.49	27.38	29.84	30.49	31.47	142.67	
Communications							
Labour	5.01	6.03	5.57	7.12	7.38	31.10	
Materials and Expense	1.79	2.07	1.87	2.31	2.35	10.40	
Sub-Totals	6.79	8.10	7.44	9.43	9.73	41.50	
Secondary Systems							
Labour	3.61	4.37	5.35	6.03	5.83	25.20	
Materials and Expense	0.37	0.44	0.53	0.58	0.56	2.48	
Sub-Totals	3.98	4.81	5.88	6.61	6.39	27.68	
Land and Easements							
Labour	4.31	4.39	4.58	4.95	5.02	23.25	
Materials and Expense	9.12	8.99	9.26	9.88	9.95	47.21	
Sub-Totals	13.44	13.38	13.84	14.83	14.97	70.46	
SUMMARY							
Sub Total Materials and Expense	36.50	42.17	43.60	48.38	48.92	219.58	The forecast maintenance costs have minor fluctuations from year to year due to the cyclical nature of the work. Growth in the asset base and increasing labour cost are the key cost drivers in the coming period.
Sub Total Materials	21.10	22.55	22.79	24.47	24.63	115.54	
Total Maintenance	57.61	64.72	66.40	72.84	73.55	335.12	
Maintenance Support & Asset Management	12.12	12.67	13.03	13.46	13.90	65.17	
Total Maintenance Support & Asset Management	12.12	12.67	13.03	13.46	13.90	65.17	
Operations / Control Room	8.70	9.12	9.41	9.75	10.09	47.05	
Total Operations	8.70	9.12	9.41	9.75	10.09	47.05	
Grid Planning	4.03	4.23	4.36	4.51	4.67	21.80	
Total Grid Planning	4.03	4.23	4.36	4.51	4.67	21.80	
Insurance	5.90	6.30	6.73	7.12	7.34	33.39	Insurance estimates are based on a Broker Assessment
Rates & Taxes	3.25	3.29	3.30	3.33	3.36	16.52	
Total Taxes and Insurance	9.15	9.58	10.04	10.44	10.70	49.91	
Property Management	3.59	3.68	3.74	3.81	3.87	18.69	
Environmental	2.86	2.99	3.08	3.19	3.29	15.41	
Total Property Management	6.45	6.67	6.82	6.99	7.17	34.11	
Corporate Governance	6.58	6.78	6.94	7.10	7.25	34.65	Fluctuations due to project costs and cyclical expenditure
Customer Relations	2.98	3.08	3.17	3.25	3.32	15.81	
Regulatory	1.72	1.77	2.30	3.36	3.82	12.98	
Total Corporate and Regulatory Management	11.28	11.64	12.40	13.71	14.40	63.44	
Finance	4.27	4.43	4.56	4.69	4.81	22.76	
Information Technology	10.94	11.24	11.46	11.70	11.92	57.26	
HR & Payroll	3.96	4.12	4.24	4.38	4.49	21.19	
Total Business Management	19.17	19.79	20.26	20.77	21.23	101.21	
TOTAL CONTROLLABLE OPEX	128.51	138.42	142.70	152.48	155.70	717.81	
OTHER OPEX							
Debt Raising	3.70	4.03	4.28	4.67	4.98	21.66	
Equity Raising	1.14	1.87	3.00	3.80	3.83	13.64	
Self-insurance	2.21	2.21	2.21	2.21	2.21	11.03	
Network Support	21.50	6.00	6.00	6.00	6.00	45.50	
TOTAL OTHER OPEX	28.55	14.10	15.49	16.67	17.02	91.82	
TOTAL REGULATORY OPEX	157.05	152.52	158.19	169.15	172.72	809.63	

Opex Commentary - Table 5.1
Opex Instructions - Table 6.1

Home

Table 2.2 Forecast Controllable Opex by Category Year 2009-10

(\$M, 2008 dollars)	2009-2010						TOTAL
	Field Maintenance			Operations and Maintenance Support	Corporate Support		
	Routine	Defects	Major Operating Projects		Network	Non-Network	
Maintenance							
Lines							
Labour	2.72	2.71	1.38				6.81
Materials and Expense	1.09	1.00	1.01				3.10
Sub-Totals	3.81	3.71	2.39	0.00	0.00	0.00	9.91
Substations							
Labour	7.27	7.91	1.59				16.77
Materials and Expense	0.80	3.60	2.32				6.72
Sub-Totals	8.07	11.50	3.92	0.00	0.00	0.00	23.49
Communications							
Labour	1.48	3.00	0.53				5.01
Materials and Expense	0.04	1.49	0.26				1.79
Sub-Totals	1.51	4.49	0.79	0.00	0.00	0.00	6.79
Secondary Systems							
Labour	2.82	0.79	0.00				3.61
Materials and Expense	0.00	0.38	0.00				0.37
Sub-Totals	2.82	1.16	0.00	0.00	0.00	0.00	3.98
Land and Easements							
Labour	2.14	0.93	1.24				4.31
Materials and Expense	4.23	2.10	2.80				9.12
Sub-Totals	6.37	3.03	4.04	0.00	0.00	0.00	13.44
SUMMARY							
Sub Total Labour	16.42	15.34	4.74	0.00	0.00	0.00	36.50
Sub Total Materials and Expense	6.16	8.55	6.39	0.00	0.00	0.00	21.10
Total Maintenance	22.58	23.89	11.14	0.00	0.00	0.00	57.61
Maintenance Support & Asset Management				12.12			12.12
Total Maintenance Support & Asset Management	0.00	0.00	0.00	12.12	0.00	0.00	12.12
Operations / Control Room				8.70			8.70
Total Operations	0.00	0.00	0.00	8.70	0.00	0.00	8.70
Grid Planning					4.03		4.03
Total Grid Planning	0.00	0.00	0.00	0.00	4.03	0.00	4.03
Insurance					5.90		5.90
Rates & Taxes					3.25		3.25
Total Taxes and Insurance	0.00	0.00	0.00	0.00	9.15	0.00	9.15
Property Management					3.59		3.59
Environmental					2.86		2.86
Total Property Management	0.00	0.00	0.00	0.00	6.45	0.00	6.45
Corporate Governance						6.58	6.58
Customer Relations					2.98		2.98
Regulatory					1.72		1.72
Total Corporate and Regulatory Management	0.00	0.00	0.00	0.00	4.70	6.58	11.28
Finance						4.27	4.27
Information Technology						10.94	10.94
HR & Payroll						3.96	3.96
Total Business Management	0.00	0.00	0.00	0.00	0.00	19.17	19.17
TOTAL CONTROLLABLE OPEX	22.58	23.89	11.14	20.81	24.34	25.74	128.51
Debt Raising						3.70	3.70
Equity Raising						1.14	1.14
Self-insurance					2.21		2.21
Network Support					21.50		21.50
TOTAL OTHER OPEX	0.00	0.00	0.00	0.00	23.71	4.84	28.55
TOTAL REGULATORY OPEX	22.58	23.89	11.14	20.81	48.05	30.58	157.05

Opex Commentary - Table 5.1
Opex Instructions - Table 6.1

Home

Table 2.3 Forecast Controllable Opex by Category Year 2010-11

(\$M, 2008 dollars)	2010-2011						TOTAL
	Field Maintenance			Operations and Maintenance Support	Corporate Support		
	Routine	Defects	Major Operating Projects		Network	Non-Network	
Maintenance							
Lines							
Labour	3.40	3.39	0.99				7.78
Materials and Expense	1.33	1.22	0.71				3.26
Sub-Totals	4.73	4.61	1.70	0.00	0.00	0.00	11.04
Substations							
Labour	8.46	9.20	1.94				19.59
Materials and Expense	0.91	4.10	2.77				7.79
Sub-Totals	9.37	13.30	4.71	0.00	0.00	0.00	27.38
Communications							
Labour	1.81	3.67	0.55				6.03
Materials and Expense	0.05	1.76	0.26				2.07
Sub-Totals	1.85	5.43	0.82	0.00	0.00	0.00	8.10
Secondary Systems							
Labour	3.42	0.96	0.00				4.37
Materials and Expense	0.00	0.44	0.00				0.44
Sub-Totals	3.41	1.40	0.00	0.00	0.00	0.00	4.81
Land and Easements							
Labour	2.86	1.19	0.35				4.39
Materials and Expense	5.59	2.63	0.77				8.99
Sub-Totals	8.45	3.82	1.11	0.00	0.00	0.00	13.38
SUMMARY							
Sub Total Labour	19.95	18.40	3.83	0.00	0.00	0.00	42.17
Sub Total Materials and Expense	7.88	10.16	4.51	0.00	0.00	0.00	22.55
Total Maintenance	27.82	28.56	8.34	0.00	0.00	0.00	64.72
Maintenance Support & Asset Management				12.67			12.67
Total Maintenance Support & Asset Management	0.00	0.00	0.00	12.67	0.00	0.00	12.67
Operations / Control Room				9.12			9.12
Total Operations	0.00	0.00	0.00	9.12	0.00	0.00	9.12
Grid Planning					4.23		4.23
Total Grid Planning	0.00	0.00	0.00	0.00	4.23	0.00	4.23
Insurance					6.30		6.30
Rates & Taxes					3.29		3.29
Total Taxes and Insurance	0.00	0.00	0.00	0.00	9.58	0.00	9.58
Property Management					3.68		3.68
Environmental					2.99		2.99
Total Property Management	0.00	0.00	0.00	0.00	6.67	0.00	6.67
Corporate Governance						6.78	6.78
Customer Relations					3.08		3.08
Regulatory					1.77		1.77
Total Corporate and Regulatory Management	0.00	0.00	0.00	0.00	4.86	6.78	11.64
Finance						4.43	4.43
Information Technology						11.24	11.24
HR & Payroll						4.12	4.12
Total Business Management	0.00	0.00	0.00	0.00	0.00	19.79	19.79
TOTAL CONTROLLABLE OPEX	27.82	28.56	8.34	21.79	25.34	26.57	138.42
Debt Raising						4.03	4.03
Equity Raising						1.87	1.87
Self-insurance					2.21		2.21
Network Support					6.00		6.00
TOTAL OTHER OPEX	0.00	0.00	0.00	0.00	8.21	5.90	14.10
TOTAL REGULATORY OPEX	27.82	28.56	8.34	21.79	33.55	32.47	152.52

Opex Commentary - Table 5.1
Opex Instructions - Table 6.1

Home

Table 2.4 Forecast Controllable Opex by Category Year 2011-12

(\$M, 2008 dollars)	2011-2012						TOTAL
	Field Maintenance			Operations and Maintenance Support	Corporate Support		
	Routine	Defects	Major Operating Projects		Network	Non-Network	
Maintenance							
Lines							
Labour	2.82	2.80	1.01				6.63
Materials and Expense	1.08	0.99	0.70				2.76
Sub-Totals	3.89	3.79	1.71	0.00	0.00	0.00	9.39
Substations							
Labour	9.28	10.10	2.09				21.47
Materials and Expense	0.99	4.43	2.95				8.37
Sub-Totals	10.27	14.53	5.04	0.00	0.00	0.00	29.84
Communications							
Labour	1.65	3.35	0.57				5.57
Materials and Expense	0.04	1.57	0.27				1.87
Sub-Totals	1.69	4.92	0.84	0.00	0.00	0.00	7.44
Secondary Systems							
Labour	4.18	1.17	0.00				5.35
Materials and Expense	0.00	0.53	0.00				0.53
Sub-Totals	4.18	1.70	0.00	0.00	0.00	0.00	5.88
Land and Easements							
Labour	3.01	1.25	0.32				4.58
Materials and Expense	5.81	2.74	0.71				9.26
Sub-Totals	8.82	3.98	1.04	0.00	0.00	0.00	13.84
SUMMARY							
Sub Total Labour	20.94	18.67	4.00	0.00	0.00	0.00	43.60
Sub Total Materials and Expense	7.91	10.25	4.63	0.00	0.00	0.00	22.79
Total Maintenance	28.84	28.92	8.63	0.00	0.00	0.00	66.40
Maintenance Support & Asset Management				13.03			13.03
Total Maintenance Support & Asset Management	0.00	0.00	0.00	13.03	0.00	0.00	13.03
Operations / Control Room				9.41			9.41
Total Operations	0.00	0.00	0.00	9.41	0.00	0.00	9.41
Grid Planning					4.36		4.36
Total Grid Planning	0.00	0.00	0.00	0.00	4.36	0.00	4.36
Insurance					6.73		6.73
Rates & Taxes					3.30		3.30
Total Taxes and Insurance	0.00	0.00	0.00	0.00	10.04	0.00	10.04
Property Management					3.74		3.74
Environmental					3.08		3.08
Total Property Management	0.00	0.00	0.00	0.00	6.82	0.00	6.82
Corporate Governance						6.94	6.94
Customer Relations					3.17		3.17
Regulatory					2.30		2.30
Total Corporate and Regulatory Management	0.00	0.00	0.00	0.00	5.47	6.94	12.40
Finance						4.56	4.56
Information Technology						11.46	11.46
HR & Payroll						4.24	4.24
Total Business Management	0.00	0.00	0.00	0.00	0.00	20.26	20.26
TOTAL CONTROLLABLE OPEX	28.84	28.92	8.63	22.43	26.68	27.20	142.70
Debt Raising						4.28	4.28
Equity Raising						3.00	3.00
Self-insurance					2.21		2.21
Network Support					6.00		6.00
TOTAL OTHER OPEX	0.00	0.00	0.00	0.00	8.21	7.28	15.49
TOTAL REGULATORY OPEX	28.84	28.92	8.63	22.43	34.89	34.48	158.19

Opex Commentary - Table 5.1
Opex Instructions - Table 6.1

Home

Table 2.5 Forecast Controllable Opex by Category Year 2012-13

(\$M, 2008 dollars)	2012-2013						TOTAL
	Field Maintenance			Operations and Maintenance Support	Corporate Support		
	Routine	Defects	Major Operating Projects		Network	Non-Network	
Maintenance							
Lines							
Labour	3.59	3.57	1.04				8.20
Materials and Expense	1.34	1.23	0.71				3.28
Sub-Totals	4.93	4.80	1.75	0.00	0.00	0.00	11.48
Substations							
Labour	9.57	10.41	2.10				22.08
Materials and Expense	1.00	4.50	2.91				8.41
Sub-Totals	10.57	14.91	5.00	0.00	0.00	0.00	30.49
Communications							
Labour	2.15	4.38	0.59				7.12
Materials and Expense	0.05	1.99	0.27				2.31
Sub-Totals	2.20	6.37	0.86	0.00	0.00	0.00	9.43
Secondary Systems							
Labour	4.71	1.32	0.00				6.03
Materials and Expense	-0.01	0.59	0.00				0.58
Sub-Totals	4.71	1.91	0.00	0.00	0.00	0.00	6.61
Land and Easements							
Labour	3.29	1.36	0.29				4.95
Materials and Expense	6.28	2.96	0.64				9.88
Sub-Totals	9.57	4.32	0.93	0.00	0.00	0.00	14.83
SUMMARY							
Sub Total Labour	23.32	21.04	4.02	0.00	0.00	0.00	48.38
Sub Total Materials and Expense	8.67	11.27	4.52	0.00	0.00	0.00	24.47
Total Maintenance	31.99	32.31	8.54	0.00	0.00	0.00	72.84
Maintenance Support & Asset Management				13.46			13.46
Total Maintenance Support & Asset Management	0.00	0.00	0.00	13.46	0.00	0.00	13.46
Operations / Control Room				9.75			9.75
Total Operations	0.00	0.00	0.00	9.75	0.00	0.00	9.75
Grid Planning					4.51		4.51
Total Grid Planning	0.00	0.00	0.00	0.00	4.51	0.00	4.51
Insurance					7.12		7.12
Rates & Taxes					3.33		3.33
Total Taxes and Insurance	0.00	0.00	0.00	0.00	10.44	0.00	10.44
Property Management					3.81		3.81
Environmental					3.19		3.19
Total Property Management	0.00	0.00	0.00	0.00	6.99	0.00	6.99
Corporate Governance						7.10	7.10
Customer Relations					3.25		3.25
Regulatory					3.36		3.36
Total Corporate and Regulatory Management	0.00	0.00	0.00	0.00	6.61	7.10	13.71
Finance						4.69	4.69
Information Technology						11.70	11.70
HR & Payroll						4.38	4.38
Total Business Management	0.00	0.00	0.00	0.00	0.00	20.77	20.77
TOTAL CONTROLLABLE OPEX	31.99	32.31	8.54	23.21	28.56	27.87	152.48
Debt Raising						4.67	4.67
Equity Raising						3.80	3.80
Self-insurance					2.21		2.21
Network Support					6.00		6.00
TOTAL OTHER OPEX	0.00	0.00	0.00	0.00	8.21	8.46	16.67
TOTAL REGULATORY OPEX	31.99	32.31	8.54	23.21	36.76	36.34	169.15

Opex Commentary - Table 5.1
Opex Instructions - Table 6.1

Home

Table 2.6 Forecast Controllable Opex by Category Year 2013-14

(\$M, 2008 dollars)	2013-2014						TOTAL
	Field Maintenance			Operations and Maintenance Support	Corporate Support		
	Routine	Defects	Major Operating Projects		Network	Non-Network	
Maintenance							
Lines							
Labour	3.42	3.40	1.06				7.88
Materials and Expense	1.26	1.15	0.71				3.12
Sub-Totals	4.67	4.55	1.77	0.00	0.00	0.00	11.00
Substations							
Labour	9.86	10.73	2.22				22.81
Materials and Expense	1.02	4.58	3.05				8.65
Sub-Totals	10.88	15.31	5.27	0.00	0.00	0.00	31.47
Communications							
Labour	2.23	4.54	0.60				7.38
Materials and Expense	0.05	2.03	0.27				2.35
Sub-Totals	2.29	6.57	0.87	0.00	0.00	0.00	9.73
Secondary Systems							
Labour	4.56	1.27	0.00				5.83
Materials and Expense	-0.01	0.56	0.00				0.56
Sub-Totals	4.55	1.84	0.00	0.00	0.00	0.00	6.39
Land and Easements							
Labour	3.34	1.38	0.30				5.02
Materials and Expense	6.33	2.98	0.65				9.95
Sub-Totals	9.66	4.36	0.95	0.00	0.00	0.00	14.97
SUMMARY							
Sub Total Labour	23.41	21.33	4.19	0.00	0.00	0.00	48.92
Sub Total Materials and Expense	8.65	11.30	4.68	0.00	0.00	0.00	24.63
Total Maintenance	32.06	32.63	8.87	0.00	0.00	0.00	73.55
Maintenance Support & Asset Management				13.90			13.90
Total Maintenance Support & Asset Management	0.00	0.00	0.00	13.90	0.00	0.00	13.90
Operations / Control Room				10.09			10.09
Total Operations	0.00	0.00	0.00	10.09	0.00	0.00	10.09
Grid Planning					4.67		4.67
Total Grid Planning	0.00	0.00	0.00	0.00	4.67	0.00	4.67
Insurance					7.34		7.34
Rates & Taxes					3.36		3.36
Total Taxes and Insurance	0.00	0.00	0.00	0.00	10.70	0.00	10.70
Property Management					3.87		3.87
Environmental					3.29		3.29
Total Property Management	0.00	0.00	0.00	0.00	7.17	0.00	7.17
Corporate Governance						7.25	7.25
Customer Relations					3.32		3.32
Regulatory					3.82		3.82
Total Corporate and Regulatory Management	0.00	0.00	0.00	0.00	7.15	7.25	14.40
Finance						4.81	4.81
Information Technology						11.92	11.92
HR & Payroll						4.49	4.49
Total Business Management	0.00	0.00	0.00	0.00	0.00	21.23	21.23
TOTAL CONTROLLABLE OPEX	32.06	32.63	8.87	23.99	29.68	28.48	155.70
Debt Raising						4.98	4.98
Equity Raising						3.83	3.83
Self-insurance					2.21		2.21
Network Support					6.00		6.00
TOTAL OTHER OPEX	0.00	0.00	0.00	0.00	8.21	8.81	17.02
TOTAL REGULATORY OPEX	32.06	32.63	8.87	23.99	37.88	37.29	172.72

3.1 Historic CAPEX by project category

(\$m, Nominal for 2004-08 then 2008 dollars)

Project Category		Year 1	Year 2	Year 3	Year 4	Year 5	TOTAL
		2004/05	2005/06	2006/07	2007/08	2008/09	
NETWORK							
LOAD DRIVEN	Augmentation	50.0	62.1	70.0	183.9	383.2	749.1
	Easements	9.0	7.4	33.0	25.4	37.8	112.6
	Connections	0.0	0.0	0.0	0.0	0.0	0.0
NON-LOAD DRIVEN	Replacement	49.7	59.6	74.0	66.8	80.3	330.4
	Security/Compliance	0.8	3.2	7.4	8.1	19.0	38.6
NON NETWORK							
BUSINESS IT	Information Technology	10.6	14.0	9.8	16.4	14.3	65.0
SUPPORT THE BUSINESS	Facilities	1.4	1.0	10.3	6.7	12.7	32.1
	Motor Vehicles	5.8	2.6	7.1	5.9	1.7	23.2
	Other	3.2	0.8	1.6	4.2	1.6	11.5
TOTAL HISTORIC CAPEX		130.6	150.7	213.3	317.3	550.6	1362.5

3.3 Historic Capex - NETWORK - by project

(\$m, Nominal for 2004-08 then 2008 dollars)

Project ID	Project Name	Commissi oning Date	Category ^A	Year 1	Year 2	Year 3	Year 4	Year 5	TOTAL	REASON FOR PROJECT	Reg Test / Business Case (Y/N)	Reg Test / Business Case Cost Estimate (Nominal)	Reason for Variance from Cost Estimate
				2004/05	2005/06	2006/07	2007/08	2008/09					
9002 C	Armidale 132kV PhaseShifting Transformer	2009	Augmentation	0.0	0.0	0.9	0.5	13.6	15.0	Network approaching limit of capacity	Yes	13.0	No material variance
9004 C	Armidale 132kV Substation -Transformer Replacement	2007	Augmentation	0.1	2.5	2.3	0.0	0.0	4.9	Asset approaching limit of capacity	Yes	4.5	No material variance
9005 C	Armidale 330kV Substation- Transformer Replacement	2008	Replacement	0.0	0.2	12.2	1.7	0.0	14.2	Asset Replacement for end-of-life condition	Yes	15.5	No material variance
9010 C	Armidale Koolkhan 966Line 132kV Uprate	2007	Augmentation	0.0	0.8	3.3	0.0	0.0	4.1				
9011 C	Armidale Koolkhan 966Line 132kV Uprate	2007	Easements	0.0	0.4	0.0	0.0	0.0	0.4	Network approach limit of capacity	Yes	0.0	No material variance
9188 C	Armidale SVC Power Oscillation Damper (POD)	2009	Augmentation	0.0	0.0	0.0	0.0	0.3	0.3	Improve capacity to meet NER System Std	Yes	0.1	Input cost increase
5818 1	Beaconsfield West 330kV Substation- 3rd Transformer	2011	Augmentation	0.0	0.0	0.0	0.0	0.1	0.1				
5818 P	Beaconsfield West 330kV Substation- 3rd Transformer	2011	Easements	0.0	0.0	0.1	4.1	0.0	4.1	Network approach limit of capacity	Yes		Project still in progress at the end of 04-09 reg period
6192 0	Beryl 66kV Sub Capacitor Banks	2009	Augmentation	0.0	0.0	0.0	0.0	1.0	1.0	Voltage Support	Yes	1.1	No material variance
9032 C	Cable 41 Reactor Replacement	2011	Replacement	0.0	0.0	0.0	0.1	4.1	4.3	Asset approaching limit of capacity	Yes	0.0	Project still in progress at the end of 04-09 reg period
9033 C	Canberra 132kV Substation Capacitor Bank	2007	Augmentation	0.1	2.0	0.1	0.0	0.0	2.1	Asset Replacement for end-of-life condition	Yes	2.3	No material variance
9204 C	Canberra 132kV Tunnel Board Replacement	2010	Replacement	0.0	0.0	0.0	0.1	2.1	2.2	Improve facility to meet NER System Std	Yes	2.3	No material variance
6383 6152E	Canberra 330kV Sub Capacitor Banks	2010	Augmentation	0.0	0.0	0.0	0.0	0.4	0.4	Voltage Support	Yes	0.0	Project still in progress at the end of 04-09 reg period
9037 C	Capacitor Augmentation at Rural Substations	2006	Augmentation	0.0	4.1	12.8	0.7	0.0	17.7	Voltage Support	Yes	15.0	Input cost increase
9045 C	Coffs Harbour 132kV Transformers	2010	Augmentation	0.0	0.0	0.0	0.1	6.0	6.1	Capability to meet NER System Std	Yes		Project still in progress at the end of 04-09 reg period
9044 C	Coffs Harbour 330 kV Substation	2008	Augmentation	1.7	20.8	3.4	1.6	0.0	27.6				
9043 C	Coffs Harbour 330 kV Substation	2007	Easements	0.9	0.1	0.0	0.0	0.0	1.1	Capability to meet NER System Std	Yes	27.2	No material variance
9127 C	Coffs Harbour-Kempsey 132kV Conversion	2010	Augmentation	0.0	0.1	0.4	1.2	5.1	6.6				
9128 C	Coffs Harbour-Kempsey 132kV Conversion	2010	Easements	0.0	0.0	0.0	0.9	0.7	1.5	Network approach limit of capacity	Yes		Project still in progress at the end of 04-09 reg period
9064 C	Comm - Augmentation of Nth Communication	2005	Augmentation	3.2	2.5	2.2	0.4	0.0	8.4	Comm upgrade to meet NEMMCO Std	Yes	8.4	No material variance
9229 C	Comm - Misc Communication Works	2007	Augmentation	0.1	0.7	-0.5	0.0	0.0	0.3	Comm upgrade to meet NEMMCO Std	Yes		
9063 C	Comm - Newcastle 132kV Communication	2006	Augmentation	0.3	0.2	0.0	0.0	0.0	0.5	Comm upgrade to meet NEMMCO Std	Yes	0.7	No material variance
9077 C	Comm - Radio Network Modifications	2007	Augmentation	0.0	0.0	0.2	1.6	0.0	1.8	Comm upgrade to meet NEMMCO Std	Yes	4.8	Cost saving resulted from alternative structure design
9072 C	Comm - Syd Sth to Bankst Feeder Prot Upgrade	2007	Augmentation	0.0	0.1	0.2	0.0	0.0	0.3	Comm upgrade to meet NEMMCO Std	Yes	0.4	No material variance
9079 C	Comm - Video Conferencing & Collaboration	2009	Augmentation	0.0	0.0	0.0	0.0	0.3	0.3	Improve communication network	Yes	0.3	No material variance
9080 C	Comm - Voice Over Internet Protocol	2010	Augmentation	0.0	0.0	0.0	0.1	3.3	3.4	Improve communication network	Yes		Project still in progress at the end of 04-09 reg period
9284 C	Communication Upgrade & Replacement	2007	Augmentation	1.5	1.0	1.2	7.9	12.2	23.8				
9285 C	Communication Upgrade & Replacement	2007	Easements	0.0	0.0	0.0	0.0	0.0	0.0				
5616 A	Cowra 132kV Sub new Transformer	2010	Augmentation	0.0	0.0	0.0	0.0	0.6	0.6	Comm upgrade to meet NEMMCO Std	Yes		Project still in progress at the end of 04-09 reg period
9088 C	Dapto 132kV Substation Capacitor Banks	2007	Augmentation	0.0	0.2	2.7	0.1	0.0	3.0	Network approach limit of capacity	Yes		Project still in progress at the end of 04-09 reg period
9090 C	Dapto Line Switchbay & Fault Level	2010	Augmentation	0.0	0.0	0.0	0.1	3.4	3.5	End of life asset upgrade	Yes	3.8	Input cost reduction
9092 C	Darlington Pt 132kV Substation Capacitor Bank	2007	Augmentation	0.0	0.1	2.7	0.0	0.0	2.9	Procurement for future reliability develop'n	Yes		Project still in progress at the end of 04-09 reg period
9094 C	Dumaresq-Lismore 330kV Line & Substation	2012	Augmentation	0.0	0.0	0.0	0.0	0.8	0.9	Resolve switching limitation	Yes	2.5	No material variance
9095 C	Dumaresq-Lismore 330kV Line & Substation	2012	Easements	0.0	0.0	0.0	0.0	2.2	2.2	Network approach limit of capacity	Yes		Project still in progress at the end of 04-09 reg period
9097 C	Finley 132kV Transformer	2009	Augmentation	0.0	0.0	0.6	5.9	1.9	8.4	End of life asset upgrade	Yes	10.4	No material variance
9098 C	Glen Innes - Inverell 132kV Line	2010	Augmentation	0.0	0.0	0.1	0.3	1.2	1.6				
9099 C	Glen Innes - Inverell 132kV Line	2010	Easements	0.0	0.0	0.1	0.4	0.8	1.3	Asset approaching limit of capacity	Yes		Project still in progress at the end of 04-09 reg period
9100 C	Glen Innes 132/66kV Substation	2008	Replacement	0.0	1.4	10.1	0.5	0.0	12.0	Connection Pt reliability upgrade & customer requ	Yes	11.0	No material variance
6147 A	Griffith 33kV Capacitor Banks No.1&2	2010	Security/Compliance	0.0	0.0	0.0	0.0	0.4	0.4	PCB contaminated	Yes		Project still in progress at the end of 04-09 reg period
9125 C	Haymarket Substation Augmentation	2005	Augmentation	6.0	0.0	0.0	0.0	0.0	6.0	Network approach limit of capacity	Yes		Completed Project c/f from Last reg period
9126 C	Haymarket Substation Augmentation	2005	Easements	0.0	0.0	0.0	0.0	0.0	0.0	Network approach limit of capacity	Yes		Completed Project c/f from Last reg period
9196 C	Haymarket Substation EA 132KV Cables	2007	Augmentation	0.0	0.0	0.0	0.3	1.8	2.1	Customer request	Yes	3.8	Reduced project scope
4188 F	Holroyd Line, Cable & Substation	2012	Augmentation	0.0	0.0	0.2	0.6	0.0	0.7				
4213 P	Holroyd Line, Cable & Substation	2012	Easements	0.0	0.0	0.0	0.0	16.0	16.0	Network approach limit of capacity	Yes		Project still in progress at the end of 04-09 reg period
9236 C	Incurred expenditure from Last Period Projects	2007	Augmentation	1.1	1.0	0.2	0.4	0.0	2.7				
9233 C	Incurred expenditure from Last Period Projects	2007	Easements	0.2	0.3	0.1	0.0	0.0	0.6				
9294 C	Incurred expenditure from Last Period Projects	2007	Replacement	0.0	0.0	1.4	0.0	0.0	1.4	Various			
6001 F	Initiation expenditure projects for next period	0	Augmentation	0.0	0.3	1.0	0.2	0.1	1.7				
6378 P	Initiation expenditure projects for next period	2013	Easements	0.0	0.0	0.1	0.0	0.1	0.2	Various	Yes		
9190 C	Inner City Substations & Cable Works	2007	Augmentation	8.6	5.2	4.7	0.5	0.0	19.0				
9107 C	Inner City Substations & Cable Works	2008	Easements	0.9	0.0	0.0	0.0	0.0	1.0	Network approach limit of capacity	Yes		Completed project c/f fr last Reg Period
9109 C	Kemps Creek 330kV Cap Bank	2008	Augmentation	0.0	0.1	4.3	1.1	0.0	5.4	Procurement for future reliability develop'n	Yes	6.8	Input cost reduction
6213 0	Kemps Creek SVC Controls Replacement	2011	Replacement	0.0	0.0	0.0	0.0	0.3	0.3	Poor asset condition & End of life asset upgrade	Yes		Project still in progress at the end of 04-09 reg period
9115 C	Kempsey 132kV Transformer Replacement	2009	Replacement	0.0	0.0	0.2	3.4	2.9	6.5	Network approach limit of capacity	Yes		Project still in progress at the end of 04-09 reg period
9129 C	Kempsey- Pt Macquare 132kVLine	2011	Augmentation	0.0	0.1	0.2	0.7	4.8	5.8				
9130 C	Kempsey- Pt Macquare 132kVLine	2011	Easements	0.0	0.0	0.0	0.0	0.5	0.5	Network approach limit of capacity	Yes		Project still in progress at the end of 04-09 reg period
9117 C	Kempsey-Nambucca-Coffs Harbour 132kV Complex	2008	Augmentation	0.7	0.0	0.0	0.0	0.0	0.7				
9144 C	Kempsey-Nambucca-Coffs Harbour 132kV Complex	2008	Easements	2.8	0.3	0.2	0.0	0.0	3.4	Network approach limit of capacity	Yes		Completed project c/f fr last Reg Period. Outstanding
9246 C	Koolkhan 132kV Sub 3rd Transformer	2010	Augmentation	0.0	0.0	0.0	0.0	1.8	1.8				
9239 C	Koolkhan 132kV Sub 3rd Transformer	2007	Easements	0.0	0.3	-0.2	0.0	0.0	0.0	Asset approach limit of capacity	Yes		Project still in progress at the end of 04-09 reg period
9240 C	Liverpool 330/132kV SS - No.3 Transformer & Bays	2007	Augmentation	4.0	0.1	0.0	0.0	0.0	4.0	Asset approach limit of capacity	Yes	4.2	No material variance
9120 C	Macarthur 330/132kV Substation Establishment	2009	Augmentation	0.0	0.1	1.1	11.1	34.1	46.4				
9121 C	Macarthur 330/132kV Substation Establishment	2009	Easements	0.0	0.1	4.9	0.1	0.0	5.1	Customer request	Yes	48.8	No material variance
9123 C	Manildra - Parkes 132kV Trans Line	2011	Augmentation	0.0	0.1	0.0	0.2	1.5	1.8				
9124 C	Manildra - Parkes 132kV Trans Line	2011	Easements	0.0	0.0	0.0	0.2	0.2	0.4	Network approach limit of capacity	Yes		Project still in progress at the end of 04-09 reg period
9249 C	Marulan 330kV/132kV Substn - 2nd Transformer	2009	Replacement	0.0	0.0	0.2	0.8	0.4	1.4	Provision of backup Transformer	Yes	2.5	Revision of Scope
9135 C	Mummorah & Vales Pt 330kV Line Upgrade	2010	Augmentation	0.0	0.0	0.1	0.8	1.2	2.0	Equip'n upgrade to meet NEMMCO std	Yes	0.0	Project still in progress at the end of 04-09 reg period
9041 C	Muswellbrook No1 132kV Cap Bank De-tuning	2009	Augmentation	0.0	0.0	0.1	0.1	1.2	1.4	Address harmonic amplification limitators	Yes	1.2	No material variance
9243 C	Newcastle 330kV Repl'n of No1 Transformer & Spare Trans	2006	Replacement	1.6	4.7	0.0	0.0	0.0	6.3	Asset replacement for end of life condition	Yes	7.5	Input cost reduction
9139 C	Orange 132kV Substation Augmentation	2010	Augmentation	0.0	0.0	0.1	1.4	8.0	9.6	Asset replace'n for end of life condition	Yes	8.6	No material variance
6394 A,B	Orange North 132kV Establishment	2012	Augmentation	0.0	0.0	0.0	0.0	0.0	0.0				
6394 P	Orange North 132kV Establishment	2012	Easements	0.0	0.0	0.0	0.0	0.1	0.1	Network approach limit of capacity	Yes		Project still in progress at the end of 04-09 reg period
9247 C	Parkes 132kV Sub - Transformer Addition	2008	Augmentation	0.0	0.0	0.1	3.8	0.5	4.5	Asset approach limit of capacity	Yes	3.3	Slight input cost increase & scope change

Project ID	Project Name	Commissioning Date	Category ^A	2004/05	2005/06	2006/07	2007/08	2008/09	Reason for Project	Reg Test / Business Case (Y/N)	Reg Test / Business Case Cost Estimate (Nominal)	Reason for Variance from Cost Estimate
9193 C	Port Macq -Kempsey-Taree 33 kV Switchbay	2008	Augmentation	0.5	0.2	0.0	0.2	0.0	Network approach limit of capacity	Yes	1.1	No material variance
5995 F	Potts Hill 330kV Sub Establishment	> 2014	Augmentation	0.0	0.0	0.0	0.0	0.0				
5995 Ff	Potts Hill 330kV Sub Establishment	> 2014	Easements	0.0	0.0	0.0	11.0	0.0	Securing ease'n for future infrastructure assets	Yes	12.0	No material variance
9145 C	Property-- Darlington Pt-Buronga Line	2008	Easements	0.2	0.7	0.6	0.2	0.0	Easement for line augmentation project	Yes	6.2	Change of scope
9146 C	Property-- Ivanhoe Coal	2009	Easements	0.0	0.0	0.0	0.0	0.1	Potential need to formulaise ease'n rights	Yes	6.0	Project on hold
9147 C	Property-- Koolkhan-Coffs Harbour 132kV Line	2008	Easements	0.0	0.1	0.6	0.6	0.0	Easement for line augmentation project	Yes	0.8	Input price increase
9149 C	Property-- Marulan SS Outstanding Land Acq	2008	Easements	0.0	0.0	0.0	0.0	0.0	Easement for substation project	Yes	0.1	Input price increase
9156 C	Property-- Misc Statewide NPWS Easements	2008	Easements	0.0	0.1	12.0	-1.0	0.0	Securing ease'n for future infrastructure assets	Yes	12.2	No material variance
9158 C	Property-- Misc Sydney Catchment Authority Easements	2008	Easements	0.0	0.2	1.4	0.0	0.0	Securing ease'n for future infrastructure assets	Yes	4.5	Change of scope
9293 C	Property-- Other easement	0	Easements	1.5	2.6	2.8	2.6	6.2	Securing ease'n for future infrastructure assets	Yes	15.1	No material variance
9154 C	Property-- State Forests Easements	2008	Easements	0.1	0.1	3.3	0.0	0.0	Securing ease'n for future infrastructure assets	Yes	1.4	Change of scope
9153 C	Property-- Substation Site Rights Acquisition	2007	Easements	0.0	0.0	0.4	0.0	0.0	Securing ease'n for future infrastructure assets	Yes	0.3	Change of scope
9166 C	Property-- Wagga-Yass Substation	2006	Easements	0.3	0.1	0.0	0.0	0.0	Asset approaching limit of capacity	Yes		Completed project c/f fr last Reg Period
9170 C	Protection & Metering	2009	Augmentation	0.0	0.0	0.0	0.2	0.2	Equip'n upgrade to meet NEMMCO std	No		Project not known during budget
9171 C	Pt Macquarie 132kV Transformer	2008	Replacement	0.1	3.5	1.6	2.9	0.0	asset replacement of end-of-life condition	Yes	8.3	No material variance
9172 C	Queanbeyan 132kV Substation	2010	Replacement	0.0	0.0	0.1	0.4	2.5	asset replacement of end-of-life condition	Yes		Project still in progress at the end of 04-09 reg period
6235 0	Real time line rating systems	2010	Augmentation	0.0	0.0	0.0	0.0	3.8	Reliability control equipment	Yes		Project still in progress at the end of 04-09 reg period
9086 C	Richmond Vale 500kV Substation Establishment	> 2014	Easements	0.0	0.0	0.0	0.7	0.0	Securing ease'n for future infrastructure assets	Yes	0.7	No material variance
9048 C	SCADA Replacement & Augmentation	2010	Augmentation	0.9	0.5	0.3	0.6	3.8	SCADA installation for NER Std	Yes	5.4	Change of scope
9175 C	Series Reactor at Wagga	2008	Augmentation	0.0	0.0	0.0	1.0	0.0	Asset approaching limit of capacity	Yes	1.0	No material variance
9178 C	Snowy Assets Rehabilitation - 64/65/66 Line	2008	Augmentation	0.1	0.1	2.8	1.1	0.0	Rehabilitation to maintain rating	Yes	10.0	Alternate design method allowed projects to be
9179 C	Snowy Assets Rehabilitation -Murray Substation	2010	Augmentation	0.0	0.0	0.0	0.8	5.2	End of life asset upgrade	Yes		Project still in progress at the end of 04-09 reg period
9180 C	Snowy Assets Rehabilitation -Upper Tumut Substation	2011	Replacement	0.0	0.0	0.0	0.1	7.1	End of life asset upgrade	Yes		Project still in progress at the end of 04-09 reg period
9198 C	Sydney North 132 kV Switchbays for Galston	2009	Augmentation	0.0	0.0	0.0	0.2	1.5	Customer request	Yes	1.3	No material variance
9238 C	Sydney Nth & East Capacitor Banks	2011	Augmentation	0.0	0.0	0.1	3.4	7.7	Metropolitan Area voltage support	Yes	16.0	Input cost reduction
9202 C	Sydney Nth 132kV Substation Fault Level	2009	Augmentation	0.0	0.0	0.1	0.1	1.5	Maintain ongoing reliability of the network	Yes	4.6	Change of scope
5950 A	Sydney Nth 330kV Sub No.5 Transformer	2010	Augmentation	0.0	0.0	0.0	0.0	0.8	Network reinforcement for load growth	Yes		Project still in progress at the end of 04-09 reg period
9026 C	Sydney South 330 kV Reactive Plant	2005	Augmentation	1.0	0.0	0.0	0.0	0.0	Asset approaching limit of capacity	Yes		Completed project c/f fr last Reg Period
9216 C	Sydney South 330kV No1&2 Transformer	2010	Augmentation	0.0	0.0	0.6	7.8	0.0	Asset approach limit of capacity	Yes		Project still in progress at the end of 04-09 reg period
9217 C	Sydney South 330kV No3&4 Transformer	2010	Augmentation	0.0	0.0	0.0	7.7	0.2	Asset approach limit of capacity	Yes		Project still in progress at the end of 04-09 reg period
9025 C	Sydney South 330kV Substation -No.5 & 6 Transformer Rep	2005	Augmentation	0.7	0.0	0.0	0.0	0.0	Asset approaching limit of capacity	Yes		Completed project c/f fr last Reg Period
9213 C	Sydney West 330kV Capacitor Bank	2006	Augmentation	0.2	2.7	0.0	0.0	0.0	Metropolitan Area voltage support	Yes	3.0	No material variance
9214 C	Sydney West 330kV SVC	2005	Augmentation	3.1	0.1	0.0	0.0	0.0	Asset end of life upgrade	Yes	3.4	No material variance
9222 C	Sydney West 330kV Transformers Replacement	2008	Replacement	0.2	6.8	13.9	6.1	0.0	Asset Replacement for end-of-life condition	Yes	34.0	Input cost reduction
9223 C	Sydney West Equip't Fault Level Upgrade	2009	Augmentation	0.0	0.0	0.2	2.3	1.0	Asset approach limit of capacity	Yes	2.9	No material variance
9197 C	Sydney West to WWP Sub 93M Feeder Prot Upgrade	2009	Augmentation	0.0	0.0	0.0	0.1	0.2	Customer request	Yes	0.3	No material variance
9225 C	Tamworth 330kV Reactors	2009	Replacement	0.0	0.1	0.2	6.4	0.1	Asset Replacement for end-of-life condition	Yes	6.2	No material variance
9226 C	Tamworth-Armidale 86 330kV Line Upgrade	2009	Augmentation	0.0	0.0	0.1	0.1	5.6	Market benefit	Yes	2.5	Revision of Scope
9227 C	Tamworth-Gunnedah 875 132kVLine	2010	Augmentation	0.0	0.0	0.1	0.3	3.0				
9228 C	Tamworth-Gunnedah 875 132kVLine	2010	Easements	0.0	0.0	0.0	0.0	0.0	Network approach limit of capacity	Yes		Project still in progress at the end of 04-09 reg period
9206 C	Taree Control Room	2010	Replacement	0.0	0.0	0.0	0.1	3.2	Improve facility to meet NER System Std	Yes		Project still in progress at the end of 04-09 reg period
9230 C	Tomago 330kV Transformer	2010	Augmentation	0.0	0.0	0.2	2.8	12.6				
9297 C	Tomago 330kV Transformer	2010	Easements	0.0	0.0	0.0	0.0	7.8	Asset approaching limit of capacity & customer re	Yes		Project still in progress at the end of 04-09 reg period
9234 C	Tuggerah 330kV 2nd Transformer & line switchbay	2007	Augmentation	0.0	0.0	0.0	0.0	0.0	Customer request	Yes	17.0	No material variance
9235 C	Tuggerah 330kV 2nd Transformer & line switchbay	2009	Augmentation	0.0	0.0	1.5	10.4	5.6	Asset replacement of end of life condition	Yes	6.2	No material variance
9252 C	Vales Point 330kV Sub Transformer	2008	Security/Compliance	0.0	0.4	3.4	2.1	0.0	Customer request	Yes	0.3	No material variance
9200 C	Vales Point 330kV Switchyard - Connection of EA's Substat	2008	Augmentation	0.0	0.0	0.0	0.5	0.0	Network approach limit of capacity	Yes	6.3	No material variance
9255 C	Vales Point- Turn in Line 24 to Eraring	2008	Augmentation	0.0	0.0	0.4	4.9	0.7	Network approach limit of capacity	Yes	6.0	No material variance
9253 C	Vales Pt 330kV Capacitor Banks	2007	Augmentation	0.2	5.3	0.0	0.0	0.0	Network approach limit of capacity	Yes	5.5	No material variance
6316 B	Vineyard 132kV No.3 Transformer (375MVA)	2010	Augmentation	0.0	0.0	0.0	0.1	1.2				
9254 C	Vineyard 330kV Line Switchbays	2008	Augmentation	0.0	0.0	0.2	0.8	0.0	Customer request	Yes	1.4	Input cost reduction
9251 C	Vineyard 330kV Sub - Replace Transformer	2006	Augmentation	7.7	1.0	0.0	0.0	0.0	Asset approach limit of capacity	Yes	9.0	No material variance
9256 C	Wagga 330kV Sub Transformer	2010	Security/Compliance	0.0	0.0	0.0	2.0	11.7	PCB contminated	Yes		Project still in progress at the end of 04-09 reg period
9257 C	Wagga North 132kV Substation	2010	Augmentation	0.0	0.0	0.3	4.7	15.9	Network approach limit of capacity	Yes		Project still in progress at the end of 04-09 reg period
5625 F	Wallerawang 330kV Sub Transformer Replacement	2010	Augmentation	0.0	0.0	0.0	0.9	0.0	Asset replace'n for end of life condition	Yes		Project still in progress at the end of 04-09 reg period
5625 A	Wallerawang 330kV Sub Transformer Replacement	2010	Replacement	0.0	0.0	0.0	0.0	1.5	Asset replace'n for end of life condition	Yes		Project still in progress at the end of 04-09 reg period
6183 E	Wallerawang-Orange 132kV line 944 rebuild	2013	Augmentation	0.0	0.0	0.0	0.0	0.1	End of life asset upgrade	Yes		Project still in progress at the end of 04-09 reg period
6001 1	Waratah West 330kV 2nd Transformer & 95N Conversion	2011	Augmentation	0.0	0.0	0.0	0.0	0.1	Network reinforcement for load growth	Yes		Project still in progress at the end of 04-09 reg period
9261 C	Waratah West 330kV Substation	2005	Augmentation	5.7	0.0	0.0	0.0	0.0	Asset approach limit of capacity	Yes		Completed project c/f fr last Reg Period
9263 C	Wellington 330kV SS Transformers	2007	Augmentation	0.2	7.2	5.3	0.0	0.1				
9262 C	Wellington 330kV SS Transformers	2007	Replacement	0.0	0.0	0.0	0.3	0.0				
9283 C	Western 500kV Development	2010	Augmentation	1.0	1.2	11.3	66.7	159.7	Asset approach limit of capacity	Yes	18.0	Reduced project scope
9270 C	Western 500kV Development	2010	Easements	0.0	0.1	1.5	0.0	0.0	Network approach limit of capacity	Yes		Project still in progress at the end of 04-09 reg period
9279 C	Williamsdale 330/132kV SS	2007	Augmentation	0.0	0.2	0.9	0.2	0.0				
9276 C	Williamsdale 330/132kV SS	2010	Easements	0.0	0.0	0.0	0.2	0.0	To meet ACT jurisdiction std	Yes		Project still in progress at the end of 04-09 reg period
9286 C	Wollar-Wellington 300kV development	2010	Augmentation	1.3	1.0	0.6	24.5	47.6				
9287 C	Wollar-Wellington 300kV development	2010	Easements	1.9	2.0	4.9	4.9	1.9	Network approach limit of capacity	Yes		Project still in progress at the end of 04-09 reg period
9291 C	Yass 330kV Substation	2006	Replacement	15.2	7.8	0.6	0.0	0.0	Asset approach limit of capacity	Yes		Completed project c/f fr last Reg Period
9296 C	Yass-Wagga 132kV (990) Reconstruction	2009	Easements	0.0	0.0	0.0	0.4	0.2				
9295 C	Yass-Wagga 132kV (990) Reconstruction	2009	Replacement	0.0	0.0	-0.3	3.7	21.0	Asset replace'n for end of life condition	Yes	20.2	Input cost increase

^Arefers to the categories used in table 4.1 (eg Information Technology, Motor Vehicles etc)

3.4 HISTORIC CAPEX - Network Programs & Non-Network

(\$m, Nominal for 2004-08 then 2008 dollars)

Commissioning

Project ID	AER Project Name	Date	Category [^]
8181	C Buildings & Facilities	Ongoing	Facilities
8018	C Communication & Control Replacement	Ongoing	Replacement
8016	C Communication & Control Replacement	Ongoing	Security/Compliance
8177	C Information Technology	Ongoing	Information Technology
8178	C Misc Assets & Office Equipment	Ongoing	Other
8179	C Motor Vehicles	Ongoing	Motor Vehicles
8058	F Protection & Metering	Ongoing	Replacement
8019	C Protection & Metering	Ongoing	Security/Compliance
8090	C Substation - Circuit Breaker	Ongoing	Replacement
8136	F Substation - Civil Work	Ongoing	Replacement
8092	C Substation - Instrument transformers	Ongoing	Security/Compliance
8133	C Substation - Plant & Equipment	Ongoing	Replacement
8137	C Substation - Security Fences	Ongoing	Replacement
8143	F Substation - Security Systems	Ongoing	Security/Compliance
8169	F Transformer Replacement & Additions	Ongoing	Replacement
8162	C Transmission Lines - minor upgrade	Ongoing	Replacement
8160	C Transmission Lines - minor upgrade	Ongoing	Security/Compliance
8164	F Transmission Lines - Wood Poles	Ongoing	Replacement

Year 1	Year 2	Year 3	Year 4	Year 5	TOTAL
2004/05	2005/06	2006/07	2007/08	2008/09	
1.4	1.0	10.3	6.7	12.7	32.1
2.4	2.8	2.4	3.2	1.6	12.5
0.1	0.1	0.0	0.1	0.0	0.4
10.6	14.0	9.8	16.4	14.3	65.0
3.2	0.8	1.6	4.2	1.6	11.5
5.8	2.6	7.1	5.9	1.7	23.2
0.5	1.4	2.1	2.3	1.4	7.7
0.1	0.4	0.4	0.2	0.0	1.1
5.3	5.2	2.5	2.2	0.7	15.9
0.4	0.5	0.4	0.5	1.3	3.3
4.0	7.9	8.0	5.0	5.1	29.9
4.3	3.3	3.7	1.3	3.2	15.8
4.9	5.7	7.2	13.1	11.9	42.9
0.5	1.3	2.6	3.6	6.4	14.4
6.4	1.1	5.1	2.3	3.3	18.1
2.4	1.4	0.7	1.1	2.1	7.6
0.0	0.2	0.0	0.0	0.0	0.2
2.1	6.7	2.6	9.1	4.8	25.3

[^]refers to the categories used in table 4.1 (eg Information Technology, Motor Vehicles etc)

REASON FOR PROJECT	Business Case (Y/N)	Reg Test / Business Case Cost Estimate (Nominal)	Reason for Variance from Cost Estimate
Poor asset condition	Yes	20.4	Input price Increase
Asset replace'n for end of life condition	Yes	9.8	Input price Increase
NEM Compliance	Yes	0.0	
End of life asset/ system upgrade	Yes	59.9	No material variance
Poor asset condition	Yes	7.7	Extra items being purchased
Business Operation need	Yes	16.7	Fall in disposal returns & scope change
Asset replace'n for end of life condition	Yes	6.4	Scope change
NEM Compliance	Yes	0.4	Scope change
Asset replace'n for end of life condition	Yes	11.3	Scope change
Poor asset condition	Yes	1.9	Scope change
Environmental Compliance	Yes	1.8	Input price Increase
Asset replace'n for end of life condition	Yes	13.4	Scope change
NEM Compliance	Yes	39.1	Scope change
NEM Compliance	Yes	10.9	Scope change
Asset replace'n for end of life condition	Yes	14.8	Input price Increase
Maintain ongoing reliability of the network	Yes	6.3	Scope change
NEM Compliance	Yes	0.2	No material variance
Asset replace'n for end of life condition	Yes	13.6	Input price Increase

4.1 FORECAST CAPEX by project category

(\$m, real 2008 dollars)

Project Category		Year 6	Year 7	Year 8	Year 9	Year 10	TOTAL
		2009/10	2010/11	2011/12	2012/13	2013/14	
NETWORK							
LOAD DRIVEN	Augmentation	305.5	244.1	402.4	373.5	224.5	1550.1
	Easements	63.4	90.7	39.6	26.3	65.2	285.1
	Connections	0.0	0.0	0.0	0.0	0.0	0.0
NON-LOAD DRIVEN	Replacement	111.4	77.5	102.6	111.6	80.7	483.8
	Security/Compliance	11.9	9.9	13.2	5.6	1.1	41.7
NON NETWORK							
BUSINESS IT	Information Technology	17.6	22.7	20.3	13.1	21.2	95.0
SUPPORT THE BUSINESS	Facilities	9.9	4.7	0.0	0.0	0.0	14.5
	Motor Vehicles	9.2	9.2	5.9	4.5	9.8	38.7
	Other	1.4	1.3	1.2	1.3	1.4	6.6
TOTAL FORECAST CAPEX		530.2	460.1	585.3	536.0	403.9	2515.5

4.3 FORECAST CAPEX - NETWORK - by project

\$ real (2008 dollars)

Project ID	Project Name	Commissioning Date	Category^	Year 6	Year 7	Year 8	Year 9	Year 10	TOTAL	REASON FOR PROJECT	Reg Test / Business Case (Y/N)
				2009/10	2010/11	2011/12	2012/13	2013/14			
6380 G	Albury-Mulwala Lines-Trip Scheme	2010	Augmentation	0.6	0.0	0.0	0.0	0.0	0.6	Customer request	Yes
6242 1	Armidale 330kV SVC Control Replacement	2015	Replacement	0.0	0.0	0.0	0.0	0.9	0.9	Reliability, manufacturer support withdrawn	Yes
5990 1	Armidale-Coffs Harbour 96C 132kV Line upgrade	2011	Augmentation	7.9	5.1	0.0	0.0	0.0	12.9	Customer request	Yes
6275 A2	Bamarang 330kV establishment	2014	Augmentation	0.0	0.2	2.6	14.9	26.8	44.5	Asset approaching limit of capacity	Yes
6275 P	Bamarang 330kV establishment	2014	Easements	0.0	0.4	0.3	1.6	0.0	2.3	Asset approaching limit of capacity	Yes
5567 2	Bannaby-South Creek 500kV Lines & Sub	2015	Augmentation	0.1	1.5	4.0	28.7	177.6	211.9	Network support for load growth	Yes
5567 P	Bannaby-South Creek 500kV Lines & Sub	2014	Easements	3.8	26.0	26.6	13.7	0.0	70.1	Network support for load growth	Yes
6378 0	Beaconsfield West 132kV GIS Replacement	2013	Replacement	2.9	8.3	11.4	28.5	0.0	51.1	Asset approaching limit of capacity	Yes
6096 A	Beaconsfield West 132kV Capacitor Bank	2011	Augmentation	0.6	6.1	0.0	0.0	0.0	6.7	Network approaching limit of capacity	Yes
5818 1	Beaconsfield West 330kV 3rd Transformer	2011	Augmentation	1.3	11.7	0.0	0.0	0.0	13.0	Network approaching limit of capacity	Yes
6263 0	Beaconsfield West 330kV Substation Busbar	2017	Augmentation	0.0	0.0	0.0	0.0	0.1	0.1	Asset approaching limit of capacity	Yes
6263 P	Beaconsfield West 330kV Substation Busbar	2017	Easements	0.0	0.0	0.0	0.0	35.6	35.6	Asset approaching limit of capacity	Yes
6157 A	Beryl 132kV Sub2 x 66kV bays	2014	Augmentation	0.0	0.0	0.0	0.0	0.9	0.9	Customer request	Yes
6460 1	Broken Hill SVC Upgrade	2012	Replacement	0.2	1.0	9.3	0.0	0.0	10.4	Poor asset condition	Yes
6167 P	Burrinjuck 132kV Substation rebuild	2015	Easements	0.0	0.0	0.0	0.3	0.0	0.3	Asset approaching limit of capacity	Yes
6167 A	Burrinjuck 132kV Substation rebuild	2015	Replacement	0.0	0.0	0.0	0.3	4.1	4.4	Asset replace'n for end of life condition	Yes
9032 C	Cable 41 Reactor Replacement	2011	Replacement	6.1	0.0	0.0	0.0	0.0	6.1	Asset replace'n for end of life condition	Yes
6381 6152C	Canberra 132kV Cap Banks (new, 4th bank)	2010	Augmentation	2.7	0.0	0.0	0.0	0.0	2.7	Voltage Support	Yes
6152 A	Canberra 132kV Capacitor Bank No.1	2013	Augmentation	0.0	0.0	0.3	2.7	0.0	3.0	Voltage Support	Yes
9204 C	Canberra 132kV Tunnel Board Replacement	2010	Replacement	0.0	0.0	0.0	0.0	0.0	0.0	Asset replace'n for end of life condition	Yes
6383 6152E	Canberra 330kV Cap Banks 200MVA	2010	Augmentation	4.2	0.0	0.0	0.0	0.0	4.2	Voltage Support	Yes
5620 A	Canberra 330kV Sub No.2 Transformer	2014	Replacement	0.0	0.0	0.0	0.6	7.4	8.0	Asset replace'n for end of life condition	Yes
6025 1	Canberra 330kV Tunnel Board Replacement	2013	Replacement	0.0	0.1	1.1	2.3	0.0	3.5	Asset replace'n for end of life condition	Yes
5995 1	Chullora 330kV Sub Establishment	2013	Augmentation	0.0	6.0	11.6	41.8	0.0	59.4	Network approaching limit of capacity	Yes
5995 P	Chullora 330kV Sub Establishment	2013	Easements	7.3	0.0	0.0	0.0	0.0	7.3	Network approaching limit of capacity	Yes
9045 C	Coffs Harbour 132kV Transformers	2010	Augmentation	6.2	0.0	0.0	0.0	0.0	6.2	Capacity to meet NER System	Yes
5999 1	Coffs Harbour 330kV Sub 2nd Transformer	2013	Augmentation	0.0	0.0	1.0	9.8	0.0	10.9	Customer request	Yes
6193 A	Coffs Harbour 66kV Cap Bank No.3 Replacement	2012	Replacement	0.0	0.1	1.1	0.0	0.0	1.2	Asset replace'n for end of life condition	Yes
9127 C	Coffs Harbour -Kempsey 132kV Conversion	2010	Augmentation	13.0	0.0	0.0	0.0	0.0	13.0	Network approaching limit of capacity	Yes
5601 0	Communication - Albury, ANM, Hume	2011	Augmentation	0.1	3.3	0.0	0.0	0.0	3.4	Communication upgrade to meet NEM	Yes
6244 1	Communication - FSX/FLX multiplex network	2013	Replacement	0.0	0.0	1.5	7.6	0.0	9.2	End of life asset upgrade	Yes
5603 0	Communication - New England Microwave radio	2013	Augmentation	0.0	0.0	0.6	9.3	0.0	9.9	Communication upgrade to meet NEM	Yes
5603 P	Communication - New England Microwave radio	2013	Easements	0.0	0.2	0.0	0.0	0.0	0.2	Communication upgrade to meet NEM	Yes
6243 0	Communication - North Coast Microwave Replacement	2011	Replacement	1.3	6.6	0.0	0.0	0.0	7.9	End of life asset upgrade	Yes
6245 1	Communication - PNx phone network Replacement	2012	Replacement	0.0	0.1	1.9	0.0	0.0	2.0	Asset replace'n for end of life condition	Yes
5830 0	Communication - South NSW Microwave Radio	2011	Augmentation	0.1	2.7	0.0	0.0	0.0	2.8	Communication upgrade to meet NEM	Yes
5607 B	Communication - SW NSW Microwave & Satellite	2011	Augmentation	0.2	4.6	0.0	0.0	0.0	4.8	Communication upgrade to meet NEM	Yes
6154 0	Communication- Beryl SCADA Microwave Radio	2012	Augmentation	0.0	0.6	2.8	0.0	0.0	3.4	Communication upgrade to meet NEM	Yes
9055 C	Communication Network Upgrade (various)	2010	Augmentation	30.5	0.0	0.0	0.0	0.0	30.5	Communication to meet NEMMCO Std	Yes
6256 1	Communication:Spur microwave system Replacement	2014	Replacement	0.0	0.0	0.0	0.1	1.7	1.8	Manufacturer support withdrawn	Yes
9080 C	Communications-- Voice Over Internet Protocol	2010	Augmentation	1.7	0.0	0.0	0.0	0.0	1.7	Communication to meet NEMMCO Std	Yes
5131 A	Cooma 132kV bay	2011	Augmentation	0.1	1.6	0.0	0.0	0.0	1.7	Customer request	Yes
6194 P	Cooma 132kV Sub replacement and new bay	2014	Easements	0.0	0.1	0.5	0.0	0.0	0.6	Asset approaching limit of capacity	Yes
6194 B	Cooma 132kV Sub replacement and new bay	2014	Replacement	0.0	0.0	0.9	9.0	30.1	40.0	Poor asset condition	Yes
5616 A	Cowra 132kV Sub Transformers	2010	Augmentation	7.1	0.0	0.0	0.0	0.0	7.1	Network approach limit of capacity	Yes
9090 C	Dapto Line Switchbay & Fault Level	2010	Augmentation	0.9	0.0	0.0	0.0	0.0	0.9	End of life asset upgrade	Yes
6021 1	Dapto- Syd Sth 330kV line rehabilitation	2012	Replacement	3.9	3.9	4.6	0.0	0.0	12.4	Poor asset condition	Yes
9094 C	Dumaresq-Lismore 330kV Line	2012	Augmentation	4.7	67.8	67.8	0.0	0.0	140.2	Network approaching limit of capacity	Yes
9095 C	Dumaresq-Lismore 330kV Line	2012	Easements	17.0	5.0	0.0	0.0	0.0	22.0	Network approaching limit of capacity	Yes
6108 0	Eraring & Kemps Creek 550kV Sub Transformer	2013	Augmentation	0.0	0.0	0.1	1.0	0.0	1.1	Network approaching limit of capacity	Yes
9098 C	Glen Innes - Inverell 132kV Line	2010	Augmentation	9.7	0.0	0.0	0.0	0.0	9.7	Asset approaching limit of capacity	Yes
6175 B	Griffith 132kV Sub 3 x 60MVA Replacement	2013	Replacement	0.0	0.0	0.8	5.8	0.0	6.6	Asset replace'n for end of life condition	Yes
6147 A	Griffith 33kV Capacitors Bank No.1&2	2010	Security/Compliance	1.6	0.0	0.0	0.0	0.0	1.6	PCB contaminated	Yes
6115 P	Hawkesbury 500kV Substation site acquisition	2012	Easements	1.0	0.0	0.0	0.0	0.0	1.0	Procurement for future reliability development	Yes
5992 A	Hawks Nest 132kV Substation	2011	Augmentation	1.0	6.6	0.0	0.0	0.0	7.7	Customer request	Yes
5992 P	Hawks Nest 132kV Substation	2011	Easements	0.5	0.1	0.0	0.0	0.0	0.6	Customer request	Yes

Project ID	Project Name	Commissioning Date	Category^	2009/10	2010/11	2011/12	2012/13	2013/14	Reg Test / Business Case (Y/N)		
9191 C	Haymarket Sub EA 132kV cables	2010	Augmentation	0.2	0.0	0.0	0.0	0.0	0.2	Customer request	Yes
5588 A	Hérons Creek 132kV Substation	2012	Augmentation	0.0	1.3	6.9	0.0	0.0	8.3		
5588 P	Hérons Creek 132kV Substation	2012	Easements	0.0	0.4	0.1	0.0	0.0	0.5	Network approaching limit of capacity	Yes
4213 1	Holroyd 330kV Substation	2013	Augmentation	0.6	9.9	22.1	75.4	0.0	108.0		
4213 P	Holroyd 330kV Substation	2012	Easements	1.5	0.0	0.0	0.0	0.0	1.5	Network approaching limit of capacity	Yes
4188 1	Holroyd- Sydney West 330kV line	2013	Augmentation	0.1	0.3	1.6	7.8	0.0	9.7		
4188 P	Holroyd- Sydney West 330kV line	2012	Easements	9.7	50.0	0.0	0.0	0.0	59.7	Network approaching limit of capacity	Yes
6204 1	Holroyd-Chullora 330kV Cable	2013	Augmentation	0.0	23.3	187.8	33.4	0.0	244.5		
6204 P	Holroyd-Chullora 330kV Cable	2013	Easements	12.5	8.6	0.0	0.0	0.0	21.1	End of life asset upgrade	Yes
5568 P	Hunter Valley - Central Coast 500kV Lines	2014	Easements	0.0	0.0	0.2	1.9	1.0	3.2	Network reinforcement for load growth	Yes
3978 L	Kemps Creek- Liverpool 330kV Lines	2013	Augmentation	0.1	0.8	4.1	17.3	0.0	22.2		
3978 P	Kemps Creek- Liverpool 330kV Lines	2013	Easements	0.4	5.1	8.7	0.0	0.0	14.2	Network approaching limit of capacity	Yes
6213 0	Kemps-Creek SVC controls Replacement	2011	Replacement	1.4	14.8	0.0	0.0	0.0	16.2	Poor asset condition & end of life asse	Yes
6415 A	Kempsey 66kV 2 x 25MVA Transformer	2012	Replacement	0.0	0.4	5.6	0.0	0.0	6.0	Asset replace'n for end of life condition	Yes
9129 C	Kempsey -Pt Macquarie 132kV Line	2011	Augmentation	10.8	3.9	0.0	0.0	0.0	14.7	Network approaching limit of capacity	Yes
9246 C	Koolkhan 132kV Sub 3rd Transformer	2010	Augmentation	3.5	0.0	0.0	0.0	0.0	3.5	Asset approaching limit of capacity	Yes
6102 1	Liddell 330kV Sub No.84 line connection	2010	Augmentation	1.9	0.0	0.0	0.0	0.0	1.9	Connection point reliability upgrade	Yes
6431 A	Lismore 132kV Substation line bay	2012	Augmentation	0.0	0.1	1.3	0.0	0.0	1.5	Customer request	Yes
9123 C	Manildra - Parkes 132kV Line	2011	Augmentation	14.6	6.8	0.0	0.0	0.0	21.4	Network approaching limit of capacity	Yes
6176 B	Molong 132kV Sub 60MVA Replacement	2012	Replacement	0.0	0.3	1.8	0.0	0.0	2.1	Asset replace'n for end of life condition	Yes
9135 C	Munmorah & Vales Pt 330kV Upgrade	2010	Augmentation	0.6	0.0	0.0	0.0	0.0	0.6	Equip'n upgrade to meet NEMMCO St	Yes
6272 A	Munmorah 132kV Sub new busbar	2012	Augmentation	0.0	1.1	8.6	0.0	0.0	9.7		
6272 P	Munmorah 132kV Sub new busbar	2012	Easements	0.7	0.0	0.0	0.0	0.0	0.7	Customer request	Yes
5998 A	Munyang 132kV Sub Transformer Replacement	2012	Replacement	0.1	1.2	9.3	0.0	0.0	10.6	Asset replace'n for end of life condition	Yes
6294 B	Murray 330kV Transformer Replacement	2015	Augmentation	0.0	0.0	0.0	0.1	1.6	1.6		
6294 P	Murray 330kV Transformer Replacement	2015	Easements	0.0	0.0	0.0	0.0	0.0	0.0	Asset approaching limit of capacity	Yes
6293 P	Murray-Guthega 132kV Lines upgrade	2012	Easements	0.0	0.1	0.0	0.0	0.0	0.1		
6293 A	Murray-Guthega 132kV Lines upgrade	2012	Security/Compliance	1.5	5.4	6.6	0.0	0.0	13.5	Poor asset condition	Yes
5738 A	Nabiac 132kV Sub Establishment	2011	Augmentation	1.9	5.0	0.0	0.0	0.0	6.9		
5738 P	Nabiac 132kV Sub Establishment	2011	Easements	0.7	0.1	0.0	0.0	0.0	0.9	Customer request	Yes
6177 A	Narrabri 132kV Sub Transformer No1 & 3	2011	Augmentation	0.2	2.6	0.0	0.0	0.0	2.8	Asset replace'n for end of life condition	Yes
6274 A	Newcastle 330kV Sub 132kV bay	2011	Augmentation	0.2	0.9	0.0	0.0	0.0	1.1	Customer request	Yes
6106 1	Newcastle 330kV Sub bus coupling	2010	Augmentation	1.2	0.0	0.0	0.0	0.0	1.2	Transmission code reliability augmenta	Yes
5622 B	Newcastle 330kV Sub Transformer Replacement	2013	Replacement	0.0	0.0	1.3	7.1	0.0	8.4	Asset replace'n for end of life condition	Yes
9139 C	Orange 132kV Sub Augmentation	2010	Augmentation	1.0	0.0	0.0	0.0	0.0	1.0	Asset replace'n for end of life condition	Yes
6394 A,B	Orange North 132kV Sub Establishment	2012	Augmentation	0.9	8.4	26.4	0.0	0.0	35.7		
6394 P	Orange North 132kV Sub Establishment	2012	Easements	1.2	0.6	0.0	0.0	0.0	1.8	Network approaching limit of capacity	Yes
5886 A	Points on Wave 330kV Sub Capacitor Bank Repl	2014	Augmentation	0.2	0.3	0.2	0.2	4.8	5.6	Equipment upgrade to meet NEMMCO	Yes
5605 0	Protection & Metering- Reactive Metering	2015	Augmentation	0.0	0.0	0.0	0.0	0.7	0.7	Equipment upgrade to meet NEMMCO	Yes
6155 0	Protection & Metering- Replacement elecmech uf	2012	Security/Compliance	0.3	0.8	1.1	0.0	0.0	2.2	Equipment upgrade to meet NEMMCO	Yes
6156 A	Pt Macquarie 132kV Sub 2x33 kV bays	2011	Augmentation	0.0	0.8	0.0	0.0	0.0	0.8	Customer request	Yes
6195 A	Pt Macquarie 33kV Cap Bank No.1 Replacement	2013	Replacement	0.0	0.0	0.2	1.3	0.0	1.5	Asset replace'n for end of life condition	Yes
6117 C	Quality supply monitoring (various)	2014	Augmentation	0.4	0.8	1.1	1.2	10.6	14.2	Equipment upgrade to meet NEMMCO	Yes
9172 C	Queanbeyan 132kV Substation	2010	Replacement	22.9	0.0	0.0	0.0	0.0	22.9	Asset replace'n for end of life condition	Yes
6235 0	Real time line rating systems	2010	Augmentation	1.5	0.0	0.0	0.0	0.0	1.5	Reliability control equipment	Yes
6258 "Reactive 1"	Regentville 132kV Cap Banks 80MVar	2012	Augmentation	0.0	0.2	2.3	0.0	0.0	2.6	Network approaching limit of capacity	Yes
9048 a	SCADA Replacement & Augmentation	2012	Augmentation	2.8	7.8	7.7	2.8	0.8	21.9	SCADA installation for NER Std	Yes
6255 a	SCADA Replacement & Augmentation	2012	Replacement	0.1	0.4	0.3	0.0	0.0	0.8	SCADA installation for NER Std	Yes
9179 C	Snowy Assets Rehabilitation -Murray Switching S	2010	Augmentation	1.1	0.0	0.0	0.0	0.0	1.1	Asset replace'n for end of life condition	Yes
9180 C	Snowy Assets Rehabilitation -Upper Tumut Switc	2011	Replacement	6.5	2.2	0.0	0.0	0.0	8.6	Asset replace'n for end of life condition	Yes
5562 Lines upgrade	Snowy-Yass/ Canberra 330kV Lines upgrade	2013	Augmentation	0.0	8.5	15.4	10.0	0.0	33.9	Network approaching limit of capacity	Yes
6008 C	Stroud-Taree 132kV Lines (330kV Construction)	2016	Augmentation	0.0	0.0	0.1	1.1	4.6	5.8		
6008 P	Stroud-Taree 132kV Lines (330kV Construction)	2016	Easements	0.0	0.0	0.0	1.9	18.9	20.8	Network reinforcement for load growth	Yes
6241 "Reactive 1"	Sydney Area Cap Banks 200MVar No.1	2013	Augmentation	0.0	0.0	0.4	4.2	0.0	4.6	Network reinforcement of load growth	Yes
6384 "Reactive 1"	Sydney Area Cap Banks 200MVar No.2	2014	Augmentation	0.0	0.0	0.0	0.4	4.1	4.6	Network reinforcement of load growth	Yes
6388 "Reactive 1"	Sydney Area Cap Banks 80MVar	2014	Augmentation	0.0	0.0	0.0	0.2	2.3	2.6	Network reinforcement of load growth	Yes
5889 A	Sydney East 330kV Sub No.4 Transformer	2013	Augmentation	0.0	0.1	1.2	10.5	0.0	11.7	Asset approaching limit of capacity	Yes
5950 A	Sydney North 330kV Sub No.5 Transformer	2010	Augmentation	12.1	0.0	0.0	0.0	0.0	12.1	Network reinforcement of load growth	Yes
6200 A	Sydney Nth 132kV Cap Banks No.1&2 (120MVar)	2013	Replacement	0.0	0.0	0.5	5.0	0.0	5.5	Asset replace'n for end of life condition	Yes
6214 1	Sydney Nth 330kV Control Rm Replace'n	2015	Replacement	0.0	0.0	0.5	8.2	7.4	16.2	Asset replace'n for end of life condition	Yes
9216 C	Sydney South 330kV Transformer No.1&2	2010	Augmentation	5.0	0.0	0.0	0.0	0.0	5.0	Asset approaching limit of capacity	Yes
6103 1	Sydney Sth 330kV bus couple	2011	Augmentation	0.1	1.2	0.0	0.0	0.0	1.3	Transmission node reliability augmenta	Yes
9217 C	Sydney Sth 330kV Transformer No3&4	2010	Augmentation	8.4	0.0	0.0	0.0	0.0	8.4	Asset approaching limit of capacity	Yes
6201 "Reactive 1"	Sydney West 132kV Cap Banks No.1 Replace'n	2012	Replacement	0.0	0.3	3.2	0.0	0.0	3.5	Asset replace'n for end of life condition	Yes
6222 A	Sydney West 132kV new line bays	2013	Augmentation	0.0	0.0	0.3	1.8	0.0	2.0	Customer request	Yes
6105 1	Sydney West 330kV bus couple	2011	Augmentation	0.1	1.2	0.0	0.0	0.0	1.3	Transmission node reliability augmenta	Yes
6161 A	Tamworth 132kV Sub 2 x 66kV bays	2011	Augmentation	0.0	1.3	0.0	0.0	0.0	1.3	Customer request	Yes

Project ID	Project Name	Commissioning Date	Category [^]	2009/10	2010/11	2011/12	2012/13	2013/14	Reg Test / Business Case (Y/N)		
5890 C	Tamworth 132kV Sub Transformer Replacement	2013	Augmentation	0.0	0.0	1.0	12.7	0.0	13.7	Asset approaching limit of capacity	Yes
6098 SVC	Tamworth/ Armidale SVC	2015	Augmentation	0.0	0.0	0.0	0.8	5.0	5.8	Network reinforcement of load growth	Yes
9227 C	Tamworth-Gundah 875 132kV Line	2010	Augmentation	1.1	0.0	0.0	0.0	0.0	1.1	Network approaching limit of capacity	Yes
6432 A	Taree 33kV Sub line bay	2014	Augmentation	0.0	0.0	0.0	0.0	0.4	0.4	Customer request	Yes
9206 C	Taree Control Room	2010	Replacement	6.5	0.0	0.0	0.0	0.0	6.5	Improve facility to meet NER System	Yes
5860 B	Tarro-Stroud 132kV Lines	2013	Augmentation	0.3	0.9	3.1	29.4	0.0	33.7		
5860 P	Tarro-Stroud 132kV Lines	2013	Easements	0.1	2.1	10.6	0.0	0.0	12.7	Network approaching limit of capacity	Yes
6266 1	Tomago 330kV 3rd Transformer	2014	Augmentation	0.0	0.0	0.1	1.6	14.7	16.4	Asset approaching limit of capacity	Yes
6266 P	Tomago 330kV 3rd Transformer	2014	Easements	0.0	0.0	3.3	0.0	0.0	3.3	Asset approaching limit of capacity	Yes
9230 C	Tomago 330kV Transformer	2010	Augmentation	10.7	0.0	0.0	0.0	0.0	10.7	Asset approaching limit of capacity	Yes
6259 A	Tomago to Tarro area 330kV Lines	2013	Augmentation	0.0	0.0	0.8	11.1	0.0	11.9		
6259 P	Tomago to Tarro area 330kV Lines	2013	Easements	0.0	0.0	0.3	1.5	0.0	1.8	Network approaching limit of capacity	Yes
6304 A	Tomago-Brandy Hill tee 132kV Lines	2013	Augmentation	0.0	0.0	0.1	1.3	0.0	1.4		
6304 P	Tomago-Brandy Hill tee 132kV Lines	2013	Easements	0.0	0.0	0.4	0.1	0.0	0.5	Customer request	Yes
6113 0	Trip Scheme - System protection scheme	2012	Augmentation	0.0	0.1	0.1	0.0	0.0	0.3	Reliability control equipment	Yes
6162 A	Tumut 132kV Sub 66kV bay	2014	Augmentation	0.0	0.0	0.0	0.1	1.2	1.3	Customer request	Yes
6271 A	Vales Point 132kV Sub new busbar	2012	Augmentation	0.0	0.6	5.7	0.0	0.0	6.3		
6271 P	Vales Point 132kV Sub new busbar	2012	Easements	0.5	0.0	0.0	0.0	0.0	0.5	Customer request	Yes
6223 A	Vineyard 132kV Sub 2 new line bays	2012	Augmentation	0.0	0.3	1.8	0.0	0.0	2.1	Customer request	Yes
6316 B	Vineyard 330kV No.3 Transformer (375MVA)	2010	Augmentation	11.2	0.0	0.0	0.0	0.0	11.2	Customer request	Yes
9256 C	Wagga 330kV Transformer	2010	Security/Compliance	6.9	0.0	0.0	0.0	0.0	6.9	PCB contaminated	Yes
9257 C	Wagga North 132kV Substation	2010	Augmentation	0.7	0.0	0.0	0.0	0.0	0.7	Asset approaching limit of capacity	Yes
6379 A	Wagga Town 132kV No.2 Transformer Replacem	2012	Replacement	0.0	0.3	3.5	0.0	0.0	3.8	Asset replace'n for end of life condition	Yes
6208 P	Wallerawang 132kV Sub Switchyard rebuild	2012	Easements	0.5	0.0	0.0	0.0	0.0	0.5		
6208 A	Wallerawang 132kV Sub Switchyard rebuild	2012	Replacement	0.5	5.6	12.1	0.0	0.0	18.3	Asset replace'n for end of life condition	Yes
5625 A	Wallerawang No.1&2 Transformer	2010	Replacement	18.7	0.0	0.0	0.0	0.0	18.7	Asset replace'n for end of life condition	Yes
6183 E	Wallerawang-Orange132kV line 944 rebuild	2013	Augmentation	0.6	2.2	18.1	23.2	0.0	44.2		
6183 P	Wallerawang-Orange132kV line 944 rebuild	2013	Easements	0.2	1.8	1.2	0.0	0.0	3.2	End of life asset upgrade	Yes
6001 1	Waratah West 330kV Sub 2nd Transformer & 95t	2011	Augmentation	2.0	21.9	0.0	0.0	0.0	23.9	Network reinforcement for load growth	Yes
6197 A	Wellington 132kV Cap Bank No.2 Repl	2012	Replacement	0.0	0.5	3.8	0.0	0.0	4.3	Asset replace'n for end of life condition	Yes
6212 A	Wellington 132kV Sub new line bay	2012	Augmentation	0.0	0.2	0.8	0.0	0.0	1.0	Customer request	Yes
9263 C	Wellington 330kV Shunt Reactor	2007	Augmentation	2.9	0.0	0.0	0.0	0.0	2.9	Asset approaching limit of capacity	Yes
9266 C	Western 500kV Development	2010	Augmentation	42.8	0.0	0.0	0.0	0.0	42.8		
9268 C	Western 500kV Development	2010	Augmentation	0.2	0.0	0.0	0.0	0.0	0.2		
9271 C	Western 500kV Development	2010	Augmentation	11.0	0.0	0.0	0.0	0.0	11.0		
9272 C	Western 500kV Development	2010	Augmentation	8.4	0.0	0.0	0.0	0.0	8.4		
9280 C1	Western 500kV Development	2010	Augmentation	15.2	0.0	0.0	0.0	0.0	15.2	Network approaching limit of capacity	Yes
6174 A	Williamsdale 330kV Sub 32kV line bay	2012	Augmentation	0.0	0.2	1.6	0.0	0.0	1.9	Customer request	Yes
9275 C	Williamsdale 330kV Substation	2010	Augmentation	27.9	0.0	0.0	0.0	0.0	27.9		
9277 C	Williamsdale 330kV Substation	2010	Augmentation	3.2	0.0	0.0	0.0	0.0	3.2	To meet ACT jurisdiction std	Yes
5564 F	Williamsdale Substation Stage 2	2012	Augmentation	1.9	11.7	20.1	0.0	0.0	33.7		
5564 P	Williamsdale Substation Stage 2	2012	Easements	1.0	0.0	0.0	0.0	0.0	1.0	To meet ACT jurisdiction std	Yes
9280 C2	Wollar-Wellington 330kV development	2010	Augmentation	5.1	0.0	0.0	0.0	0.0	5.1		
9286 C	Wollar-Wellington 330kV development	2010	Augmentation	1.4	0.0	0.0	0.0	0.0	1.4	Network approaching limit of capacity	Yes
5618 A	Yanco 132kV Sub Transformer Replacement	2013	Replacement	0.0	0.0	0.6	7.0	0.0	7.6	Asset replace'n for end of life condition	Yes
6382 6152D	Yass 132kV Cap Banks (new 80MVA)	2011	Augmentation	0.2	2.1	0.0	0.0	0.0	2.3	Improve reliability of purchased assets	Yes
5619 B	Yass 132kV Sub Transformer Replacement	2013	Augmentation	0.0	0.0	0.2	2.9	0.0	3.1	Voltage support	Yes

[^]refers to the categories used in table 4.1 (eg Information Technology, Motor Vehicles etc)

4.4 FORECAST CAPEX - Network Programs & Non-Network

\$ real (2008 dollars)

Project ID	Project Name	Commissioning Date	Category^								
				Year 6	Year 7	Year 8	Year 9	Year 10	TOTAL		
				2009/10	2010/11	2011/12	2012/13	2013/14			
5161	Buildings & Facilities	Ongoing	Facilities								
4978 a	Communication & Control Replacement	Ongoing	Replacement	9.9	4.7	0.0	0.0	0.0		14.5	
IT	Information Technology	Ongoing	Information Technology	2.4	1.9	2.0	1.7	2.1		10.0	
Office	Miscellaneous Plant & office Machines	Ongoing	Other	17.6	22.7	20.3	13.1	21.2		95.0	
Fleet	Motor Vehicles	Ongoing	Motor Vehicles	1.4	1.3	1.2	1.3	1.4		6.6	
6353 a	Protection & Metering	Ongoing	Replacement	9.2	9.2	5.9	4.5	9.8		38.7	
6095 a	Substation - Capacitor Bank	Ongoing	Replacement	5.0	5.9	5.0	5.9	5.1		26.9	
5949 a	Substation - Civil Work	Ongoing	Replacement	3.2	3.0	4.0	5.5	4.7		20.4	
5087 a	Substation - Instrument transformers	Ongoing	Replacement	3.5	3.9	3.0	2.7	0.7		13.9	
5098 a	Substation - Plant & Equipment	Ongoing	Replacement	5.1	4.5	3.8	3.7	4.0		21.1	
6340 a	Substation - Security	Ongoing	Security/Compliance	3.0	1.4	0.8	1.0	0.1		6.3	
6423 a	Transformer Replacement & Addition	Ongoing	Replacement	1.7	3.8	5.5	5.6	1.1		17.6	
5158 a	Transmission Lines- Minor upgrades	Ongoing	Replacement	12.0	5.5	5.1	5.0	5.5		33.1	
4939 a	Transmission Lines- Wood Poles	Ongoing	Replacement	0.1	0.2	0.0	0.6	1.5		2.5	
				6.0	4.8	3.9	3.9	3.7		22.3	

REASON FOR PROJECT	Business Case (Y/N)
Poor asset condition	Yes
Asset replace'n for end of life condition	Yes
System and IT assets upgrade	Yes
End of life asset upgrade	Yes
Business Operation need	Yes
Asset replace'n for end of life condition	Yes
Asset replace'n for end of life condition	Yes
Asset replace'n for end of life condition	Yes
Asset replace'n for end of life condition	Yes
Asset replace'n for end of life condition	Yes
Asset replace'n for end of life condition	Yes
Asset replace'n for end of life condition	Yes
Asset replace'n for end of life condition	Yes
Asset replace'n for end of life condition	Yes

^refers to the categories used in table 4.1 (eg Information Technology, Motor Vehicles etc)

5.1 Historic and Forecast Opex Commentary proforma: key cost drivers

<p>Commentary on cost drivers and material changes over the current regulatory period</p> <p><i>Section 6 of the Revenue Proposal provides information on TransGrid's performance in the current regulatory period. Please refer to this section for commentary on cost drivers and other material changes in this period.</i></p> <p><i>The Revised Revenue Proposal does not comment on the historic opex.</i></p>
<p>Supporting information</p> <p><i>Supporting documentation is being provided separately to the AER.</i></p>
<p>Commentary on cost drivers and material changes affecting the upcoming regulatory period</p> <p><i>Section 8 of the Revenue Proposal provides information on TransGrid's forecast operating expenditure. This section includes a description of the operation of the Opex Model, including commentary on the major cost drivers used to develop the operating expenditure forecast.</i></p> <p><i>Section 5 of the Revised Revenue Proposal comments on the forecast operating expenditure decision.</i></p>
<p>Supporting information</p> <p><i>Supporting documentation is being provided separately to the AER.</i></p>

5.2 Historic Capex Commentary Proforma: reasons for variance

Commentary on reasons for variances
<i>Section 6 of the Revenue Proposal provides information on TransGrid's performance in the current regulatory period. Please refer to this section for commentary on variances.</i>
Supporting information
<i>Supporting documentation is being provided separately to the AER.</i>

5.3 Forecast Capex Commentary Proforma: reasons for project

Themes sets and Scenarios modelled
<i>Section 7 of the Revenue Proposal provides information on TransGrid's forecast capital expenditure. This section includes a description of the capital estimate forecasting methodology. The themes and scenarios modelled are discussed in Section 7.4.4.</i>
<i>Section 3 of the Revised Revenue Proposal comments on the forecast capital expenditure decision.</i>
Supporting information
<i>Supporting documentation is being provided separately to the AER.</i>

6.1 OPEX - Instructions and definitions	
PURPOSE OF INFORMATION AND USE BY THE AER:	<p>The historic worksheets (1.1 to 1.7) are a key input into the AER's assessment of a TNSP's historic opex performance to assist it in establishing a starting point from which to set efficient opex for the next regulatory period.</p> <p>The forecast worksheets (2.1 to 2.6) are a key input into the AER's assessment of a TNSP's proposed forecast opex.</p> <p>Key cost drivers for expenditure are important to the AER's understanding of what has happened in the current regulatory period and any step changes in opex claimed for the next regulatory period.</p>
INSTRUCTIONS	<p>Data to be input on the basis of the definitions provided.</p> <p>All expenditure must relate to the provision of prescribed services.</p> <p>Key cost drivers for expenditure: reasons for material changes in costs should be expanded upon in the relevant opex commentary proforma.</p> <p>Templates must be completed in accordance with the instructions contained in the AER's Information Requirements Guidelines (eg. cost allocation methodology.)</p> <p>Values for 2007/08 and 2008/09 are estimated values only</p>
DEFINITIONS	<p>Maintenance - all field-based costs for routine maintenance, defect maintenance and major operating projects such as plant refurbishment</p> <p>Maintenance Support and Asset Management - Management of field-based maintenance teams, asset management and costs of running business systems that directly support the field maintenance activities, fleet costs, logistics and supply management.</p> <p>Operations/ control room - Around-the-clock state system control and regional control functions.</p> <p>Grid planning - Operational costs associated with planning for the development of the transmission network</p> <p>Rates and Taxes - Operating costs paid to external authorities</p> <p>Insurance - Operating costs paid to insurance companies</p> <p>Property management - Ongoing management of property and issues related to easements and environmental compliance</p> <p>Corporate and Regulatory Management - Customer relations, stakeholder relations, providing assurance of effective corporate governance and regulatory support</p> <p>Business management - Business administration, including human resources, payroll functions, finance, accounting and IT.</p> <p>Other - debt-raising costs, equity-raising costs, self-insurance and network support</p>

6.2 Historic Capex Instructions and definitions

PURPOSE OF INFORMATION AND USE BY THE AER:	<p>The templates are key inputs into the AER's assessment of historic capex and will assist in the analysis of the prudence of expenditure.</p> <p>Specifying expenditure by project enables the AER to select projects on which to undertake more detailed analysis. The capex categories are essentially divided between Network and Non-network. Network includes augmentation capex which is subject to the Regulatory Test.</p>
INSTRUCTIONS:	<p>Data to be input on the basis of the definitions provided.</p> <p>All expenditure must relate to the provision of prescribed services.</p> <p>Categorisation of capex should be performed according to the primary reason for expenditure.</p> <p>Capex amounts should be entered on an as-commissioned basis, excluding customer contributions.</p> <p>Customer contributions are to be noted separately.</p> <p>Reasons for variance: if actual expenditure materially varies from the amount determined under the Regulatory Test/Business case, or the date of commissioning was later than planned, then reasons should be given on the Historic Capex Commentary pro forma with a brief reference in the 'Reasons for variance' column of Table 3.3 and 3.4.</p> <p>Templates must be completed according to the instructions contained in the AER's Information Requirements Guidelines.</p> <p>Values for 2007/08 and 2008/09 are estimated values only.</p>
DEFINITIONS:	<p>Augmentation - Projects to enlarge the network or increase its transmission capability</p> <p>Replacement - Works to replace transmission lines, substation primary plant, secondary systems, communications equipment and other system assets</p> <p>Land/ Easement - Acquisitions for future augmentation and connection projects</p> <p>Security/ compliance - Projects that ensure the physical security of critical infrastructure assets, and that ensure TransGrid complies with applicable regulatory obligations or requirements</p> <p>Information Technology - Development and maintenance of IT capacity and improvements to functionality of business systems</p> <p>Facilities -- Projects to replace and upgrade buildings to meet business requirements</p> <p>Motor Vehicles -- The acquisition of fleet vehicles and mobile plant</p> <p>Office machines and miscellaneous plant</p>

6.3 Forecast Capex Instructions and definitions

PURPOSE OF INFORMATION AND USE BY THE AER:	The templates are key inputs into the AER's assessment of forecast capex and will enable an analysis of the proposed expenditure. Specifying expenditure by project enables the AER to select projects on which to undertake more detailed analysis.
INSTRUCTIONS:	Data to be input on the basis of the definitions provided. All expenditure must relate to the provision of prescribed services. Categorisation of capex should be performed according to the primary reason for expenditure. Capex amounts should be entered on an as-incurred basis, excluding customer contributions. Customer contributions are to be noted separately. Templates must be completed according to the instructions contained in the AER's Information Requirements Guidelines. The TNSP is also requested to provide consultants reports on the probabilistic methodology adopted, including information on theme sets and scenarios upon which the proposed capex spend is based. Further, details on the consultants assumptions, inputs and detailed information on the outcomes are requested.
DEFINITIONS:	Refer to Table 6.2

7.1 Weighted Average Cost of Capital

Setting the Revenue Cap Forecast - Rate of Return ("WACC")

Notes for the preparation of information on this proforma:

1. The proforma sets out the minimum inputs required by the AER to model a TNSP's estimate of WACC.
2. The minimum inputs set out in the proforma are averages for the five-year regulatory period.
3. A post-tax nominal WACC framework involves the use of a cash flow modelling approach to derive the revenue requirement.
4. A TNSP shall provide to the AER:
 - (a) an estimate of its post-tax nominal return on equity; post-tax nominal WACC; and pre-tax real WACC.
 - (b) the assumptions underlying the estimation.
 - (c) full and detailed explanations of the basis of any calculations.
 - (d) references to any sources of information or precedents.

Setting the Revenue Cap Forecast - Rate of Return ("WACC")

TNSP: **TransGrid**

Reporting date: **2009/14**

	<i>Proposed value</i> %
Nominal risk free rate	5.86%
Real risk free rate	3.20%
Inflation Rate	2.58%
Proportion of debt funding	60.00%
Nominal pre-tax cost of debt	9.07%
Cost of debt margin over the risk free rate	3.21%
Market risk premium	6.00%
Corporate tax rate	30.00%
Effective tax rate for equity	24.19%
Proportion of franking credits attributed to shareholders	50.00%
Equity beta	1.00
Post-tax nominal return on equity	11.86%
Nominal vanilla WACC	10.19%

7.2 Depreciation

Inputs for Post-Tax Revenue Model

Asset Class	Opening WDV	Ave Lives Remaining	Standard Lives	Forecast Net Capital Expenditure – As Commissioned (\$m 2009 dollars)				
				2009-10	2010-11	2011-12	2012-13	2013-14
Transmission Lines (pre 2004-05)	1,214.46	23.13	50.0	-	-	-	-	-
Underground Cables (pre 2004-05)	211.05	35.30	45.0	-	-	-	-	-
Substations including Buildings (pre 2004-05)	800.11	21.48	40.0	-	-	-	-	-
SCADA and Communications (pre 2004-05)	31.69	6.77	15.0	-	-	-	-	-
Non-network Assets (pre 2004-05)	42.26	1.66	10.0	-	-	-	-	-
SMHEA Assets (pre 2004-05)	39.91	8.02	40.0	-	-	-	-	-
Accelerated Lines (pre 2004-05)	0.04	0.00	n/a	-	-	-	-	-
Accelerated Substations (pre 2004-05)	0.01	0.00	n/a	-	-	-	-	-
Land and Easements (pre 2004-05)	514.61	n/a	n/a	-	-	-	-	-
Transmission Lines (2004-09)	183.63	49.09	50.0	-	-	-	-	-
Underground Cables (2004-09)	9.01	41.41	45.0	-	-	-	-	-
Substations including Buildings (2004-09)	930.62	38.79	40.0	-	-	-	-	-
SCADA and Communications (2004-09)	57.17	13.78	15.0	-	-	-	-	-
Non-network Assets (2004-09)	117.89	8.42	10.0	-	-	-	-	-
Land and Easements (2004-09)	123.08	n/a	n/a	-	-	-	-	-
Transmission Lines & Cables - Aug. (09-14)	-	n/a	50.0	80.14	114.03	275.32	200.48	96.44
Substations - Augmentation (09-14)	-	n/a	40.0	201.55	109.56	130.61	181.57	122.95
Secondary Systems - Augmentation (09-14)	-	n/a	35.0	11.55	8.05	10.64	5.75	10.26
Communications - Augmentation (09-14)	-	n/a	35.0	23.49	14.21	10.12	7.17	3.04
Transmission Lines & Cables - Rep. (09-14)	-	n/a	26.4	11.85	14.21	14.95	5.14	7.29
Substations - Replacement (09-14)	-	n/a	30.4	99.81	48.65	77.23	86.81	56.68
Secondary Systems - Replacement (09-14)	-	n/a	30.4	8.50	8.63	11.61	19.70	16.02
Communications - Replacement (09-14)	-	n/a	11.4	6.03	19.07	14.88	2.43	4.75
Land & Easement (09-14)	-	n/a	n/a	65.78	93.96	40.99	27.28	67.57
Business IT (09-14)	-	n/a	4.0	18.25	23.55	21.06	13.60	22.01
Support the Business - Minor Plant (09-14)	-	n/a	8.0	11.64	6.16	1.29	1.31	1.46
Motor Vehicles & Mobile Plant (09-14)	-	n/a	8.0	9.53	9.58	6.16	4.70	10.12
Total	4,275.55			548.12	469.66	614.86	555.92	418.59

Based on these inputs, the PTRM will calculate the amount of straight-line depreciation annually. These amounts will then be entered into the depreciation schedule below.

Depreciation Schedule

Asset Class	Straight-line Depreciation (\$m 2009 dollars)					Total
	2009-10	2010-11	2011-12	2012-13	2013-14	
Transmission Lines (pre 2004-05)	52.50	52.50	52.50	52.50	52.50	262.49
Underground Cables (pre 2004-05)	5.98	5.98	5.98	5.98	5.98	29.89
Substations including Buildings (pre 2004-05)	37.26	37.26	37.26	37.26	37.26	186.29
SCADA and Communications (pre 2004-05)	4.68	4.68	4.68	4.68	4.68	23.42
Non-network Assets (pre 2004-05)	25.50	16.76	-	-	-	42.26
SMHEA Assets (pre 2004-05)	4.97	4.97	4.97	4.97	4.97	24.87
Accelerated Lines (pre 2004-05)	0.04	-	-	-	-	0.04
Accelerated Substations (pre 2004-05)	0.01	-	-	-	-	0.01
Land and Easements (pre 2004-05)	-	-	-	-	-	-
Transmission Lines (2004-09)	3.74	3.74	3.74	3.74	3.74	18.70
Underground Cables (2004-09)	0.22	0.22	0.22	0.22	0.22	1.09
Substations including Buildings (2004-09)	23.99	23.99	23.99	23.99	23.99	119.97
SCADA and Communications (2004-09)	4.15	4.15	4.15	4.15	4.15	20.74
Non-network Assets (2004-09)	14.01	14.01	14.01	14.01	14.01	70.04
Land and Easements (2004-09)	-	-	-	-	-	-
Transmission Lines & Cables - Aug. (09-14)	-	1.45	3.72	8.54	12.75	26.46
Substations - Augmentation (09-14)	-	5.02	7.68	10.91	15.06	38.67
Secondary Systems - Augmentation (09-14)	-	0.30	0.50	0.82	0.96	2.58
Communications - Augmentation (09-14)	-	0.65	1.07	1.38	1.58	4.69
Transmission Lines & Cables - Rep. (09-14)	-	0.25	0.46	1.61	1.79	4.10
Substations - Replacement (09-14)	-	3.20	4.31	6.66	10.17	24.34
Secondary Systems - Replacement (09-14)	-	0.27	0.49	0.90	1.32	2.98
Communications - Replacement (09-14)	-	0.52	2.08	3.60	3.79	9.99
Land & Easement (09-14)	-	-	-	-	-	-
Business IT (09-14)	-	4.73	10.83	16.29	19.81	51.66
Support the Business - Minor Plant (09-14)	-	1.51	2.31	2.47	2.64	8.93
Motor Vehicles & Mobile Plant (09-14)	-	0.58	1.16	1.30	1.26	4.30
Total Depreciation	177.06	186.73	186.09	205.98	222.65	978.51

Location of assets

- see network map and forecast capex claim of TNSP.

NER requirements

- as per cl 6A.6.3 and Schedule 6A.1.3(7) of NER.

7.4 AER decision - Opex Efficiency Carry-Forward Allowance

The AER considers that TransGrid's calculation of carry-forward amounts during 2004–09 was incorrect. TransGrid did not adjust the previous year's underspend to current year's CPI, thus inflation was included as TransGrid's efficiency gain.

The table below correctly calculates TransGrid's carry-forward amounts during 2004–09 regulatory control period.

Efficiency Carry-Forward Mechanism

This template allows for a carry forward of efficiency gains or losses over the 2004-09 regulatory period.

Year	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2003-14
Actual CPI Inflation Rate	1.98%	2.36%	2.98%	2.44%	4.24%	3.63%	3.25%	2.50%	2.50%	2.50%	2.50%
Actual CPI	0.857	0.878	0.904	0.926	0.965	1.000	1.033	1.058	1.085	1.112	1.140
Target (\$m, 2008-09)		136.40	135.89	135.46	135.11	134.90					
Actual (\$m, 2008-09)		135.15	135.56	131.95	126.64	128.42					

Efficiency gain/loss (\$m, 2008-09)		1.25	-0.93	3.18	4.96	-1.99	0.00	0.00	0.00	0.00	0.00
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Carryover (\$m, 2008-09)		(\$m, 2008-09)					(\$m, 2008-09)				
Year -4			1.25	1.25	1.25	1.25	1.25				
Year -3				-0.93	-0.93	-0.93	-0.93	-0.93			
Year -2					3.18	3.18	3.18	3.18	3.18		
Year -1						4.96	4.96	4.96	4.96	4.96	
Year -0							-1.99	-1.99	-1.99	-1.99	-1.99
Forecast Carryover Amounts (\$m, 2008-09)							6.48	5.23	6.15	2.98	-1.99

TOTAL (\$m, 2008-09) \$18.86