

Attachment 8: Roll Forward of the Asset Base

TransGrid

Roll Forward Regulated Asset Base 1999/00 to 2003/04

The Roll Forward Regulated Asset Base has been prepared by TransGrid with the assistance of KPMG and NERA.

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Asset roll forward

RAB - page 2

		Years ended 30 June										
		2000	2001	2002	2003	2004						
Opening RAB												
Lines	Opening inputs	1,032.72	1,033.85	1,090.98	1,192.91	1,215.61						
underground cables	(at 1 July 1999)	38.43	38.06	38.82	49.73	100.76						
Substations		461.56	482.21	547.55	609.34	720.53						
SCADA		15.55	20.28	33.92	55.87	54.74						
Non network		57.13	68.37	76.70	82.15	85.71						
Non depreciable assets		329.15	344.02	371.74	388.42	409.37						
Southern NSW		62.45	59.81	60.07	59.11	59.01						
Total opening assets		1,996.99	2,046.59	2,219.79	2,437.53	2,645.73						
Add actual CPI												
ABS data	March to March	Inputs	121.8	125.2	132.7	136.6	141.3	144.5				
Actual CPI			2.79%	5.99%	2.94%	3.44%	2.26%					
Actual CPI as allowed in TransGrid MAR												
Lines			28.83	61.93	32.06	41.04	27.53					
underground cables			1.07	2.28	1.14	1.71	2.28					
Substations			12.88	28.89	16.09	20.97	16.32					
SCADA			0.43	1.21	1.00	1.92	1.24					
Non network			1.59	4.10	2.25	2.83	1.94					
Non depreciable assets			9.19	20.61	10.93	13.36	9.27					
Southern NSW			1.74	3.58	1.77	2.03	1.34					
			55.75	122.60	65.24	83.87	59.92	387.37				
Depreciation as per decision adjusted for actual CPI												
Lines	From page 8	-	38.42	-	40.71	-	42.38	-	46.96	-	50.12	
underground cables		-	1.44	-	1.52	-	1.52	-	1.63	-	1.63	
Substations		-	30.84	-	33.40	-	35.26	-	39.77	-	41.36	
SCADA		-	3.62	-	5.79	-	8.53	-	11.41	-	12.26	
Non network		-	6.76	-	7.70	-	8.30	-	9.40	-	9.85	
Non depreciable assets		-	-	-	-	-	-	-	-	-	-	
Southern NSW		-	4.39	-	4.60	-	4.65	-	4.46	-	4.55	
		-	85.46	-	93.71	-	100.65	-	113.62	-	119.77	513.21

Calculated here:
Opening assets multiplied by
CPI

See Depreciation calculations
below. Decision depreciation
adjusted for CPI

Asset roll forward (Cont)

	Years ended 30 June					Rolling in Unforecast capex		
	2000	2001	2002	2003	2004			
Add decision Capex at actual CPI						(from page 7)		
Lines		<i>From page 4</i>	10.72	35.91	112.25	28.61	24.20	70.30
underground cables			-	-	11.29	50.94	50.50	39.98
Substations	38.61	69.85	80.96	130.00	97.76			81.99
SCADA	7.91	18.22	29.48	8.35	3.16			0.45
Non network	16.40	11.94	11.50	10.13	10.00			52.00
Non depreciable assets	5.68	7.12	5.75	7.58	3.93			25.37
Southern NSW	-	1.28	1.92	2.33	1.89			
	79.32	144.31	253.15	237.95	191.44	906.17		270.08
Closing RAB								
Lines	1,033.85	1,090.98	1,192.91	1,215.61	1,217.22			70.30
underground cables	38.06	38.82	49.73	100.76	151.92			39.98
Substations	482.21	547.55	609.34	720.53	793.25			81.99
SCADA	20.28	33.92	55.87	54.74	46.87			0.45
Non network	68.37	76.70	82.15	85.71	87.80			52.00
Non depreciable assets	344.02	371.74	388.42	409.37	422.57			25.37
Southern NSW	59.81	60.07	59.11	59.01	57.68			-
	2,046.59	2,219.79	2,437.53	2,645.73	2,777.31			270.08
Opening RAB	1,996.99	2,046.59	2,219.79	2,437.53	2,645.73			-
Add actual CPI	55.75	122.60	65.24	83.87	59.92			-
Depreciation as per decision (allocated)	- 85.46	- 93.71	- 100.65	- 113.62	- 119.77			-
Add decision Capex at actual CPI	79.32	144.31	253.15	237.95	191.44			270.08
Closing RAB	2,046.59	2,219.79	2,437.53	2,645.73	2,777.31			270.08

RAB - page 3

Decision capex adjusts for actual CPI
Unforecast capex column includes unforecast capex and capitalised "interest"

Calculated here:
Opening assets, plus Actual CPI, plus decision capex at actual CPI, less depreciation at actual CPI

Closing RAB as at 30 June 04 is equal to Closing RAB (roll forward) plus unforecast capex plus unrecouped returns which is equal to **\$3,047.40 million**

3,047.40

Calculation of Decision Capex at Actual CPI

RAB - page 4

		Years ended 30 June					
		2000	2001	2002	2003	2004	Total
Decision Capex (Nominal) ACCC Decision Table 4.3 recalculated as incurred							
Lines	<i>Inputs - Refer to Roll Forward Attachment B</i>	10.76	35.07	109.85	27.92	23.82	207.41
underground cables		-	-	11.05	49.71	49.71	110.47
Substations		38.74	68.22	79.23	126.86	96.22	409.26
SCADA		7.94	17.79	28.85	8.15	3.11	65.84
Non network		16.46	11.66	11.25	9.89	9.84	59.10
Non depreciable assets		5.70	6.95	5.63	7.40	3.87	29.55
Southern NSW	<i>From page 9</i>	-	1.23	1.84	2.20	1.79	7.06
		<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
		79.60	140.91	247.69	232.13	188.36	888.69
CPI	<i>Inputs</i>	3.15%	3.15%	3.15%	3.15%	3.15%	(as per Table 2.1 of ACCC TransGrid decision)
Factor		1.032	1.064	1.098	1.132	1.168	
CPI	<i>Inputs</i>	2.35%	2.35%	2.35%	2.35%	2.35%	(as per Table 2.1 of ACCC SMHEA decision)
Factor		1.024	1.048	1.072	1.097	1.123	
Real Decision Capex							
Lines		10.43	32.96	100.09	24.66	20.40	
underground cables		-	-	10.07	43.91	42.57	
Substations		37.56	64.11	72.19	112.06	82.40	
SCADA		7.70	16.72	26.29	7.20	2.66	
Non network		15.96	10.96	10.25	8.74	8.43	
Non depreciable assets		5.53	6.53	5.13	6.54	3.31	
Southern NSW	<i>At SMHEA Decision CPI</i>	-	1.17	1.72	2.00	1.59	
		<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
		77.17	132.46	225.72	205.11	161.37	801.82
Nominal decision capex at actual CPI							
CPI	<i>(From ABS actual and RAB forecast data)</i>	2.79%	5.99%	2.94%	3.44%	2.26%	
		<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
Factor		1.028	1.089	1.122	1.160	1.186	
Lines		10.72	35.91	112.25	28.61	24.20	
underground cables		-	-	11.29	50.94	50.50	
Substations		38.61	69.85	80.96	130.00	97.76	
SCADA		7.91	18.22	29.48	8.35	3.16	
Non network		16.40	11.94	11.50	10.13	10.00	
Non depreciable assets		5.68	7.12	5.75	7.58	3.93	
Southern NSW		-	1.28	1.92	2.33	1.89	
		<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
		79.32	144.31	253.15	237.95	191.44	906.17

Taken to page 3

Decision Capex (allocated over lines and subs)

Calculated here:
Decision capex at "real"
(backing out decision CPI)

Decision capex recast at actual CPI to provide nominal capex

Calculation of Additional Assets for Actual Capex

RAB - page 5

Years ended 30 June

2000 2001 2002 2003 2004 Total

Capital expenditure (Actual as spent - Nominal) - As incurred

		2000	2001	2002	2003	2004	Total
A	Lines						
	underground cables						
	Substations						
	SCADA						
	Non network						
	Non depreciable assets						
	Southern NSW						
	Inputs						
		65.31	44.15	101.15	15.83	23.71	
		1.79	1.82	19.05	77.66	44.37	
		74.29	66.60	63.56	125.99	151.25	
		14.09	22.98	18.95	4.75	4.41	
		29.27	15.07	18.33	14.63	22.17	
		5.16	9.69	12.90	11.16	12.69	1,092.77 TG
		-	1.28	1.92	2.33	1.89	7.42 SMHEA
		189.92	161.58	235.86	252.36	260.48	1,100.20

Actual capex at nominal terms

Less ACCC Decision capex at actual CPI (Calculated "as incurred")

		2000	2001	2002	2003	2004	Total
B	Lines						
	underground cables						
	Substations						
	SCADA						
	Non network						
	Non depreciable assets						
	Southern NSW						
	From page 4						
		10.72	35.91	112.25	28.61	24.20	
		-	-	11.29	50.94	50.50	
		38.61	69.85	80.96	130.00	97.76	
		7.91	18.22	29.48	8.35	3.16	
		16.40	11.94	11.50	10.13	10.00	
		5.68	7.12	5.75	7.58	3.93	
		-	1.28	1.92	2.33	1.89	
		79.32	144.31	253.15	237.95	191.44	906.17

Calculation of Additional Assets for Actual Capex (Cont) - Difference and Lost Returns "ON"

RAB - page 6

		Years ended 30 June					
		2000	2001	2002	2003	2004	Total
Difference between actual "as incurred" (excluding Snowy) and ACCC Decision forecast							
C=A-B	Lines	54.59	8.24 -	11.10 -	12.78 -	0.49	38.45
	underground cables	1.79	1.82	7.76	26.72 -	6.14	31.95
	Substations	35.68 -	3.25 -	17.40 -	4.00	53.49	64.52
	SCADA	6.18	4.77 -	10.54 -	3.60	1.25 -	1.94
	Non network	12.87	3.13	6.84	4.50	12.17	39.50
	Non depreciable assets	- 0.52	2.57	7.15	3.57	8.76	21.54
	Southern NSW	-	-	-	-	-	-
		110.60	17.27 -	17.29	14.41	69.04	194.03
Capitalisation of Returns							
	WACC	Input	10.35%	13.78%	10.51%	11.04%	9.78%
(ACCC Decision - Nominal Vanilla WACC - Compounded)							
	Lines	Yr1	2.82	7.91	6.86	7.97	7.84
		Yr2		0.57	0.92	1.07	1.06
		Yr3		-	0.58 -	1.29 -	1.27
		Yr4			-	0.71 -	1.32
		Yr5				-	0.02
							31.85
	underground cables	Yr1	0.09	0.26	0.22	0.26	0.26
		Yr2		0.13	0.20	0.24	0.23
		Yr3			0.41	0.90	0.89
		Yr4				1.48	2.76
		Yr5				-	0.30
							8.02
	Substations	Yr1	1.85	5.17	4.49	5.21	5.13
		Yr2	-	0.22 -	0.36 -	0.42 -	0.42
		Yr3		-	0.91 -	2.02 -	1.99
		Yr4			-	0.22 -	0.41
		Yr5					2.62
							17.47

Calculated here:
 Difference between actual "as incurred" and ACCC Decision forecast (including QNI 500kV assets) excluding Snowy assets so that returns are not capitalised on the Snowy assets

These calculations provide for the returns on investment between the returns on investment between commissioning date and the date they will be rolled in, which will be treated as 30 June 2004

Half years return allowed in year of commissioning, and full years there after

Interest is not compounded from year to year

		Years ended 30 June					Total
		2000	2001	2002	2003	2004	
SCADA	Yr1	0.32	0.90	0.78	0.90	0.89	
	Yr2		0.33	0.54	0.62	0.61	
	Yr3		-	0.55	-	1.22	1.20
	Yr4			-	0.20	-	0.37
	Yr5						0.06
							2.39
Non network	Yr1	0.67	1.87	1.62	1.88	1.85	
	Yr2		0.22	0.35	0.41	0.40	
	Yr3			0.36	0.79	0.78	
	Yr4				0.25	0.46	
	Yr5					0.60	
							12.50
Non depreciable assets	Yr1	-	0.03	-	0.08	-	0.07
	Yr2			0.18	0.29	0.34	0.33
	Yr3				0.38	0.83	0.82
	Yr4					0.20	0.37
	Yr5						0.43
							3.83
Total Return capitalised into capex		5.72	17.22	14.93	17.19	20.99	76.05

Total value to be capitalised in to asset base at end of period

Lines
 underground cables
 Substations
 SCADA
 Non network
 Non depreciable assets
 Southern NSW

Capex (from page 6) (excludes Snowy)	Return on Capital	Total to roll in at 30-Jun-04
38.45	31.85	70.30
31.95	8.02	39.98
64.52	17.47	81.99
-	2.39	0.45
39.50	12.50	52.00
21.54	3.83	25.37
-	nil	-
194.03	76.05	270.08

The unforecast capex and unrecouped returns is equivalent to \$270.08m

270.08

Taken to page 3

Depreciation

		Years ended 30 June					Total
		2000	2001	2002	2003	2004	
Depreciation	(as per pdf ACCC Doc)						
Lines	<i>Inputs</i>	- 37.13	- 38.20	- 40.70	- 43.31	- 47.41	
underground cables		- 1.39	- 1.43	- 1.46	- 1.50	- 1.54	
Substations		- 29.81	- 31.34	- 33.86	- 36.68	- 39.12	
SCADA		- 3.50	- 5.43	- 8.19	- 10.52	- 11.60	
Non network		- 6.53	- 7.23	- 7.97	- 8.67	- 9.32	
Non depreciable assets							
Southern NSW							
		- 78.4	- 83.6	- 92.2	- 100.7	- 109.0	463.84
Depreciation - as per 2000 TransGrid decision <i>Section 6.4.3</i>	<i>Inputs</i>	-81.36	-87.03	-93.94	-106.52	-113.41	
Economic depreciation - as per 2000 TransGrid Decision <i>Table 6.1</i>		-26.14	-31.14	-37.03	-41.96	-47.12	
Depreciation as per decision (allocated)							
Lines		- 38.55	- 39.75	- 41.48	- 45.82	- 49.33	
underground cables		- 1.44	- 1.49	- 1.49	- 1.59	- 1.60	
Substations		- 30.95	- 32.61	- 34.51	- 38.81	- 40.71	
SCADA		- 3.63	- 5.65	- 8.35	- 11.13	- 12.07	
Non network		- 6.78	- 7.52	- 8.12	- 9.17	- 9.70	
Non depreciable assets		-	-	-	-	-	
Southern NSW	<i>From page 9</i>	- 4.37	- 4.42	- 4.45	- 4.22	- 4.31	
		- 85.73	- 91.45	- 98.39	- 110.74	- 117.72	504.02
	Depreciation from TransGrid decision	- 81.36	- 87.03	- 93.94	- 106.52	- 113.41	
	Depreciation from SMHEA decision	- 4.37	- 4.42	- 4.45	- 4.22	- 4.31	
		- 85.73	- 91.45	- 98.39	- 110.74	- 117.72	
Adjustment for actual CPI	<i>Inputs from above</i>						
ACCC TransGrid Decision CPI (Decision Table 2.1)		3.15%	3.15%	3.15%	3.15%	3.15%	
Factor		1.032	1.064	1.098	1.132	1.168	
ACCC SMHEA Decision CPI (Decision Table 2.1)		2.35%	2.35%	2.35%	2.35%	2.35%	
Factor		1.024	1.048	1.072	1.097	1.123	
Actual CPI	<i>Inputs from above</i>	2.79%	5.99%	2.94%	3.44%	2.26%	
		2.79%	5.99%	2.94%	3.44%	2.26%	
Factor		1.028	1.089	1.122	1.160	1.186	
Lines		- 38.42	- 40.71	- 42.38	- 46.96	- 50.12	
underground cables		- 1.44	- 1.52	- 1.52	- 1.63	- 1.63	
Substations		- 30.84	- 33.40	- 35.26	- 39.77	- 41.36	
SCADA		- 3.62	- 5.79	- 8.53	- 11.41	- 12.26	
Non network		- 6.76	- 7.70	- 8.30	- 9.40	- 9.85	
Non depreciable assets		-	-	-	-	-	
Southern NSW	Adjusted for SMHEA CPI	- 4.39	- 4.60	- 4.65	- 4.46	- 4.55	
		- 85.46	- 93.71	- 100.65	- 113.62	- 119.77	513.21 <i>To page 2</i>

Calculated here:
 Depreciation totals from the ACCC decision are reallocated over asset classes based on the depreciation by class as disclosed in the ACCC pdf document received 17 July 2003)

Calculated here:
 Depreciation is adjusted for actual CPI rather than forecast CPI as applied in the decision

Depreciation - SMHEA

	Years ended 30 June					Total
	2000	2001	2002	2003	2004	
Calculating gross depreciation for roll forward						
Opening asset base	62.45	59.55	57.76	56.51	55.82	
Capital expenditure		1.23	1.84	2.20	1.79	<i>To page 4</i>
Economic depreciation (net)	- 2.90 -	3.02 -	3.09 -	2.89 -	3.00	
Closing asset base	59.55	57.76	56.51	55.82	54.61	
CPI as used in the decision	2.35%	2.35%	2.35%	2.35%	2.35%	
CPI increment	1.47	1.40	1.36	1.33	1.31	
Economic depreciation	- 2.90 -	3.02 -	3.09 -	2.89 -	3.00	
Gross depreciation	- 4.37 -	4.42 -	4.45 -	4.22 -	4.31	<i>To Page 8</i>

Capex inputs

	Years ended 30 June					Total
	2000	2001	2002	2003	2004	
Latest Capital Expenditure Plans						
Lines	<i>Inputs - Refer to Roll Forward Attachment A</i>					
underground cables	65.31	44.15	101.15	15.83	23.71	
Substations	1.79	1.82	19.05	77.66	44.37	
SCADA	74.99	66.70	65.26	125.99	151.25	
Non network	14.09	22.98	18.95	4.85	4.41	
Non depreciable assets	33.97	19.67	22.73	19.73	27.17	
	7.36	10.69	14.10	12.56	12.69	
	197.52	166.00	241.24	256.63	263.59	1,124.97
Asset disposals						
Lines						
underground cables						
Substations	- 0.70	- 0.10	- 1.70			
SCADA				- 0.10		
Non network	- 4.70	- 4.60	- 4.40	- 5.10	- 5.00	
Non depreciable assets	- 2.20	- 1.00	- 1.20	- 1.40		
	- 7.60	- 5.70	- 7.30	- 6.60	- 5.00	32.20
Closing balance of Actual capex inputs "as incurred"						
Lines	65.31	44.15	101.15	15.83	23.71	
underground cables	1.79	1.82	19.05	77.66	44.37	
Substations	74.29	66.60	63.56	125.99	151.25	
SCADA	14.09	22.98	18.95	4.75	4.41	
Non network	29.27	15.07	18.33	14.63	22.17	
Non depreciable assets	5.16	9.69	12.90	11.16	12.69	
	189.92	160.30	233.94	250.03	258.59	1,092.77

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