

Powerlink pro-forma information statements - 16 January 2012

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1.1 HISTORIC OPEX by expenditure category

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Opex Instructions -
Table 6.1

Opex Commentary - Table 5.1

\$ million nominal	Financial year	2007/08	2008/09	2009/10	2010/11	2011/12	Total	Revenue Cap Allowance	Key cost drivers and explanation for material differences over time
Direct Operations & Maintenance									
Field Maintenance									
Secondary Systems									
Labour		4.76	5.20	5.26	5.57	6.34	27.13		
Non-Labour		0.31	0.34	0.38	0.40	0.42	1.85		
Sub-Totals		5.07	5.54	5.64	5.97	6.77	28.99		
Substations									
Labour		8.57	11.31	13.54	14.30	16.06	63.78		
Non-Labour		2.88	3.80	4.70	4.94	5.18	21.50		
Sub-Totals		11.45	15.12	18.24	19.24	21.24	85.29		
Lines									
Labour		8.17	6.70	7.42	8.04	9.03	39.36		
Non-Labour		2.03	1.67	1.90	2.04	2.16	9.80		
Sub-Totals		10.20	8.36	9.31	10.07	11.18	49.12		
Communications									
Labour		1.66	2.19	1.82	1.94	2.31	9.92		
Non-Labour		0.41	0.54	0.46	0.49	0.54	2.44		
Sub-Totals		2.07	2.73	2.28	2.43	2.85	12.36		
Land									
Labour		5.59	6.77	6.29	6.73	7.90	33.28		
Non-Labour		2.62	3.17	2.94	3.14	3.42	15.29		
Sub-Totals		8.20	9.94	9.23	9.86	11.33	48.56		
Summary									
Sub-Total Labour		28.75	32.17	34.33	36.57	41.63	173.45		
Sub-Total Non-Labour		8.25	9.52	10.38	11.00	11.73	50.88		
Total Maintenance		37.00	41.68	44.70	47.57	53.36	224.31		
Operational Refurbishment									
Total Operational Refurbishment		18.61	20.25	22.19	24.42	27.04	112.51		
Maintenance Support									
Field Support		1.18	1.37	1.43	1.50	1.61	7.09		
Other Support		5.57	5.34	5.36	5.64	6.04	27.95		
Direct charges		3.49	3.61	4.25	4.55	4.83	20.73		
Total Maintenance Support		10.24	10.33	11.04	11.69	12.47	55.77		
Network Operations									
Switching		5.07	5.43	5.46	5.78	6.22	27.96		
Asset Monitoring Team		1.94	1.84	2.54	2.69	2.89	11.90		
NMS Support		1.89	2.28	2.29	2.42	2.61	11.49		
Operations Support		1.47	1.93	1.90	2.01	2.16	9.47		
Total Network Operations		10.38	11.47	12.19	12.90	13.88	60.82		
Total Direct Operations & Maintenance		76.23	83.73	90.12	96.59	106.75	453.42	453.18	No material differences.
Other Controllable									
Asset Management Support									
Grid Planning		4.22	5.51	5.33	5.62	6.01	26.69		
Network Support		10.41	10.59	12.10	12.72	13.58	59.40		
IT Support		7.05	8.24	8.10	8.51	9.09	40.99		
Customer & Regulatory Support		4.18	3.82	4.06	4.26	4.55	20.87		
Total Asset Management Support		25.87	28.16	29.59	31.11	33.23	147.96		
Corporate Support									
Total Corporate Support		9.07	9.66	12.71	15.10	13.83	60.37		
Total Other Controllable		34.94	37.82	42.30	46.21	47.06	208.33	204.56	
Total Controllable Operating		111.17	121.55	132.42	142.80	153.81	661.75	657.74	No material differences.
Summary									
Total Labour		94.23	102.63	111.67	117.05	126.74	552.32		
Total Maintenance Non-Labour		8.25	9.52	10.38	11.00	11.73	50.88		
Total Other Non-Labour		8.68	9.41	10.38	14.74	15.34	58.55		
Other Operating									
Insurances		5.37	5.93	6.71	7.33	7.96	33.30		
Network Support		27.30	15.10	12.70	-	0.40	55.50		
Debt Raising		0.20	0.20	0.30	0.20	0.30	1.20		
Total Operating Expenditure		144.04	142.78	152.13	150.33	162.47	751.75	787.35	Network Support requirements influenced by exogenous factors outside Powerlink's control impacting on the volume of and demand for Network Support.
Revenue Cap Allowance		143.61	147.85	163.62	161.29	170.97	787.35		

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1.3 HISTORIC OPEX by expenditure category
Year Ended 30 June 2008

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Opex instructions - Table
6.1

(\$m, nominal)

Year 1 - Year Ended 30 June 2008

\$ million, nominal	Field Maintenance			Operational Refurbishment	Maintenance Support	Network Operations	AM Support / Corporate		TOTAL	Revenue Cap Allowance
	Routine	Condition-Based	Corrective				Network	Non-Network		
Direct Operations & Maintenance										
Field Maintenance										
Secondary Systems										
Labour	1.46	1.42	1.88							
Non-Labour	0.09	0.09	0.12							
Sub-Totals	1.55	1.51	2.00						5.06	
Substations										
Labour	2.86	3.37	2.34							
Non-Labour	0.96	1.13	0.79							
Sub-Totals	3.82	4.50	3.13						11.45	
Lines										
Labour	1.76	3.92	2.49							
Non-Labour	0.44	0.97	0.62							
Sub-Totals	2.20	4.89	3.11						10.20	
Communications										
Labour	0.30	0.65	0.71							
Non-Labour	0.07	0.16	0.18							
Sub-Totals	0.37	0.81	0.89						2.07	
Land										
Labour	3.46	2.00	0.13							
Non-Labour	1.62	0.94	0.06							
Sub-Totals	5.08	2.94	0.19						8.21	
Summary										
Sub-Total Labour	9.84	11.36	7.55						28.75	
Sub-Total Non-Labour	3.18	3.29	1.77						8.24	
Total Maintenance	13.02	14.65	9.32						36.99	
Operational Refurbishment										
Total Operational Refurbishment				18.61					18.61	
Maintenance Support										
Field Support					1.18					
Other Support					5.57					
Direct charges					3.49					
Total Maintenance Support					10.24				10.24	
Network Operations										
Switching						5.07				
Asset Monitoring Team						1.94				
NMS Support						1.89				
Operations Support						1.47				
Total Network Operations						10.37			10.37	
Total Direct Operations & Maintenance	13.02	14.65	9.32	18.61	10.24	10.37			76.21	
Other Controllable										
Asset Management Support										
Grid Planning							4.22			
Network Support							10.41			
IT Support							7.05			
Customer & Regulatory Support							4.18			
Total Asset Management Support							25.86		25.86	
Corporate Support										
Total Corporate Support								9.07	9.07	
Total Other Controllable							25.86	9.07	34.93	
Total Controllable Operating	13.02	14.65	9.32	18.61	10.24	10.37	25.86	9.07	111.14	
Summary										
Total Labour	9.84	11.36	7.55	18.61	6.09	9.34	23.28	8.16	94.23	
Total Maintenance Non-Labour	3.18	3.29	1.77						8.24	
Total Other Non-Labour					4.15	1.04	2.59	0.91	8.69	
Other Operating										
Insurances									5.37	
Network Support									27.30	
Debt Raising									0.20	
Total Operating Expenditure									144.03	
Revenue Cap Allowance									143.61	

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1.4 HISTORIC OPEX by expenditure category
Year Ended 30 June 2009

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(\$m, nominal)

Year 2 - Year Ended 30 June 2009

	Field Maintenance			Operational Refurbishment	Maintenance Support	Network Operations	AM Support / Corporate		TOTAL	Revenue Cap Allowance
	Routine	Condition-Based	Corrective				Network	Non-Network		
\$ million, nominal										
Direct Operations & Maintenance										
Field Maintenance										
Secondary Systems										
Labour	1.17	1.21	2.81							
Non-Labour	0.08	0.08	0.18							
Sub-Totals	1.25	1.29	2.99						5.53	
Substations										
Labour	3.15	5.33	2.84							
Non-Labour	1.06	1.79	0.95							
Sub-Totals	4.21	7.12	3.79						15.12	
Lines										
Labour	1.90	3.07	1.73							
Non-Labour	0.47	0.76	0.43							
Sub-Totals	2.37	3.83	2.16						8.36	
Communications										
Labour	0.34	0.60	1.25							
Non-Labour	0.08	0.15	0.31							
Sub-Totals	0.42	0.75	1.56						2.73	
Land										
Labour	4.29	2.40	0.08							
Non-Labour	2.01	1.12	0.04							
Sub-Totals	6.30	3.52	0.12						9.94	
Summary										
Sub-Total Labour	10.85	12.61	8.71						32.17	
Sub-Total Non-Labour	3.70	3.90	1.91						9.51	
Total Maintenance	14.55	16.51	10.62						41.68	
Operational Refurbishment										
Total Operational Refurbishment				20.25					20.25	
Maintenance Support										
Field Support					1.37					
Other Support					5.34					
Direct charges					3.61					
Total Maintenance Support					10.32				10.32	
Network Operations										
Switching						5.43				
Asset Monitoring Team						1.84				
NMS Support						2.28				
Operations Support						1.93				
Total Network Operations						11.48			11.48	
Total Direct Operations & Maintenance	14.55	16.51	10.62	20.25	10.32	11.48			83.73	
Other Controllable										
Asset Management Support										
Grid Planning							5.51			
Network Support							10.59			
IT Support							8.24			
Customer & Regulatory Support							3.82			
Total Asset Management Support							28.16		28.16	
Corporate Support										
Total Corporate Support								9.66	9.66	
Total Other Controllable							28.16	9.66	37.82	
Total Controllable Operating	14.55	16.51	10.62	20.25	10.32	11.48	28.16	9.66	121.55	
Summary										
Total Labour	10.85	12.61	8.71	20.25	5.85	10.32	25.35	8.69	102.63	
Total Maintenance Non-Labour	3.70	3.90	1.91						9.51	
Total Other Non-Labour					4.48	1.15	2.82	0.97	9.42	
Other Operating										
Insurances									5.93	
Network Support									15.10	
Debt Raising									0.20	
Total Operating Expenditure									142.79	
Revenue Cap Allowance									147.85	

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1.5 HISTORIC OPEX by expenditure category
Year Ended 30 June 2010

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(\$m, nominal)

Year 3 - Year Ended 30 June 2010										
	Field Maintenance			Operational Refurbishment	Maintenance Support	Network Operations	AM Support / Corporate		TOTAL	Revenue Cap Allowance
	Routine	Condition-Based	Corrective				Network	Non-Network		
\$ million, nominal										
Direct Operations & Maintenance										
Field Maintenance										
Secondary Systems										
Labour	1.30	1.21	2.76							
Non-Labour	0.09	0.08	0.21							
Sub-Totals	1.39	1.29	2.97						5.65	
Substations										
Labour	2.95	6.78	3.81							
Non-Labour	1.01	2.38	1.30							
Sub-Totals	3.96	9.16	5.11						18.23	
Lines										
Labour	1.92	4.16	1.34							
Non-Labour	0.53	1.07	0.30							
Sub-Totals	2.45	5.23	1.64						9.32	
Communications										
Labour	0.38	0.32	1.12							
Non-Labour	0.09	0.08	0.28							
Sub-Totals	0.47	0.40	1.40						2.27	
Land										
Labour	3.77	1.93	0.58							
Non-Labour	1.76	0.91	0.27							
Sub-Totals	5.53	2.84	0.85						9.22	
Summary										
Sub-Total Labour	10.32	14.40	9.61						34.33	
Sub-Total Non-Labour	3.48	4.52	2.36						10.36	
Total Maintenance	13.80	18.92	11.97						44.69	
Operational Refurbishment										
Total Operational Refurbishment				22.19					22.19	
Maintenance Support										
Field Support					1.43					
Other Support					5.36					
Direct charges					4.25					
Total Maintenance Support					11.04				11.04	
Network Operations										
Switching						5.46				
Asset Monitoring Team						2.54				
NMS Support						2.29				
Operations Support						1.90				
Total Network Operations						12.19			12.19	
Total Direct Operations & Maintenance	13.80	18.92	11.97	22.19	11.04	12.19			90.11	
Other Controllable										
Asset Management Support										
Grid Planning							5.33			
Network Support							12.10			
IT Support							8.10			
Customer & Regulatory Support							4.06			
Total Asset Management Support							29.59		29.59	
Corporate Support										
Total Corporate Support								12.71	12.71	
Total Other Controllable							29.59	12.71	42.30	
Total Controllable Operating	13.80	18.92	11.97	22.19	11.04	12.19	29.59	12.71	132.41	
Summary										
Total Labour	10.32	14.40	9.61	22.19	6.11	10.97	26.63	11.44	111.67	
Total Maintenance Non-Labour	3.48	4.52	2.36						10.36	
Total Other Non-Labour					4.93	1.22	2.96	1.27	10.38	
Other Operating										
Insurances									6.71	
Network Support									12.70	
Debt Raising									0.30	
Total Operating Expenditure									152.12	
Revenue Cap Allowance									163.62	

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1.6 HISTORIC OPEX by expenditure category
Year Ended 30 June 2011

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(\$m, nominal)

Year 4 - Year Ended 30 June 2011										
	Field Maintenance			Operational Refurbishment	Maintenance Support	Network Operations	AM Support / Corporate		TOTAL	Revenue Cap Allowance
	Routine	Condition-Based	Corrective				Network	Non-Network		
\$ million, nominal										
Direct Operations & Maintenance										
Field Maintenance										
Secondary Systems										
Labour	1.37	1.28	2.92							
Non-Labour	0.09	0.09	0.22							
Sub-Totals	1.46	1.37	3.14						5.97	
Substations										
Labour	3.12	7.16	4.02							
Non-Labour	1.07	2.50	1.37							
Sub-Totals	4.19	9.66	5.39						19.24	
Lines										
Labour	2.07	4.51	1.45							
Non-Labour	0.57	1.15	0.32							
Sub-Totals	2.64	5.66	1.77						10.07	
Communications										
Labour	0.40	0.34	1.19							
Non-Labour	0.10	0.09	0.30							
Sub-Totals	0.50	0.43	1.49						2.42	
Land										
Labour	4.03	2.07	0.62							
Non-Labour	1.88	0.97	0.29							
Sub-Totals	5.91	3.04	0.91						9.86	
Summary										
Sub-Total Labour	10.99	15.36	10.20						36.55	
Sub-Total Non-Labour	3.71	4.80	2.50						11.01	
Total Maintenance	14.70	20.16	12.70						47.56	
Operational Refurbishment										
Total Operational Refurbishment				24.42					24.42	
Maintenance Support										
Field Support					1.50					
Other Support					5.64					
Direct charges					4.55					
Total Maintenance Support					11.69				11.69	
Network Operations										
Switching						5.78				
Asset Monitoring Team						2.69				
NMS Support						2.42				
Operations Support						2.01				
Total Network Operations						12.90			12.90	
Total Direct Operations & Maintenance	14.70	20.16	12.70	24.42	11.69	12.90			96.57	
Other Controllable										
Asset Management Support										
Grid Planning							5.62			
Network Support							12.72			
IT Support							8.51			
Customer & Regulatory Support							4.26			
Total Asset Management Support							31.11		31.11	
Corporate Support										
Total Corporate Support								15.10	15.10	
Total Other Controllable							31.11	15.10	46.21	
Total Controllable Operating	14.70	20.16	12.70	24.42	11.69	12.90	31.11	15.10	142.78	
Summary										
Total Labour	10.99	15.36	10.20	24.42	6.44	11.62	28.03	9.97	117.03	
Total Maintenance Non-Labour	3.71	4.80	2.50						11.01	
Total Other Non-Labour					5.26	1.28	3.08	5.13	14.75	
Other Operating										
Insurances									7.33	
Network Support										
Debt Raising									0.20	
Total Operating Expenditure									150.32	
Revenue Cap Allowance									161.29	

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1.7 HISTORIC OPEX by expenditure category
Year Ended 30 June 2012

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[Opex instructions - Table](#)

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(\$m, nominal)

Year 5 - Year Ended 30 June 2012

	Field Maintenance			Operational Refurbishment	Maintenance Support	Network Operations	AM Support / Corporate		TOTAL	Revenue Cap Allowance
	Routine	Condition-Based	Corrective				Network	Non-Network		
\$ million, nominal										
Direct Operations & Maintenance										
Field Maintenance										
Secondary Systems										
Labour	1.58	1.46	3.31							
Non-Labour	0.10	0.09	0.23							
Sub-Totals	1.68	1.55	3.54						6.77	
Substations										
Labour	3.52	8.02	4.52							
Non-Labour	1.12	2.63	1.43							
Sub-Totals	4.64	10.65	5.95						21.24	
Lines										
Labour	2.32	5.06	1.64							
Non-Labour	0.60	1.22	0.34							
Sub-Totals	2.92	6.28	1.98						11.18	
Communications										
Labour	0.48	0.41	1.42							
Non-Labour	0.11	0.10	0.33							
Sub-Totals	0.59	0.51	1.75						2.85	
Land										
Labour	4.76	2.43	0.72							
Non-Labour	2.05	1.05	0.32							
Sub-Totals	6.81	3.48	1.04						11.33	
Summary										
Sub-Total Labour	12.66	17.38	11.61						41.65	
Sub-Total Non-Labour	3.98	5.09	2.65						11.72	
Total Maintenance	16.64	22.47	14.26						53.37	
Operational Refurbishment										
Total Operational Refurbishment				27.04					27.04	
Maintenance Support										
Field Support					1.61					
Other Support					6.04					
Direct charges					4.83					
Total Maintenance Support					12.48				12.48	
Network Operations										
Switching						6.22				
Asset Monitoring Team						2.89				
NMS Support						2.61				
Operations Support						2.16				
Total Network Operations						13.88			13.88	
Total Direct Operations & Maintenance	16.64	22.47	14.26	27.04	12.48	13.88			106.77	
Other Controllable										
Asset Management Support										
Grid Planning							6.01			
Network Support							13.58			
IT Support							9.09			
Customer & Regulatory Support							4.55			
Total Asset Management Support							33.23		33.23	
Corporate Support										
Total Corporate Support								13.83	13.83	
Total Other Controllable							33.23	13.83	47.06	
Total Controllable Operating	16.64	22.47	14.26	27.04	12.48	13.88	33.23	13.83	153.83	
Summary										
Total Labour	12.66	17.38	11.61	27.04	6.91	12.55	30.05	8.56	126.76	
Total Maintenance Non-Labour	3.98	5.09	2.65						11.72	
Total Other Non-Labour					5.56	1.33	3.18	5.27	15.34	
Other Operating										
Insurances									7.96	
Network Support									0.40	
Debt Raising									0.30	
Total Operating Expenditure									162.48	
Revenue Cap Allowance									170.97	

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2.1 FORECAST OPEX by expenditure category

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[Opex Commentary -
Table 5.1](#)

	Financial year	2012/13	2013/14	2014/15	2015/16	2016/17	Total
\$ million, Real (2011/12)							
Direct Operations & Maintenance							
Field Maintenance							
Secondary Systems							
Labour		6.72	7.36	7.96	8.54	9.12	39.70
Non-Labour		0.44	0.47	0.49	0.51	0.53	2.44
Sub-Totals		7.16	7.83	8.45	9.05	9.65	42.14
Substations							
Labour		16.80	18.23	19.19	20.26	21.28	95.76
Non-Labour		5.38	5.64	5.73	5.86	5.95	28.56
Sub-Totals		22.18	23.87	24.92	26.12	27.23	124.32
Lines							
Labour		9.51	10.32	10.99	12.04	12.58	55.44
Non-Labour		2.25	2.36	2.42	2.56	2.59	12.18
Sub-Totals		11.77	12.68	13.41	14.61	15.18	67.65
Communications							
Labour		2.69	3.14	3.38	3.69	4.01	16.91
Non-Labour		0.63	0.71	0.74	0.78	0.82	3.68
Sub-Totals		3.31	3.84	4.12	4.47	4.83	20.57
Land							
Labour		8.26	8.65	9.40	10.17	10.82	47.30
Non-Labour		3.54	3.58	3.76	3.93	4.05	18.86
Sub-Totals		11.80	12.22	13.15	14.10	14.87	66.14
Summary							
Sub-Total Labour		43.99	47.69	50.92	54.70	57.81	255.11
Sub-Total Non-Labour		12.25	12.74	13.14	13.64	13.95	65.72
Total Maintenance		56.23	60.43	64.05	68.35	71.76	320.82
Operational Refurbishment							
Total Operational Refurbishment		34.71	35.53	33.93	35.15	39.53	178.85
Maintenance Support							
Field Support		1.65	1.73	1.80	1.88	1.95	9.01
Other Support		6.22	6.51	6.77	7.08	7.33	33.91
Direct charges		5.00	5.25	5.41	5.69	5.79	27.14
Total Maintenance Support		12.87	13.49	13.98	14.64	15.06	70.04
Network Operations							
Switching		6.43	6.79	7.09	7.47	7.76	35.54
Asset Monitoring Team		2.99	3.16	3.30	3.48	3.61	16.54
NMS Support		2.70	2.85	2.98	3.13	3.26	14.92
Operations Support		2.24	2.36	2.47	2.60	2.70	12.37
Total Network Operations		14.36	15.15	15.84	16.68	17.32	79.35
Total Direct Operations & Maintenance		118.18	124.60	127.80	134.83	143.67	649.08
Other Controllable							
Asset Management Support							
Grid Planning		6.19	6.47	6.74	7.04	7.29	33.73
Network Support		13.95	14.57	15.13	15.77	16.31	75.73
IT Support		9.34	9.75	10.13	10.56	10.92	50.70
Customer & Regulatory Support		4.68	4.89	5.07	5.29	5.47	25.40
Total Asset Management Support		34.16	35.68	37.07	38.66	40.00	185.57
Corporate Support							
Total Corporate Support		14.77	15.64	18.00	20.70	18.73	87.84
Total Other Controllable		48.93	51.32	55.07	59.36	58.73	273.41
Total Controllable Operating		167.11	175.92	182.87	194.19	202.40	922.49
Summary							
Total Labour		137.56	145.00	151.27	161.10	168.77	763.70
Total Maintenance Non-Labour		12.25	12.74	13.14	13.64	13.95	65.72
Total Other Non-Labour		17.30	18.17	18.47	19.44	19.68	93.06
Other Operating							
Insurances		8.55	9.07	9.79	10.32	11.04	48.77
Network Support		1.91	5.79	4.35	4.73	2.53	19.31
Debt Raising		3.41	3.72	3.99	4.22	4.36	19.70
Total Operating Expenditure		180.98	194.50	201.00	213.46	220.33	1,010.27

Key cost drivers and explanation for material differences over time

Key cost drivers and other factors were detailed in Section 9.6 of the Revenue Proposal. These have been further expanded on in Chapter 9 of the Revised Revenue Proposal.

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2.2 FORECAST OPEX by expenditure category
Year Ended 30 June 2013

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Year 6 - Year Ended 30 June 2013

\$ million, Real (2011/12)	Field Maintenance			Operational Refurbishment	Maintenance Support	Network Operations	AM Support / Corporate		TOTAL	Revenue Cap Allowance
	Routine	Condition-Based	Corrective				Network	Non-Network		
Direct Operations & Maintenance										
Field Maintenance										
Secondary Systems										
Labour	1.67	1.54	3.51							
Non-Labour	0.10	0.10	0.24							
Sub-Totals	1.77	1.64	3.75						7.16	
Substations										
Labour	3.69	8.39	4.72							
Non-Labour	1.19	2.71	1.48							
Sub-Totals	4.88	11.10	6.20						22.18	
Lines										
Labour	2.42	5.38	1.71							
Non-Labour	0.61	1.30	0.35							
Sub-Totals	3.03	6.68	2.06						11.77	
Communications										
Labour	0.56	0.48	1.65							
Non-Labour	0.13	0.11	0.38							
Sub-Totals	0.69	0.59	2.03						3.31	
Land										
Labour	4.97	2.54	0.75							
Non-Labour	2.12	1.09	0.33							
Sub-Totals	7.09	3.63	1.08						11.80	
Summary										
Sub-Total Labour	13.31	18.33	12.34						43.98	
Sub-Total Non-Labour	4.15	5.31	2.78						12.24	
Total Maintenance	17.46	23.64	15.12						56.22	
Operational Refurbishment										
Total Operational Refurbishment				34.71					34.71	
Maintenance Support										
Field Support					1.65					
Other Support					6.22					
Direct charges					5.00					
Total Maintenance Support					12.87				12.87	
Network Operations										
Switching						6.43				
Asset Monitoring Team						2.99				
NMS Support						2.70				
Operations Support						2.24				
Total Network Operations						14.36			14.36	
Total Direct Operations & Maintenance	17.46	23.64	15.12	34.71	12.87	14.36			118.16	
Other Controllable										
Asset Management Support										
Grid Planning							6.19			
Network Support							13.95			
IT Support							9.34			
Customer & Regulatory Support							4.68			
Total Asset Management Support							34.16		34.16	
Corporate Support										
Total Corporate Support								14.77	14.77	
Total Other Controllable								34.16	48.93	
Total Controllable Operating	17.46	23.64	15.12	34.71	12.87	14.36	34.16	14.77	167.09	
Summary										
Total Labour	13.31	18.33	12.34	34.71	7.13	13.02	30.95	7.76	137.55	
Total Maintenance Non-Labour	4.15	5.31	2.78						12.24	
Total Other Non-Labour					5.74	1.35	3.21	7.00	17.30	
Other Operating										
Insurances									8.55	
Network Support									1.91	
Debt Raising									3.41	
Total Operating Expenditure									180.96	

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2.3 FORECAST OPEX by expenditure category
Year Ended 30 June 2014

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Year 7 - Year Ended 30 June 2014										
	Field Maintenance			Operational Refurbishment	Maintenance Support	Network Operations	AM Support / Corporate		TOTAL	Revenue Cap Allowance
	Routine	Condition-Based	Corrective				Network	Non-Network		
\$ million, Real (2011/12)										
Direct Operations & Maintenance										
Field Maintenance										
Secondary Systems										
Labour	1.83	1.69	3.84							
Non-Labour	0.11	0.10	0.26							
Sub-Totals	1.94	1.79	4.10						7.83	
Substations										
Labour	4.02	9.09	5.12							
Non-Labour	1.25	2.84	1.55							
Sub-Totals	5.27	11.93	6.67						23.87	
Lines										
Labour	2.62	5.84	1.86							
Non-Labour	0.63	1.36	0.36							
Sub-Totals	3.25	7.20	2.22						12.67	
Communications										
Labour	0.65	0.56	1.93							
Non-Labour	0.14	0.13	0.43							
Sub-Totals	0.79	0.69	2.36						3.84	
Land										
Labour	5.20	2.66	0.79							
Non-Labour	2.15	1.10	0.33							
Sub-Totals	7.35	3.76	1.12						12.23	
Summary										
Sub-Total Labour	14.32	19.84	13.54						47.70	
Sub-Total Non-Labour	4.28	5.53	2.93						12.74	
Total Maintenance	18.60	25.37	16.47						60.44	
Operational Refurbishment										
Total Operational Refurbishment				35.53					35.53	
Maintenance Support										
Field Support					1.73					
Other Support					6.51					
Direct charges					5.25					
Total Maintenance Support					13.49				13.49	
Network Operations										
Switching						6.79				
Asset Monitoring Team						3.16				
NMS Support						2.85				
Operations Support						2.36				
Total Network Operations						15.16			15.16	
Total Direct Operations & Maintenance	18.60	25.37	16.47	35.53	13.49	15.16			124.62	
Other Controllable										
Asset Management Support										
Grid Planning							6.47			
Network Support							14.57			
IT Support							9.75			
Customer & Regulatory Support							4.89			
Total Asset Management Support							35.68		35.68	
Corporate Support										
Total Corporate Support									15.64	
Total Other Controllable							35.68	15.64	51.32	
Total Controllable Operating	18.60	25.37	16.47	35.53	13.49	15.16	35.68	15.64	175.94	
Summary										
Total Labour	14.32	19.84	13.54	35.53	7.49	13.77	32.43	8.09	145.01	
Total Maintenance Non-Labour	4.28	5.53	2.93						12.74	
Total Other Non-Labour					6.00	1.38	3.24	7.55	18.17	
Other Operating										
Insurances									9.07	
Network Support									5.79	
Debt Raising									3.72	
Total Operating Expenditure									194.50	

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2.4 FORECAST OPEX by expenditure category
Year Ended 30 June 2015

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Year 8 - Year Ended 30 June 2015

	Field Maintenance			Operational Refurbishment	Maintenance Support	Network Operations	AM Support / Corporate		TOTAL	Revenue Cap Allowance
	Routine	Condition-Based	Corrective				Network	Non-Network		
\$ million, Real (2011/12)										
Direct Operations & Maintenance										
Field Maintenance										
Secondary Systems										
Labour	1.98	1.82	4.16							
Non-Labour	0.11	0.11	0.27							
Sub-Totals	2.09	1.93	4.43						8.45	
Substations										
Labour	4.24	9.57	5.39							
Non-Labour	1.27	2.88	1.57							
Sub-Totals	5.51	12.45	6.96						24.92	
Lines										
Labour	2.78	6.22	1.98							
Non-Labour	0.65	1.40	0.38							
Sub-Totals	3.43	7.62	2.36						13.41	
Communications										
Labour	0.70	0.60	2.08							
Non-Labour	0.15	0.13	0.45							
Sub-Totals	0.85	0.73	2.53						4.11	
Land										
Labour	5.65	2.89	0.86							
Non-Labour	2.25	1.16	0.35							
Sub-Totals	7.90	4.05	1.21						13.16	
Summary										
Sub-Total Labour	15.35	21.10	14.47						50.92	
Sub-Total Non-Labour	4.43	5.68	3.02						13.13	
Total Maintenance	19.78	26.78	17.49						64.05	
Operational Refurbishment										
Total Operational Refurbishment				33.93					33.93	
Maintenance Support										
Field Support					1.80					
Other Support					6.77					
Direct charges					5.41					
Total Maintenance Support					13.98				13.98	
Network Operations										
Switching						7.09				
Asset Monitoring Team						3.30				
NMS Support						2.98				
Operations Support						2.47				
Total Network Operations						15.84			15.84	
Total Direct Operations & Maintenance	19.78	26.78	17.49	33.93	13.98	15.84			127.80	
Other Controllable										
Asset Management Support										
Grid Planning							6.74			
Network Support							15.13			
IT Support							10.13			
Customer & Regulatory Support							5.07			
Total Asset Management Support							37.07		37.07	
Corporate Support										
Total Corporate Support								18.00	18.00	
Total Other Controllable							37.07	18.00	55.07	
Total Controllable Operating	19.78	26.78	17.49	33.93	13.98	15.84	37.07	18.00	182.87	
Summary										
Total Labour	15.35	21.10	14.47	33.93	7.82	14.44	33.81	10.36	151.28	
Total Maintenance Non-Labour	4.43	5.68	3.02						13.13	
Total Other Non-Labour					6.17	1.39	3.27	7.65	18.48	
Other Operating										
Insurances									9.79	
Network Support									4.35	
Debt Raising									3.99	
Total Operating Expenditure									201.02	

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2.5 FORECAST OPEX by expenditure category
Year Ended 30 June 2016

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Table 6.1

Year 9 - Year Ended 30 June 2016										
	Field Maintenance			Operational Refurbishment	Maintenance Support	Network Operations	AM Support / Corporate		TOTAL	Revenue Cap Allowance
	Routine	Condition-Based	Corrective				Network	Non-Network		
\$ million, Real (2011/12)										
Direct Operations & Maintenance										
Field Maintenance										
Secondary Systems										
Labour	2.13	1.96	4.45							
Non-Labour	0.12	0.11	0.28							
Sub-Totals	2.25	2.07	4.73						9.05	
Substations										
Labour	4.48	10.10	5.69							
Non-Labour	1.30	2.95	1.61							
Sub-Totals	5.78	13.05	7.30						26.13	
Lines										
Labour	3.04	6.83	2.18							
Non-Labour	0.68	1.48	0.40							
Sub-Totals	3.72	8.31	2.58						14.61	
Communications										
Labour	0.77	0.65	2.27							
Non-Labour	0.16	0.14	0.48							
Sub-Totals	0.93	0.79	2.75						4.47	
Land										
Labour	6.11	3.13	0.93							
Non-Labour	2.36	1.21	0.36							
Sub-Totals	8.47	4.34	1.29						14.10	
Summary										
Sub-Total Labour	16.53	22.67	15.52						54.72	
Sub-Total Non-Labour	4.62	5.89	3.13						13.64	
Total Maintenance	21.15	28.56	18.65						68.36	
Operational Refurbishment										
Total Operational Refurbishment				35.15					35.15	
Maintenance Support										
Field Support					1.88					
Other Support					7.08					
Direct charges					5.69					
Total Maintenance Support					14.65				14.65	
Network Operations										
Switching						7.47				
Asset Monitoring Team						3.48				
NMS Support						3.13				
Operations Support						2.60				
Total Network Operations						16.68			16.68	
Total Direct Operations & Maintenance	21.15	28.56	18.65	35.15	14.65	16.68			134.84	
Other Controllable										
Asset Management Support										
Grid Planning							7.04			
Network Support							15.77			
IT Support							10.56			
Customer & Regulatory Support							5.29			
Total Asset Management Support							38.66		38.66	
Corporate Support										
Total Corporate Support								20.70	20.70	
Total Other Controllable							38.66	20.70	59.36	
Total Controllable Operating	21.15	28.56	18.65	35.15	14.65	16.68	38.66	20.70	194.20	
Summary										
Total Labour	16.53	22.67	15.52	35.15	8.19	15.26	35.35	12.45	161.12	
Total Maintenance Non-Labour	4.62	5.89	3.13						13.64	
Total Other Non-Labour					6.45	1.43	3.31	8.26	19.45	
Other Operating										
Insurances									10.32	
Network Support									4.73	
Debt Raising									4.22	
Total Operating Expenditure									213.48	

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2.6 FORECAST OPEX by expenditure category
Year Ended 30 June 2017

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[Opex instructions - Table 6.1](#)

Year 10 - Year Ended 30 June 2017

	Year 10 - Year Ended 30 June 2017								TOTAL	Revenue Cap Allowance
	Field Maintenance			Operational Refurbishment	Maintenance Support	Network Operations	AM Support / Corporate			
\$ million, Real (2011/12)	Routine	Condition-Based	Corrective							Network
Direct Operations & Maintenance										
Field Maintenance										
Secondary Systems										
Labour	2.28	2.09	4.76							
Non-Labour	0.12	0.12	0.29							
Sub-Totals	2.40	2.21	5.05							9.66
Substations										
Labour	4.71	10.60	5.97							
Non-Labour	1.33	2.99	1.63							
Sub-Totals	6.04	13.59	7.60							27.23
Lines										
Labour	3.17	7.13	2.28							
Non-Labour	0.69	1.50	0.40							
Sub-Totals	3.86	8.63	2.68							15.17
Communications										
Labour	0.83	0.71	2.47							
Non-Labour	0.17	0.15	0.50							
Sub-Totals	1.00	0.86	2.97							4.83
Land										
Labour	6.51	3.33	0.99							
Non-Labour	2.43	1.25	0.37							
Sub-Totals	8.94	4.58	1.36							14.88
Summary										
Sub-Total Labour	17.50	23.86	16.47							57.83
Sub-Total Non-Labour	4.74	6.01	3.19							13.94
Total Maintenance	22.24	29.87	19.66							71.77
Operational Refurbishment										
Total Operational Refurbishment				39.53						39.53
Maintenance Support										
Field Support					1.95					
Other Support					7.33					
Direct charges					5.79					
Total Maintenance Support					15.07					15.07
Network Operations										
Switching						7.76				
Asset Monitoring Team						3.61				
NMS Support						3.26				
Operations Support						2.70				
Total Network Operations						17.33				17.33
Total Direct Operations & Maintenance	22.24	29.87	19.66	39.53	15.07	17.33				143.70
Other Controllable										
Asset Management Support										
Grid Planning							7.29			
Network Support							16.31			
IT Support							10.92			
Customer & Regulatory Support							5.47			
Total Asset Management Support							39.99			39.99
Corporate Support										
Total Corporate Support								18.73		18.73
Total Other Controllable							39.99	18.73		58.72
Total Controllable Operating	22.24	29.87	19.66	39.53	15.07	17.33	39.99	18.73		202.42
Summary										
Total Labour	17.50	23.86	16.47	39.53	8.51	15.89	36.68	10.36		168.80
Total Maintenance Non-Labour	4.74	6.01	3.19							13.94
Total Other Non-Labour					6.56	1.44	3.32	8.37		19.69
Other Operating										
Insurances										11.04
Network Support										2.53
Debt Raising										4.36
Total Operating Expenditure										220.36

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3.1 HISTORIC CAPEX by project category

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[Link to Historic Capex Instructions - Table 6.2](#)

[Link to Historic Capex Commentary - Table 5.2](#)

\$ million nominal

Project Category		2007/08	2008/09	2009/10	2010/11	2011/12	TOTAL
NETWORK							
LOAD DRIVEN	Augmentation	410.88	344.18	207.00	133.08	292.01	1,387.15
	Easements	23.04	18.92	16.48	16.74	19.76	94.94
	Connections	22.74	27.39	30.78	12.58	17.44	110.93
NON-LOAD DRIVEN	Replacements	169.31	186.85	139.81	206.30	255.24	957.51
	Security/Compliance	2.21	2.07	9.90	3.60	29.01	46.79
	Other	7.30	16.02	11.63	15.41	45.52	95.88
NON NETWORK							
BUSINESS IT	Information Technology	10.41	12.71	11.55	12.40	14.79	61.86
SUPPORT THE BUSINESS	Commercial Buildings	4.40	6.67	10.62	14.62	4.18	40.48
	Motor Vehicles	0.77	1.26	3.29	2.97	4.25	12.54
	Moveable Plant	1.31	1.19	1.40	2.14	1.77	7.81
TOTAL FDC							
TOTAL HISTORIC CAPEX		652.36	617.26	442.46	419.84	683.95	2,815.87

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3.2 HISTORIC CAPEX by asset class

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[Link to Capex Instructions - Table](#)

6.2

\$ million nominal

Asset class

	2007/08	2008/09	2009/10	2010/11	2011/12	TOTAL
	Cost	Cost	Cost	Cost	Cost	Cost
Transmission Lines (Overhead)	310.32	304.47	240.86	164.55	260.53	1,280.73
Transmission Lines (Underground)	0.00	0.00	0.00	0.00	0.06	0.06
Transmission Lines (Refit)	0.00	0.00	0.00	0.00	0.00	0.00
Substations Primary Plant	204.19	176.54	85.12	130.35	225.87	822.07
Substations Secondary Systems	83.62	73.36	55.98	59.00	98.45	370.41
Communications Assets	13.87	16.91	13.92	11.65	40.47	96.82
Communications - Civil Works	0.00	0.00	0.01	0.00	0.00	0.01
Network Switching Centres	0.87	4.70	3.24	5.54	12.05	26.40
Land	7.54	5.70	4.24	5.65	4.82	27.95
Easements	15.50	16.01	12.24	10.96	16.72	71.43
	0.00	0.00	0.00	0.00	0.00	0.00
Commercial Buildings	4.27	3.85	10.62	14.62	4.17	37.53
Computer Equipment	9.86	13.06	11.55	12.40	14.79	61.66
Office Furniture & Miscellaneous	0.13	0.01	0.00	0.00	0.01	0.15
Office Machines	0.00	0.03	0.00	0.00	0.00	0.03
Vehicles	0.77	1.26	3.29	2.98	4.25	12.55
Moveable Plant	1.43	1.36	1.40	2.14	1.77	8.10
Insurance Spares	0.00	-0.72	-0.21	1.47	0.00	0.54
						0
Equity raising costs	8.74					8.74
TOTAL CAPEX	661.11	616.54	442.25	421.31	683.96	2,825.18

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[Link to Historic Capex Instructions - Table 6.2](#)

[Link to Historic Capex Commentary Table 5.2](#)

\$M nominal

Yearly expenditure by project

Project ID	Project Description	Commissioning Date	Category*	Yearly expenditure by project					
				2007/08	2008/09	2009/10	2010/11	2011/12	TOTAL
CP.00364	Murarie 2nd 300MVAZ75/110kV Transformer	Dec-08	Augmentation	2.30	1.71	0.00	1.45	0.00	5.46
CP.00618	Kareeya-Innisfail Line Replace Easmt Acq	Oct-07	Easement	3.73	1.20	0.00	0.00	0.00	4.93
CP.00659	El Arish 132/22kV Substation Establishment	Feb-09	Augmentation	14.50	1.98	0.09	0.00	0.00	16.57
CP.00704	Springdale - Tarong Easement Acquisition	Apr-12	Easement	1.53	1.62	0.44	0.15	1.06	4.80
CP.00736	Greenbank Stat Var Compensator	Dec-08	Augmentation	16.02	11.58	0.05	0.00	0.00	27.65
CP.00752	Nebo & QR SVCs Secondary Systems Replacement	Feb-08	Replacement	8.54	1.04	0.02	0.00	0.00	9.60
CP.00836	Cairns 132kV Substation Replacement	Oct-10	Replacement	0.07	1.14	2.87	2.51	0.22	6.81
CP.00861	Innisfail Edmonton Easement Acquisition	Dec-08	Easement	0.93	5.00	1.90	0.30	0.00	8.13
CP.00880	Tully - Cardwell 132kV Line Replacement	Oct-13	Replacement	0.00	0.00	0.03	3.12	8.12	11.27
CP.00881	Ingham/Yabulu Sth 275/132kV Line Replacement	Oct-11	Replacement	0.37	6.00	30.19	54.23	4.74	95.53
CP.00882	Cardwell - Ingham South 132kV Line Replacement	Dec-13	Replacement	0.01	0.00	0.07	1.24	6.83	8.15
CP.01015	Woolooga 275/132kV Substn Replacement	Oct-09	Replacement	14.53	14.10	5.59	0.16	0.00	34.38
CP.01017	Tarong Secondary Systems Replacement	Aug-11	Replacement	0.68	4.04	8.10	1.71	0.52	15.05
CP.01018	Swanbank A 110kV Substation Rebuild	Jun-11	Replacement	0.12	0.88	6.58	14.50	0.00	22.08
CP.01019	Moranbah Secondary Systems Replacement	Oct-12	Replacement	0.00	0.00	0.21	2.22	12.18	14.61
CP.01021	Lilyvale Secondary Systems Replacement	Jun-12	Replacement	0.00	0.02	0.28	6.03	1.84	8.17
CP.01022	Townsville South Secondary Systems Upgrade	Feb-09	Replacement	1.29	1.25	0.17	0.00	0.00	2.71
CP.01030	Belmont/Murarie Easement Acquisition	Oct-06	Easement	1.34	1.45	0.00	0.00	0.00	2.79
CP.01035	Ross-Townsville South Transmission Reinforcement	Jul-08	Augmentation	9.28	0.17	0.00	0.00	0.00	9.45
CP.01063	Blackwater Secondary Systems Replacement	May-10	Replacement	0.59	0.30	1.34	0.26	0.00	2.49
CP.01064	Gin Gin Secondary Systems Replacement	Mar-12	Replacement	0.02	0.28	3.33	7.26	0.98	11.87
CP.01067	Clare 132kV Substation Replacement	Nov-09	Replacement	2.45	19.55	2.31	0.98	0.00	25.29
CP.01078	Nudgee 275/110kV Easement Acquisition	Oct-08	Easement	1.01	0.29	0.84	1.97	0.35	4.46
CP.01087	Bohrie River to Townsville GT 132kV Line	Oct-07	Replacement	2.01	2.07	0.14	0.00	0.00	4.22
CP.01090	Woree 275kV Reinforcement	Oct-07	Augmentation	8.90	0.07	0.00	0.00	0.00	8.97
CP.01091	Garbutt - Alan Sherriff T/L Replacement	Oct-13	Replacement	0.01	0.00	0.00	0.02	0.25	0.28
CP.01100	Middle Ridge - Greenbank Easement Acquisition	Sep-07	Easement	1.27	1.05	0.29	0.24	0.43	3.28
CP.01101	NQ Transmission Reinf St2 (Nebo-Strath)	Aug-09	Augmentation	58.95	72.18	5.26	0.72	0.23	137.34
CP.01121 & CP.01038 & CP.01081	Goodna, Algester and Sumner Sub Establishments	Nov 06/Sep 07	Augmentation	1.50	0.01	0.01	0.00	0.00	1.52
CP.01124	Mackay Transmission Reinforcement	Feb-08	Augmentation	18.28	0.40	0.00	0.00	0.00	18.68
CP.01127	Loganlea 110kV Secondary Systems Replacement	Jun-14	Replacement	0.00	0.00	0.00	0.44	6.27	6.71
CP.01131	Tully-Innisfail 132kV Transmission Line	Aug-08	Replacement	58.08	5.25	0.00	0.00	0.00	63.33
CP.01133	Belmont No 4 Transformer Replacement	Jul-10	Replacement	0.03	2.19	2.08	2.21	0.00	6.51
CP.01134	South Pine 110kV Substn Replacement	Oct-10	Replacement	14.33	20.77	14.92	4.37	1.94	56.33
CP.01135	Redbank Plains Secondary System Replacement	Jul-12	Replacement	0.00	0.00	0.03	0.08	3.96	4.07
CP.01137	Ross - Yabulu Transmission Reinforcement	Oct-09	Augmentation	22.76	15.28	1.21	0.00	0.00	39.25
CP.01138	SEQ Augmentation	Feb-08	Augmentation	47.69	-3.21	0.01	0.00	0.00	44.49
CP.01144	Townsville East Substation Establishment	Sep-08	Augmentation	22.08	3.06	0.00	0.00	0.00	25.14
CP.01147	Belmont No 5 Transformer Replacement	Nov-09	Replacement	0.05	4.58	2.87	0.01	0.00	7.51
CP.01155	MT England Secondary Systems Replacement	Aug-10	Replacement	0.55	1.57	2.23	0.80	0.00	5.15

REASON FOR PROJECT	Reg Test / Business Case (Y/N)	Reg Test / Business Case Cost Estimate	Reason for Variance from Cost Estimate / Expected Commissioning Date
Reliability	Reg Test - AFR	\$9.2m (\$2005/06)	Commissioning advanced to maintain reliability of supply by facilitating staged rebuild of another project in the area.
Age / Condition / Obsolescence	Board Memo	\$5.9m (escal)	Higher costs due to significant community opposition and additional legal impediments (eg. EPBC Act).
Reliability	Reg Test	\$13.5m (\$2005/06) \$14.6m (escal)	Slight delay to completion due to industrial action. Higher costs due to increase in materials and labour costs, and wet weather.
Strategic Easement	Board Memo	\$8.2m (escal)	
Reliability	Reg Test	\$32.9m (\$2006/07)	Minor delay in commissioning due to industrial action.
Age / Condition / Obsolescence	Board Memo	\$27.6m (\$2004/05) \$28.9m (escal)	
Age / Condition / Obsolescence	Bus Case	\$10.8m (\$2003/04) \$11.0m (escal)	
Age / Condition / Obsolescence	Approval Memo	\$1.7m (escal)	Access delayed due to additional legal impediments (eg. EPBC Act and other environmental permits). Higher costs primarily associated with increased land values.
Age / Condition / Obsolescence	Bus Case	\$57.3m (escal)	
Age / Condition / Obsolescence	Bus Case	\$97.3m (escal)	
Age / Condition / Obsolescence	Bus Case	\$60.3m (escal)	
Age / Condition / Obsolescence	Bus Case	\$33.5m (escal)	Delay in commissioning due to manufacturer defect and industrial action.
Obsolescence / Safety	Bus Case	\$21.9m (escal)	
Operational	Bus Case	\$31.2m (escal)	
Age / Condition / Obsolescence	Bus Case	\$17.4m (escal)	
Age / Condition / Obsolescence	Bus Case	\$10.5m (escal)	
Obsolescence	Bus Case	\$10.2m (\$2005/06) \$10.5m (escal)	Significant works completed by December 2008. Final commissioning delayed due to reorganisation of workload.
Reliability	Bus Case	\$6.0m (\$2001/02)	
Reliability	Reg Test	\$16.2m (\$2005/06) \$17.3m (escal)	Delay to completion due to transformer failure at another site (ie. resources diverted) and wet weather. Higher materials and labour costs and prolongation costs.
Age / Condition / Obsolescence	Bus Case	\$3.6m (escal)	
Obsolescence / Safety	Bus Case	\$12.3m (escal)	
Age / Condition / Obsolescence	Bus Case	\$25.8m (escal)	Delay in commissioning caused by wet weather and third parties.
Reliability	Bus Case	\$6.2m (escal)	
Safety	Bus Case	\$17.1m (\$2004/05) \$18.0m (escal)	Cost increases due to wet weather, third party delays and higher dismantling costs.
Reliability	Bus Case	\$12.4m (\$2005/06) \$13.4m (escal)	
Age / Condition / Obsolescence	Bus Case		
Demand Growth / Reliability	Bus Case	\$5.5m (escal)	
Reliability	Reg Test	\$118.9m (\$2005/06) \$132.2m (escal)	Delay in commissioning due to wet weather and coordination with other projects.
Reliability	Reg Test	\$34.9m (\$2004/05)	Delay in commissioning of Algester due to third party.
Reliability	Reg Test	\$44.7m (\$2005/06) \$51.4m (escal)	Higher costs due to wet weather (prolongation costs) and increased construction costs. Prolonged period of wet weather also impacted commissioning.
Age / Condition / Obsolescence	Bus Case	\$55.1m (escal)	Higher costs due primarily to wet weather (prolongation costs) and increases in materials costs. Delays due to wet weather and legal access impediments. Reapproved at \$99.8m.
Age / Condition / Obsolescence	Bus Case	\$7.2m (escal)	
Safety	Bus Case	\$48.2m (escal)	Commissioning delayed to coordinate with other works at South Pine. Higher costs largely associated with staging and increased input costs.
Age / Condition / Obsolescence	Bus Case	\$4.6m (escal)	
Reliability	Reg Test	\$39.4m (\$2006/07)	Commissioning delayed due to impacts of unreliable flood level data and project coordination.
Reliability	Reg Test	\$94.8m (\$2005/06) \$99.9m (escal)	Cost increases due to higher construction costs (labour, materials). Lines commissioned in Feb. Transformer commissioned Nov 08. Delay was due to manufacture issues.
Reliability	Reg Test	\$23.4m (\$2005/06) \$24.3m (escal)	Delays due to environmental permit process and excessive wet weather. Higher materials and implementation costs (eg. due to wet weather). Reapproved at \$35.0m.
Age / Condition / Obsolescence	Bus Case	\$8.2m (escal)	
Age / Condition / Obsolescence	Bus Case	\$8.4m (escal)	

Project ID	Project Description	Commissioning Date	Category^	Yearly expenditure by project						REASON FOR PROJECT	Business Case (Y/N)	Business Case Cost Estimate	Reason for Variance from Cost Estimate /
				2007/08	2008/09	2009/10	2010/11	2011/12	TOTAL				
CP.97054	CAD Data Mining	Apr-12	Information Technology	0.00	0.00	0.00	0.00	0.31	0.31	Operational			
CP.97055	Ratings Calculation Applications	Apr-13	Information Technology	0.00	0.00	0.00	0.00	0.51	0.51	Operational			
CP.97056	Data Centre Replacement Program 2011 / 2012	Jun-12	Information Technology	0.00	0.00	0.00	0.00	1.03	1.03	Age / Condition / Obsolescence			
CP.97058	Desktop Replacement Program 2011/2012	Jun-12	Information Technology	0.00	0.00	0.00	0.00	1.33	1.33	Age / Condition / Obsolescence			
CP.97060	Project Integration and Reporting	Dec-12	Information Technology	0.00	0.00	0.00	0.00	0.36	0.36	Operational			
CP.97061	Market Impact Assessment	Jun-12	Information Technology	0.00	0.00	0.00	0.00	0.31	0.31	Operational			
CP.97063	ODMS Improvements for Grid Planning	Apr-12	Information Technology	0.00	0.00	0.00	0.00	0.31	0.31	Age / Condition / Obsolescence			
CP.97065	Enterprise Data Services	Apr-12	Information Technology	0.00	0.00	0.00	0.00	0.62	0.62	Operational			
CP.97066	Protection Settings Extended Functions	Apr-12	Information Technology	0.00	0.00	0.00	0.00	0.36	0.36	Operational			
CP.97067	Dynamic Line Rating	Apr-12	Information Technology	0.00	0.00	0.00	0.00	0.26	0.26	Operational			
CP.97068	Risk Management Tool	Dec-12	Information Technology	0.00	0.00	0.00	0.00	0.36	0.36	Operational			
CP.97069	Tasks Management	Apr-12	Information Technology	0.00	0.00	0.00	0.00	0.51	0.51	Operational			
CP.97070	Workflow Development	Apr-12	Information Technology	0.00	0.00	0.00	0.00	0.31	0.31	Operational			
	IT Less than \$250k	ongoing	Information Technology	0.96	0.84	0.28	0.79	0.75	3.62				
	Fleet*	ongoing	Fleet	0.77	1.29	3.31	2.91	4.25	12.53				
	NN - Buildings	ongoing	NN - Buildings	4.40	6.67	10.62	14.78	4.18	40.65				
	NN - Tools and Equipment	ongoing	NN - Tools and Equipment	1.31	1.19	1.40	2.14	1.77	7.81				

* Adjusted to include proceeds from fleet disposals.

Subtotal	16.89	21.86	26.88	32.23	25.02	122.88
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*Note that values in these columns are estimates only

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4.1 FORECAST CAPEX by project category

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[Link to Forecast Capex Instructions - Table 6.3](#)

\$ million, real (2011/12 mid year)

Project Category		2012/13	2013/14	2014/15	2015/16	2016/17	TOTAL
NETWORK							
LOAD DRIVEN	Augmentation	324.79	324.37	322.24	220.69	335.57	1,527.66
	Easements	17.30	21.81	29.95	34.30	41.04	144.40
	Connections	19.25	11.85	4.50	7.03	11.56	54.19
NON-LOAD DRIVEN	Replacements	-	-	-	-	-	-
	Security/Compliance	310.04	277.11	259.39	229.58	206.62	1,282.74
	Other	25.43	20.42	8.94	2.80	1.67	59.26
NON NETWORK							
BUSINESS IT	Information Technology	33.10	30.69	19.90	21.74	12.74	118.16
SUPPORT THE BUSINESS	Commercial Buildings	15.75	14.93	16.11	15.60	15.67	78.05
	Motor Vehicles	5.74	3.30	3.11	2.87	3.09	18.10
	Moveable Plant	3.36	2.66	3.43	2.65	3.67	15.77
TOTAL HISTORIC CAPEX		1.93	1.80	1.72	1.83	1.86	9.13
		756.68	708.92	669.29	539.10	633.49	3,307.47

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4.2 FORECAST CAPEX by asset class

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[Link to Capex Instructions - Table 6.3](#)

\$ million, (2011/12 mid year)

Asset class

Transmission Lines (Overhead)
Transmission Lines (Underground)
Transmission Lines (Refit)
Substations Primary Plant
Substations Secondary Systems
Communications Assets
Communications - Civil Works
Network Switching Centres
Land
Easements
Commercial Buildings
Computer Equipment
Office Furniture & Miscellaneous
Office Machines
Vehicles
Moveable Plant
Insurance Spares
Equity raising costs

	2012/13	2013/14	2014/15	2015/16	2016/17	TOTAL
Transmission Lines (Overhead)	325.05	290.08	293.13	193.85	294.01	1,396.11
Transmission Lines (Underground)	1.41	6.15	9.20	8.96	9.93	35.65
Transmission Lines (Refit)	16.24	37.30	53.48	26.60	7.38	141.00
Substations Primary Plant	206.05	182.99	139.85	124.15	146.21	799.25
Substations Secondary Systems	107.01	113.09	90.09	75.66	86.06	471.91
Communications Assets	44.01	26.58	23.11	18.22	9.46	121.37
Communications - Civil Works	0.00	0.00	0.00	0.00	0.00	0.00
Network Switching Centres	12.78	8.25	6.12	34.41	15.10	76.66
Land	3.55	3.77	3.31	0.67	0.22	11.52
Easements	13.82	18.04	26.64	33.63	40.82	132.95
Commercial Buildings	5.73	3.29	3.10	2.87	3.09	18.07
Computer Equipment	15.75	14.93	16.11	15.60	15.67	78.05
Office Furniture & Miscellaneous	0.01	0.01	0.01	0.01	0.01	0.03
Office Machines	0.00	0.00	0.00	0.00	0.00	0.00
Vehicles	3.36	2.66	3.43	2.65	3.67	15.77
Moveable Plant	1.93	1.80	1.72	1.83	1.86	9.13
Insurance Spares						
Equity raising costs	23.80					
TOTAL CAPEX	780.48	708.92	669.29	539.10	633.49	3,331.27

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4.4 FORECAST CAPEX - Non-Network - by project

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[Link to Forecast Capex Instructions - Table 6.3](#)

[Link to Forecast Capex Commentary - Table 5.3](#)

\$ million, (2011/12 mid year)

Yearly expenditure by project							REASON FOR PROJECT	Business Case (Y/N)			
Project ID	Project Description	Estimated Commissioning Date	Category^	2012/13	2013/14	2014/15			2015/16	2016/17	TOTAL
CP.96825	Minor Application Upgrades / Purchases	Jun-13	Information Technology	0.41	0.00	0.00	0.00	0.00	0.41	Operational	
CP.96826	Powerlink Alert Management System Replacement	Jun-16	Information Technology	0.00	0.00	0.00	1.03	0.00	1.03	Age / Condition / Obsolescence	
CP.96827	SAP Manager Self Service	Apr-13	Information Technology	0.26	0.00	0.00	0.00	0.00	0.26	Operational	
CP.96828	Workflow Development	Apr-13	Information Technology	0.51	0.00	0.00	0.00	0.00	0.51	Operational	
CP.96925	Ratings Management	Jun-12	Information Technology	0.51	0.00	0.00	0.00	0.00	0.51	Operational	Bus Case
CP.96928	Digital Network Connectivity Database Replacement	Jun-13	Information Technology	1.00	0.00	0.00	0.00	0.00	1.00	Age / Condition / Obsolescence	Bus Case
CP.96936	Enterprise Incident Management	Feb-13	Information Technology	0.26	0.00	0.00	0.00	0.00	0.26	Age / Condition / Obsolescence	
CP.96937	Contract Management System	Feb-13	Information Technology	0.26	0.00	0.00	0.00	0.00	0.26	Age / Condition / Obsolescence	
CP.96945	Improved Access to Operational and Event	Jun-15	Information Technology	0.00	0.59	0.98	0.00	0.00	1.57	Operational	
CP.96947	Advanced Ratings Management	Jun-15	Information Technology	0.00	0.00	1.63	0.00	0.00	1.63	Operational	
CP.96948	SAP PM Exploitation	Apr-13	Information Technology	1.03	0.00	0.00	0.00	0.00	1.03	Operational	
CP.96949	Network Equipment Health Index	Jun-13	Information Technology	0.58	0.00	0.00	0.00	0.00	0.58	Operational	
CP.96950	Management of Restricted Access Zones	Apr-14	Information Technology	0.00	0.80	0.00	0.00	0.00	0.80	Operational	Bus Case
CP.96952	Extend Asset Performance Data Analysis	Jun-15	Information Technology	0.00	0.00	1.26	0.00	0.00	1.26	Operational	
CP.96953	Implement Data Quality Tool	Apr-14	Information Technology	0.00	0.58	0.00	0.00	0.00	0.58	Operational	
CP.96954	Secondary Systems and Communications Outage Analysis	Jun-15	Information Technology	0.00	0.00	1.44	0.00	0.00	1.44	Operational	
CP.96956	Resource Planning	Jun-13	Information Technology	1.39	0.00	0.00	0.00	0.00	1.39	Operational	
CP.96957	Integrated Resource Allocation	Jun-14	Information Technology	0.00	1.79	0.00	0.00	0.00	1.79	Operational	
CP.96958	Extended Web Based Integration of Power Systems Information	Jun-17	Information Technology	0.00	0.00	0.00	0.00	1.03	1.03	Operational	
CP.96959	High Voltage Index Application	Jun-13	Information Technology	0.52	0.00	0.00	0.00	0.00	0.52	Operational	
CP.96961	CAD Data Mining	Jun-17	Information Technology	0.00	0.00	0.00	0.00	1.41	1.41	Age / Condition / Obsolescence	
CP.96962	Extend TNDB Network Model	Jun-15	Information Technology	0.00	0.00	1.03	0.00	0.00	1.03	Operational	
CP.96963	NPR Master Data Management	Jun-13	Information Technology	0.77	0.00	0.00	0.00	0.00	0.77	Age / Condition / Obsolescence	
CP.96964	Implement Data Mining tool	Jun-16	Information Technology	0.00	0.00	0.00	1.13	0.00	1.13	Operational	
CP.96965	Implement Enterprise Collaboration and Knowledge Management Tool	Jun-14	Information Technology	0.73	0.31	0.00	0.00	0.00	1.04	Operational	
CP.96967	Electrical Network Design Tools	Jun-13	Information Technology	1.72	0.00	0.00	0.00	0.00	1.72	Operational	
CP.96968	Meter Data Management and Customer Billing	Jun-14	Information Technology	0.00	1.05	0.00	0.00	0.00	1.05	Age / Condition / Obsolescence	
CP.96969	Ops Guide Content	Apr-13	Information Technology	0.60	0.00	0.00	0.00	0.00	0.60	Operational	
CP.96970	SPF Major Upgrade	Jun-15	Information Technology	0.00	0.00	1.05	0.00	0.00	1.05	Age / Condition / Obsolescence	
CP.96971	Master Data Management Tool	Jun-15	Information Technology	0.00	0.00	0.95	0.00	0.00	0.95	Operational	
CP.96973	Business Performance Reporting and Analytics	Apr-14	Information Technology	0.83	0.31	0.00	0.00	0.00	1.14	Operational	
CP.96974	Objective Major Upgrade	Apr-13	Information Technology	0.84	0.00	0.00	0.00	0.00	0.84	Age / Condition / Obsolescence	
CP.96975	Osi Pi Major Upgrade	Jun-14	Information Technology	0.00	1.23	0.00	0.00	0.00	1.23	Age / Condition / Obsolescence	
CP.96976	PQ Maps Major Upgrade	Apr-14	Information Technology	0.00	0.71	0.00	0.00	0.00	0.71	Age / Condition / Obsolescence	
CP.96977	Project Server Major Upgrade	Jun-16	Information Technology	0.00	0.00	0.00	1.03	0.00	1.03	Age / Condition / Obsolescence	
CP.96978	SAP Major Upgrade	Jun-16	Information Technology	0.00	0.00	0.82	1.46	0.00	2.28	Age / Condition / Obsolescence	
CP.96979	Internet Upgrade - External Website	Apr-16	Information Technology	0.00	0.00	0.00	0.70	0.00	0.70	Age / Condition / Obsolescence	
CP.96980	Intranet Upgrade - Internal Website	Apr-15	Information Technology	0.00	0.00	0.76	0.00	0.00	0.76	Age / Condition / Obsolescence	
CP.96981	SAP PM Exploitation	Apr-16	Information Technology	0.00	0.00	0.00	1.03	0.00	1.03	Operational	
CP.96982	Minor Application Upgrades / Purchases (13/14)	Jun-14	Information Technology	0.00	0.41	0.00	0.00	0.00	0.41	Operational	
CP.96983	Minor Application Upgrades / Purchases (14/15)	Jun-15	Information Technology	0.00	0.00	0.41	0.00	0.00	0.41	Operational	
CP.96984	Minor Application Upgrades / Purchases (15/16)	Jun-16	Information Technology	0.00	0.00	0.00	0.41	0.00	0.41	Operational	
CP.96985	Minor Application Upgrades / Purchases (16/17)	Jun-17	Information Technology	0.00	0.00	0.00	0.00	0.41	0.41	Operational	
CP.96986	Mobile Working Solutions (13/14)	Jun-14	Information Technology	0.00	0.31	0.00	0.00	0.00	0.31	Operational	
CP.96987	Mobile Working Solutions (14/15)	Jun-15	Information Technology	0.00	0.00	0.31	0.00	0.00	0.31	Operational	
CP.96988	Mobile Working Solutions (15/16)	Jun-16	Information Technology	0.00	0.00	0.00	0.31	0.00	0.31	Operational	
CP.96989	Mobile Working Solutions (16/17)	Jun-17	Information Technology	0.00	0.00	0.00	0.00	0.31	0.31	Operational	
CP.96995	Database Consolidation and Augmentation	Jun-17	Information Technology	0.00	0.00	0.00	0.00	1.28	1.28	Operational	
CP.96996	ESX Platform Upgrade	Jun-17	Information Technology	0.00	0.00	0.00	0.96	0.51	1.47	Operational	
CP.96997	Electronic Bulletinboard	Apr-16	Information Technology	0.00	0.00	0.00	0.75	0.00	0.75	Operational	
CP.96998	Storage Consolidation	Jun-17	Information Technology	0.00	0.00	0.00	0.00	4.77	4.77	Operational	
CP.96999	Fault Tolerant Architecture	Jun-15	Information Technology	0.00	0.00	1.54	0.00	0.00	1.54	Operational	
CP.97001	Mobile Working Solutions (12/13)	Jun-13	Information Technology	0.31	0.00	0.00	0.00	0.00	0.31	Replacement	
CP.97003	Hierarchical Storage Management	Apr-17	Information Technology	0.00	0.00	0.00	0.00	0.51	0.51	Replacement	
CP.97004	NAC Implementation	Jun-17	Information Technology	0.00	0.00	0.00	0.00	0.96	0.96	Security	
CP.97005	Application Performance Monitoring	Jun-16	Information Technology	0.00	0.00	0.00	1.03	0.00	1.03	Additional requirements	

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5.1 Historic and Forecast Opex Commentary proforma: key cost drivers

This pro forma is designed to allow the TNSP to provide context and background for the quantitative opex templates.

The historic opex tables (1.1 - 1.7) provide a column where the key cost drivers for *historic opex* should be briefly listed. This commentary pro forma provides opportunity for more detailed explanations regarding material changes in particular expenses over the relevant regulatory period.

The forecast opex tables (2.1 - 2.7) provide a similar column where the key cost drivers for *forecast opex* should be briefly listed. This commentary pro forma provides the opportunity for more detailed explanations regarding material changes in particular forecast expenses.

The commentary should address the following:

- >The main cost drivers for the particular opex item (eg changes in CPI, legislative and regulatory requirements, environmental factors).
- >Were these increases foreseeable? If not, why not?
- >Details of management induced opex efficiencies achieved.
- >Major opex risks and mitigation strategies.
- >Key Performance Indicators – are these benchmarked against other transmission companies?

In addition, the TNSP is requested to provide:

- >Definitions of 'opex' and 'capex' used by the business. Further, the TNSP should provide definitions for the categories and activities used in the opex templates. These definitions should be added to the definition section in table 6.1
- >A discussion on the relationship between opex and capex.
- >Details of changes in accounting policies over the past regulatory period and how they may have impacted on opex in general or specific opex items.

[Home](#)

[Link to Historic Opex Summary - Table 1.1](#)

[Link to Forecast Opex Summary - Table 2.1](#)

Commentary on cost drivers and material changes over the current regulatory period

Chapter nine of the Revised Revenue Proposal provides information on Powerlink's historic operating expenditure performance.

Supporting information

Supporting information is provided, or referenced, in Chapter nine of the Revised Revenue Proposal.

Commentary on cost drivers and material changes affecting the upcoming regulatory period

Chapter nine of the Revised Revenue Proposal provides information on Powerlink's forecast operating expenditure.

Supporting information

Supporting information is provided, or referenced, in Chapter nine of the Revised Revenue Proposal.

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5.2 Historic Capex Commentary Proforma: reasons for variance

This pro forma is designed to allow TNSP's to provide context and background for the quantitative historic capex templates.

Tables 3.3 & 3.4 provide a column where reasons for capex cost variances may be briefly listed. This pro forma provides the opportunity for more detailed reasons to be given for material differences between actual project costs and amounts included in the regulatory test/business case assessment.

The commentary should address the following:

- >The main reasons for the project being undertaken (eg. demand growth)
- >The main reasons for material cost variances for the particular project (eg changes in material costs, legislative and regulatory requirements, environmental factors, technology changes) and whether they were foreseeable.
- >The main reason for any material variance in commissioning date (e.g delays in supply of materials, environmental approvals etc) and whether they were foreseeable.
- >How does the project align with the TNSP's asset management strategy/plan?
- >Reference to the project's assessment in the TNSP's Annual Planning Reports.
- >Details of management induced capex efficiencies which have reduced costs.
- >Major project risks and strategies undertaken to mitigate them.

Commentary on reasons for variance

Chapter seven of the Revised Revenue Proposal provides information on Powerlink's historic capital expenditure performance.

Supporting information

Supporting information is provided, or referenced, in Chapter seven of the Revised Revenue Proposal.

[Home](#)

[Link to Historic
Capex by
category - Table
3.1](#)

[Link to Historic
Capex by Asset
Class - Table 3.2](#)

[Link to Historic
Capex - Network -
Table 3.3](#)

[Link to Historic
Capex - Non-
Network - Table
3.4](#)

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5.3 Forecast Capex Commentary Proforma: reasons for project

This pro forma is designed to provide context and background for the quantitative forecast capex templates, by specifying matters that the AER will take into account in assessing the TNSP's proposed expenditure.

Table 4.3 provides a column where reasons for the project can be provided. This pro forma provides the opportunity for more detailed reasons to be given for factors influencing the proposed spend, including load growth, planned generation and the range of foreseeable scenarios and their probabilities of occurring.

The commentary should address the following:

- >The theme sets upon which the proposed capex spend is based
- > The scenarios derived from the above theme sets and their relevant probabilities.
- > Project specific information in addition to the cost information provided in the forward capex templates.

In addition, the TNSP is requested to provide:

- >Details of its capital expenditure and approvals processes.
- >Details of its overall asset management strategy/plan.
- >Relevant Annual Planning Reports.
- >Consultants reports on the probabilistic methodology adopted, its assumptions, inputs and detailed information on the outcomes.

Theme sets and Scenarios modelled

Chapter seven of the Revised Revenue Proposal provides information on Powerlink's forecast capital expenditure.

Supporting information

Supporting information is provided, or referenced, in Chapter seven of the Revised Revenue Proposal.

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[Link to Forecast
Capex by
category - Table
4.1](#)

[Link to Forecast
by Asset Class -
Table 4.2](#)

[Link to Forecast
Capex - Network -
Table 4.3](#)

[Link to Forecast
Capex - Non-
Network - Table
4.4](#)

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6.1 OPEX - Instructions and definitions

Note: These definitions are a guide only. TNSPs can adapt the definition section as necessary, given consultation with the AER.

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 transmission 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 Submission Guidelines and Cost Allocation Guidelines.</p> <p>Values for years 4 and 5 are estimated values only</p> <p>All cells must be filled out where possible, especially in relation to any commentary on variances.</p>
DEFINITIONS	<p>Asset Manager Support: Asset Management (AM) Support are those operational activities required to support the strategic development and ongoing asset management of the network. Asset Management Support has 4 major sub-elements: Grid Planning, Network Support, Network Customer & Regulatory Support, IT Support, and Operational Support.</p> <p>Condition based maintenance: usually evolves out of routine maintenance or an inspection regime, where it is identified that the condition of plant or equipment is such that action must be taken to avoid future defects (e.g. operating out of tolerance).</p> <p>Corporate Support : Corporate Support encompasses the support activities required by Powerlink in order to ensure adequate and effective corporate governance.</p> <p>Corrective maintenance: activities that restore a failed component to an operational state.</p> <p>Directing Operating and Maintenance Expenditure are the costs directly associated with maintaining and operating the network and include Field Maintenance, Operational Refurbishment, Maintenance Support and Network Operations.</p> <p>Field Maintenance: Field maintenance includes all field activities, performed by Maintenance Service Providers, to ensure plant can perform its required functions.</p> <p>Key cost drivers: significant factors driving expenditure such as network growth, labour and non-labour cost increases, the age and condition of assets and legislative requirements.</p> <p>Maintenance Support: non-field (non-MSP) based support for maintenance activities and primarily comprises the asset management functions for the maintain/operate phase of an the asset life cycle such as maintenance strategy development, performance management and maintenance auditing and include Field Support, Other Support and Direct Charges.</p> <p>Network Operations: are activities are the 'control centre' functions as well as those additional activities required to ensure the safe, reliable and efficient operational management of the Queensland transmission network and include Switching, Asset Monitoring Team, NMS Support and Operations Support.</p> <p>Non-network: all activities not directly related to the operation and maintenance of the network, including administrative, planning and engineering support costs.</p> <p>Other Controllable Costs encompass activities and services integral to managing the network business but not directly related to maintaining or operating the actual network.</p> <p>Other Operating Expenditure is driven by exogenous events outside of Powerlink's control and comprise three categories of Insurance, Network Support and Debt Raising Costs.</p> <p>Operational refurbishment: activities that return an asset to its pre-existing condition or function, or activities undertaken on part of an asset to return that specific component to its pre-existing condition or function.</p> <p>Opex: expenditure related to operating and maintaining assets which is not capex.</p> <p>Routine maintenance: recurrent activities undertaken to maintain assets and defined by maintenance plans implemented in Powerlink's corporate asset management system .</p> <p>Support/corporate: activities and services integral to managing the network business but not directly related to maintaining or operating the actual network.</p>



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6.2 HISTORIC CAPEX - Instructions and definitions	
Note: These definitions are a guide only. TNSPs can adapt the definition section as necessary, given consultation with the AER.	
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 TNSP's forecast capex claim.</p> <p>Specifying expenditure by project enables the AER to select projects on which to undertake more detailed analysis.</p> <p>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 transmission services.</p> <p>Categorisation of capex should be performed according to the primary reason for expenditure.</p> <p>Capex amounts should be entered exclusive of customer contributions.</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 Submission Guidelines.</p> <p>Values for year 5 are estimated values only.</p> <p>All cells must be filled out where possible, especially in relation to any commentary on variances.</p>
DEFINITIONS:	<p>Augmentation: are as defined under the National Electricity Rules (NER) as works to enlarge a network or to increase the capability of a network to transmit (or distribute) active energy.</p> <p>Business case: a detailed cost/benefit analysis undertaken to support an investment.</p> <p>Business IT: Business IT expenditure.</p> <p>Capex: expenditure that satisfies one or more of the following requirements - relates to the purchase or construction of a new asset; increases the functionality of the asset; or extends the service life of the asset.</p> <p>Connections: changes to connections between the transmission and distribution networks.</p> <p>Easements: land acquisitions and rights of way for transmission lines / substations.</p> <p>Other (Non-Load Driven): all other projects associated with the network which provides prescribed transmission services such as communications system enhancements.</p> <p>Project ID: A unique numerical identifier for a given project</p> <p>Project Description: A short description of the project</p> <p>Regulatory Test: the test as promulgated by the AER to assess augmentation expenditure. A prudence test must be applied to other capex.</p> <p>Replacements: replacement or life extension of network assets.</p> <p>Security/Compliance: projects undertaken to ensure the physical security of assets and compliance with amendments to various technical, safety or environmental legislation.</p> <p>Support the business: non-network capex relating to commercial buildings, motor vehicles and moveable plant (but excluding IT).</p>



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6.3 FORECAST CAPEX - Instructions and definitions	
Note: These definitions are a guide only. TNSPs can adapt the definition section as necessary, given consultation with the AER.	
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 transmission 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 Submission 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:	Definitions are the same as described in pro forma statement 6.2 Scenario: for scenario projects project timing is dependent on market scenarios (probabilistic planning). The commissioning date for these projects is based on the median date. The forecast capital expenditure is based on costs for the median date. Information on the probabilistic methodology adopted is contained and referenced in Chapter 8 of the Revenue Proposal.

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[Link to Forecast Capex commentary - Table 5.3](#)

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: Powerlink Queensland

Reporting date: 1 July 2012 to 30 June 2017

Proposed value
%

Nominal risk free rate	4.25
Real risk free rate	1.59
Inflation Rate	2.62
Proportion of debt funding	60.00
Nominal pre-tax cost of debt	8.16
Cost of debt margin over the risk free rate	3.91
Market risk premium	6.50
Corporate tax rate	30.00
Effective tax rate for equity	19.87
Proportion of franking credits attributed to shareholders	65.00
Equity beta	80.00
Post-tax nominal return on equity	9.45
Nominal vanilla WACC	8.68

7.2 Depreciation

Inputs for Post-Tax Revenue Model

Values 2011/12 end of year

Asset Class	Opening WDV	Ave Lives Remaining	Standard Lives	CAPITAL EXPENDITURE				
				2012/13	2013/14	2014/15	2015/16	2016/17
Transmission Lines (Overhead)	3351.84			329.26	293.85	296.94	196.37	297.83
Transmission Lines (Underground)	57.81			1.43	6.23	9.32	9.08	10.06
Transmission Lines (Refit)	0.00			16.45	37.79	54.17	26.94	7.48
Substations Primary Plant	1785.94			208.73	185.37	141.67	125.77	148.12
Substations Secondary Systems	438.17			108.40	114.56	91.27	76.64	87.18
Communications Assets	83.07			44.58	26.93	23.41	18.45	9.58
Communications - Civil Works	17.94			0.00	0.00	0.00	0.00	0.00
Network Switching Centres	18.32			12.94	8.36	6.20	34.86	15.30
Land	151.50			3.59	3.82	3.35	0.68	0.22
Easements	413.65			14.00	18.27	26.98	34.07	41.35
	0.00			0.00	0.00	0.00	0.00	0.00
Commercial Buildings	77.33			5.80	3.33	3.14	2.90	3.13
Computer Equipment	45.68			15.96	15.12	16.32	15.80	15.87
Office Furniture & Miscellaneous	1.11			0.01	0.01	0.01	0.01	0.01
Office Machines	1.12			0.00	0.00	0.00	0.00	0.00
Vehicles	14.58			3.41	2.89	3.48	2.69	3.71
Moveable Plant	11.43			1.95	1.82	1.74	1.85	1.89
Insurance Spares	6.70			0.00	0.00	0.00	0.00	0.00
	0.00			0.00	0.00	0.00	0.00	0.00
Equity raising costs	9.27			23.80				
Total	6485.46			790.33	718.15	678.00	546.12	641.73

Capitalisation (as commissioned)

Asset Class	Opening WDV	Ave Lives Remaining	Standard Lives	CAPITALISATIONS				
				2012/13	2013/14	2014/15	2015/16	2016/17
Transmission Lines (Overhead)	2936.57	30.7	50	200.60	337.63	189.13	440.09	54.74
Transmission Lines (Underground)	50.65	24.0	45	0.06	0.01	4.23	10.82	6.08
Transmission Lines (Refit)	0.00	n/a	15	0.00	10.51	54.78	32.19	44.33
Substations Primary Plant	1564.67	27.6	40	181.44	272.41	122.63	147.59	114.20
Substations Secondary Systems	383.88	11.8	15	87.12	111.69	102.13	88.77	84.87
Communications Assets	72.78	12.9	15	41.90	40.35	15.07	22.20	22.41
Communications - Civil Works	15.72	17.8	40	0.00	0.00	0.00	0.00	0.00
Network Switching Centres	16.05	10.2	12	9.02	16.36	6.50	6.06	48.20
Land	132.73	n/a	n/a	7.16	0.13	8.52	2.21	0.22
Easements	362.41	n/a	n/a	11.06	5.89	19.77	28.69	23.69
	0.00	n/a	n/a	0.00	0.00	0.00	0.00	0.00
Commercial Buildings	67.75	31.7	40	5.80	3.33	3.14	2.90	3.13
Computer Equipment	40.02	4.2	5	18.33	16.86	15.49	14.39	18.03
Office Furniture & Miscellaneous	0.97	3.9	7	0.01	0.01	0.01	0.01	0.01
Office Machines	0.98	4.9	7	0.00	0.00	0.00	0.00	0.00
Vehicles	12.78	5.7	7	3.41	2.89	3.48	2.69	3.71
Moveable Plant	10.01	5.3	7	1.95	1.82	1.74	1.85	1.89
Insurance Spares	6.70	n/a	n/a	0.00	0.00	0.00	0.00	0.00
	0.00	n/a	n/a	0.00	0.00	0.00	0.00	0.00
Equity raising costs	9.27	39.0	43	23.80				
Total	5683.94			591.69	819.29	546.61	800.46	425.50

Depreciation Schedule

Values 2011/12 end of year

Asset Class	2012/13	2013/14	2014/15	2015/16	2016/17	Total
Transmission Lines (Overhead)	95.53	99.66	106.61	110.50	119.56	120.69
Transmission Lines (Underground)	2.11	2.11	2.11	2.21	2.45	2.59
Transmission Lines (Refit)	0.00	0.00	0.72	4.48	6.69	9.73
Substations Primary Plant	56.76	61.43	68.44	71.59	75.39	78.33
Substations Secondary Systems	32.48	38.46	46.12	53.13	59.22	65.04
Communications Assets	5.63	8.50	11.27	12.30	13.83	15.36
Communications - Civil Works	0.88	0.88	0.88	0.88	0.88	0.88
Network Switching Centres	1.57	2.34	3.75	4.30	4.82	8.96
Land	0.00	0.00	0.00	0.00	0.00	0.00
Easements	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	0.00	0.00
Commercial Buildings	2.14	2.29	2.37	2.45	2.53	2.61
Computer Equipment	9.44	13.21	16.64	19.83	15.83	17.07
Office Furniture & Miscellaneous	0.25	0.25	0.25	0.22	0.00	0.00
Office Machines	0.20	0.20	0.20	0.20	0.17	0.00
Vehicles	2.26	2.76	3.15	3.66	4.06	3.84
Moveable Plant	1.89	2.18	2.44	2.70	2.97	1.92
Insurance Spares	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	0.00	0.00
Equity raising costs	0.24	0.81	0.81	0.81	0.81	0.81
Total Depreciation	211.37	235.08	265.77	289.27	309.01	327.82

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7.3 Service Target Performance Incentive Scheme Parameters

Instructions:

TNSPs are required to list all appropriate parameters for the revenue reset period, grouped under the relevant subheading.

TNSPs must list the relevant unit for each parameter, what weighting that sub-parameters is given and the targets for the reset period.

Targets must be provided for each year of the revenue reset period. Proposed caps and collars for those targets should also be included.

These should be included in the format X / Y / Z, where X is the collar, Y is the target and Z is the cap.

Measure	Unit	Weighting Factor(%)	Proposed Collar / Targets / Cap				
			2013	2014	2015	2016	2017
Circuit Availability Parameter							
Transmission Lines Availability	%	0.10	97.51 / 98.67 / 99.83	97.51 / 98.67 / 99.83	97.51 / 98.67 / 99.83	97.51 / 98.67 / 99.83	97.51 / 98.67 / 99.83
Transformer Availability	%	0.10	98.11 / 98.59 / 99.08	98.11 / 98.59 / 99.08	98.11 / 98.59 / 99.08	98.11 / 98.59 / 99.08	98.11 / 98.59 / 99.08
Reactive Plant Availability	%	0.15	94.45 / 97.15 / 99.84	94.45 / 97.15 / 99.84	94.45 / 97.15 / 99.84	94.45 / 97.15 / 99.84	94.45 / 97.15 / 99.84
Peak Availability	%	0.10	98.31 / 98.76 / 99.20	98.31 / 98.76 / 99.20	98.31 / 98.76 / 99.20	98.31 / 98.76 / 99.20	98.31 / 98.76 / 99.20
Loss of Supply Parameter							
Loss of Supply > 0.75 system minutes	Events	0.30	2 / 1 / 0	2 / 1 / 0	2 / 1 / 0	2 / 1 / 0	2 / 1 / 0
Loss of Supply > 0.10 system minutes	Events	0.15	10 / 4 / 3	10 / 4 / 3	10 / 4 / 3	10 / 4 / 3	10 / 4 / 3
Outage Parameter							
Average Outage Duration	Minutes	0.10	1306 / 859 / 412	1306 / 859 / 412	1306 / 859 / 412	1306 / 859 / 412	1306 / 859 / 412

Notes:

The Peak Availability Parameter applies to all individual plant of transmission lines, transformers and reactive plant from November to March, with a time period from 07:00 to 22:00 (not including weekends and public holidays).

The Reactive Plant Availability and Average Outage Duration excludes capacitor banks during off-peak periods from 1 April through to 31 October.

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7.4 Efficiency Benefit Sharing Scheme Parameters

Enter actual/target data in blue cells only

Year	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Actual CPI, end of year (lagged March)		155.6	162.2	166.2	171.0	176.7	181.1					
Actual CPI, midyear (lagged September)			158.6	166.5	168.6	173.3	178.9					
Target (Decision - \$000s real June 2007)			143,119	143,739	154,227	147,589	151,914					
Target (\$000s real June 2012)			166,590	167,311	179,519	171,793	176,827					
Adjustments to Target*												
Debt raising costs (real)			- 2,058	- 2,373	- 2,640	- 2,780	- 2,939					
Insurance & Self-insurance (real)			- 6,377	- 6,642	- 6,926	- 7,172	- 7,389					
Capex efficiencies (real)			- 3,719	- 3,719	- 3,719	- 3,719	- 3,719					
Network support costs (real)			- 27,971	- 20,184	- 25,782	- 9,568	- 9,661					
Adjusted Target (\$000s real June 2012)	-	-	126,465	134,394	140,452	148,553	153,118					
Actual (\$000s nominal)			144,087	142,796	152,108	150,873	162,474					
Actual (\$000s real June 2012)			164,544	155,332	163,401	157,679	164,492					
Adjustments to Actual*												
Debt management costs (real)			- 258	- 258	- 344	- 260						
Insurance & Self-insurance (real)			- 6,145	- 6,446	- 7,211	- 7,675						
Capex efficiencies (real)			-	-	-	-						
Network support costs (real)			- 31,206	- 16,404	- 13,662	-						
Adjusted Actual (\$000s real June 2012)	-	-	126,935	132,224	142,184	149,743	154,308					
Incremental Gain (\$000s real June 2012)			- 470	2,640	- 3,902	542	-					
Carryover [^]												
Year -4			- 470	- 470	- 470	- 470	- 470					
Year -3				2,640	2,640	2,640	2,640	2,640				
Year -2					- 3,902	- 3,902	- 3,902	- 3,902	- 3,902			
Year -1						542	542	542	542	542		
Year 0												
Total Carryover Amount (\$000s real June 2012)								- 1,190	- 719	- 3,360	542	-
PTRM inputs (\$m real June 2012)								- 1.19	- 0.72	- 3.36	0.54	-

2007-08	2008-09	2009-10	2010-11	2011-12
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Forecasts (\$000s real June 2007)

1,768	2,038	2,268	2,389	2,525
5,479	5,706	5,950	6,162	6,348
3,195	3,195	3,195	3,195	3,195
24,030	17,340	22,150	8,220	8,300

Actuals (\$000s nominal)

226	237	320	249
5,381	5,926	6,713	7,344
27,326	15,080	12,718	-

-4,726 Without movements in provisions excluded - as per Revised Revenue Proposal

4.726 Row 34 for input into Revised Revenue Proposal PTRM

* Additional rows may be added as necessary but are subject to approval by the AER. Adjustments must relate to cost categories approved by the AER to be excluded from the scheme in a relevant revenue determination. See clause 2.3 of the Efficiency Benefit

[^] Raw efficiency gains are calculated as per the formulae below. For the purposes of calculating the carry-over amount, the adjusted target and actual amounts are to be used.

For the first application of the scheme, the efficiency carry forward amount for the first year of the regulatory period is expressed mathematically as:

$$E-4 = F-4 - A-4 \quad \text{where } A-4 \text{ is the actual operating cost for year -4 and } F-4 \text{ is the regulatory target operating cost for that year.}$$

For subsequent applications of the scheme, the efficiency carry forward amount for the first year of the regulatory period is expressed mathematically as:

$$E-4 = (F-4 - A-4) - (F-5 - A-5) + (F-6 - A-6)$$

For savings that arose in the second to fifth year of the regulatory period, the efficiency carry forward amount is calculated as:

$$E_t = (F_t - A_t) - (F_{t-1} - A_{t-1})$$

where: E_t is the efficiency benefit/loss in year t ;

A_t , A_{t-1} is the actual operating cost for the years t and $t-1$ respectively; and

F_t , F_{t-1} is the forecast operating cost for the years t and $t-1$ respectively