ElectraNet's TNSP Economic Benchmarking Data Templates

Estimate Information

5. Operational data worksheet

Variable_Code	Regulatory year / Variable	Units	2006	2007	2008	2009	2010	2011	2012	2013
	Table 5.1 Energy delivery									
	Energy Grouping by Downstream Connection type									
TOPED0101	To Other connected transmission networks	GWh	2,530	882	-24	187	580	519	1,071	1,356
TOPED0102	To Distribution networks	GWh	11,389	11,689	11,783	11,791	11,974	11,705	11,276	11,135
TOPED0103	To Directly connected end-users (please specify voltages)	GWh	1,182	1,418	1,324	1,536	1,292	1,657	1,716	1,793
TOPED01	***Total energy transported***	GWh	15,101	13,990	13,083	13,514	13,847	13,882	14,063	14,284
	Table 5.2 Connection point numbers									
	Number of entry points at each transmission voltage level									
TOPCP0101	275kV		7	7	7	8	10	10	10	10
TOPCP0102	132 kV		9	9	10	11	11	11	11	11
TOPCP0103	66 kV		3	3	3	3	3	3	3	3
	Number of exit points at each transmission voltage level									
TOPCP0201	275kV		11	11	11	11	11	12	14	14
TOPCP0202	132 kV		56	56	57	57	58	59	60	61
TOPCP0203	66 kV		5	5	5	5	5	5	5	5
	Table 5.3 System demand									
	Table 5.3.1 Annual system maximum demand characteristics – MW measure									
TOPSD0101	Transmission System coincident maximum demand	MW	2717	2707	2940	3178	3055	3169	2808	2914
TOPSD0102	Transmission System coincident weather adjusted maximum demand 10% POE	MW								
TOPSD0103	Transmission System coincident weather adjusted maximum demand 50% POE	MW								
TOPSD0104	Transmission System non-coincident summated maximum demand	MW	3648	3712	4001	4103	4077	4204	4042	4136
TOPSD0105	Transmission System non-coincident weather adjusted summated maximum demand 10% POE	MW								
TOPSD0106	Transmission System non-coincident weather adjusted summated maximum demand 50% POE	MW								
	Table 5.3.2 Annual system maximum demand characteristics – MVA measure									
TOPSD0201	Transmission System coincident maximum demand	MVA	2839	3097	3123	3346	3272	3282	2915	3235
TOPSD0202	Transmission System coincident weather adjusted maximum demand 10% POE	MVA								
TOPSD0203	Transmission System coincident weather adjusted maximum demand 50% POE	MVA								
TOPSD0204	Transmission System non-coincident summated maximum demand	MVA	3978	3976	4223	4265	4285	4376	4229	4403
TOPSD0205	Transmission System non-coincident weather adjusted summated maximum demand 10% POE	MVA								
TOPSD0206	Transmission System non-coincident weather adjusted summated maximum demand 50% POE	MVA								
	Table 5.3.3 Power factor									
	Power factor conversion between MVA and MW									
TOPSD0301	Average overall network power factor conversion between MVA and MW	Factor	0.9920 leading	0.9891 leading	0.9766 leading	0.9797 leading	0.9821 leading	0.9787 leading	0.9829 leading	0.9785 leading
TOPSD0302	Average power factor conversion for 500 kV lines	Factor	NA	NA	NA	NA	NA	NA	NA	NA
TOPSD0303	Average power factor conversion for 330 kV lines	Factor	NA	NA	NA	NA	NA	NA	NA	NA
TOPSD0304	Average power factor conversion for 275 kV lines	Factor	0.9856 lagging	0.9916 leading	0.9892 leading	0.9897 leading	0.9923 leading	0.9919 leading	0.9999 lagging	0.9886 leading
TOPSD0305	Average power factor conversion for 220 kV lines	Factor	NA	NA	NA	NA	NA	NA	NA	NA
TOPSD0306	Average power factor conversion for 132 kV lines	Factor	0.9762 leading	0.9836 leading	0.9677 leading	0.9718 leading	0.9749 leading	0.9675 leading	0.9710 leading	0.9680 leading
TOPSD0307	Average power factor conversion for 66 kV lines	Factor	0.9906 lagging	0.9693 lagging	0.9785 leading	0.9884 leading	0.9834 leading	0.9929 lagging	0.9872 leading	0.9586 lagging
TOPSD0308	Average power factor conversion for 33 kV lines	Factor	NA	NA	NA	NA	NA	NA	NA	NA
TOPSD0309	[Add rows as required for other voltages here. For each additional row, specify the voltage level and add a variable code]									

6. Physical assets worksheet

Variable_Code	Regulatory year / Variable	Unit	2006	2007	2008	2009	2010	2011	2012	2013
	Table 6.1 Transmission System Capacities Variables									
	Table 6.1.1 Overhead network length of circuit at each voltage									
TPA0101	500 kV	km	0	0	0	0	0	0	0	0
TPA0102	330 kV	km	0	0	0	0	0	0	0	0
TPA0103	275 kV	km	2608	2608	2608	2608	2608	2608	2611	2611
TPA0104	220 kV	km	0	0	0	0	0	0	0	0
TPA0105	132 kV	km	2969	2886	2886	2871	2869	2872	2872	2873
TPA0106	66 kV	km	14.75	15.88	15.88	15.88	15.88	15.88	15.88	16.16
TPA0107	33 kV	km	0	0	0	0	0	0	0	0
TPA0108	[Add rows as required for other voltages here. For each additional row, specify the voltage level and add a variable code]									
TPA01	***Total overhead circuit kilometres***	km	5592	5510	5510	5495	5493	5496	5499	5500
	Table 6.1.2 Underground cable circuit length at each voltage									
TPA0201	500 kV	km	0	0	0	0	0	0	0	0
TPA0202	330 kV	km	0	0	0	0	0	0	0	0
TPA0203	275 kV	km	7.87	7.87	7.87	7.87	7.87	7.87	26.27	26.27
TPA0204	220 kV	km	0	0	0	0	0	0	0	0
TPA0205	132 kV	km	0	0	0	0	0	0	0	0
TPA0206	66 kV	km	0.919	0.919	0.919	0.919	0.919	0.919	0.919	0.919
TPA0207	33 kV	km	0	0	0	0	0	0	0	0
TPA0208	[Add rows as required for other voltages here. For each additional row, specify the voltage level and add a variable code]									
TPA02	***Total underground circuit kilometres***	km	8.789	8.789	8.789	8.789	8.789	8.789	27.189	27.189
	Table 6.1.3 Estimated overhead network weighted average MVA capacity by voltage class	SUMMER*								
TPA0301	500 kV	MVA	0	0	0	0	0	0	0	0
TPA0302	330 kV	MVA	0	0	0	0	0	0	0	0
TPA0303	275 kV	MVA	550.6	565.8	565.8	566.4	566.4	566.4	566.4	566.4
TPA0304	220 kV	MVA	0	0	0	0	0	0	0	0
TPA0305	132 kV	MVA	108.2	109.8	111.9	114.1	114.1	114.1	114.1	114.1
TPA0306	66 kV	MVA	105.9	105.9	105.9	105.9	105.9	105.9	105.9	105.9
TPA0307	33 kV	MVA	0	0	0	0	0	0	0	0
TPA0308	[Add rows as required for other voltages here. For each additional row, specify the voltage level and add a variable code]									
	Table 6.1.4 Estimated underground network weighted average MVA capacity by voltage class									
TPA0401	500 kV	MVA	0	0	0	0	0	0	0	0
TPA0402	330 kV	MVA	0	0	0	0	0	0	0	0
TPA0403	275 kV	MVA	450.0	450.0	450.0	450.0	450.0	450.0	597.0	597.0
TPA0404	220 kV	MVA	0	0	0	0	0	0	0	0
TPA0405	132 kV	MVA	0	0	0	0	0	0	0	0
TPA0406	66 kV	MVA	0	0	0	0	0	0	0	0
TPA0407	33 kV	MVA	0	0	0	0	0	0	0	0
TPA0408	[Add rows as required for other voltages here. For each additional row, specify the voltage level and add a variable code]									
	Table 6.1.5 Installed transmission system transformer capacity									
TPA0501	Transmission substations (eg 500 kV to 330 kV)	MVA	3300	3080	3240	3240	3240	3240	3400	3440
TPA0502	Terminal points to DNSP systems	MVA	5297	5230	5478	5798	5863	6263	6888	7363
TPA0503	Transformer capacity for directly connected end–users owned by the TNSP	MVA	601.0	746.0	871.0	871.0	871.0	871.0	891.0	891.0
TPA0504	Transformer capacity for directly connected end–users owned by the end–user	MVA	4934	4934	5039	5182	5182	5542	5542	5542
TPA0505	Interconnector capacity	MVA	680	680	680	680	680	680	680	680
TPA0506	[Add rows as required for other voltages here. For each additional row, specify the voltage level and add a variable code]									
	Table 6.1.6 Cold spare capacity									
TPA06	Cold spare capacity included in table 6.1.5	MVA	268.6	40.0	222.6	492.6	462.6	462.6	462.6	717.6

7. Quality of services worksheet

Variable_Code	Regulatory year / Variable	Unit	2006	2007	2008	2009	2010	2011	2012	2013
	Table 7.1 Service Component									
	Table 7.1.1 Service Parameter 1 – Average Circuit outage rate									
TQS0101	Lines outage rate - fault	per cent	41.1	26.2	26.9	20.4	41.7	25.7	43.6	29.7
TQS0102	Number of Lines fault outages	number	44	28	29	22	45	28	48	33
TQS0103	Number of defined Lines	number	107	107	108	108	108	109	110	111
TQS0104	Transformers outage rate - fault	per cent	20	14.5	15.1	11.6	17.2	8.6	11.2	11.1
TQS0105	Number of Transformer fault outages	number	25	18	19	15	23	12	16	16
TQS0106	Number of defined Transformers	number	125	124	126	129	134	139	143	144
TQS0107	Reactive plant outage rate - fault	per cent	50	23.1	42.3	30.8	25.9	46.2	28.6	30.3
TQS0108	Number of Reactive plant fault outages	number	13	6	11	8	7	12	8	10
TQS0109	Number of defined Reactive plant	number	26	26	26	26	27	26	28	33
TQS0110	Lines outage rate – forced outage	per cent	14	14	15.7	13	25.9	20.2	9.1	14.4
TQS0111	Number of Lines forced outages	number	15	15	17	14	28	22	10	16
TQS0112	Transformer outage rate – forced outage	per cent	8	5.6	4	7.8	9.7	2.2	8.4	0.7
TQS0113	Number of Transformers forced outages	number	10	7	5	10	13	3	12	1
TQS0114	Reactive plant outage rate – forced outage	per cent	11.5	26.9	88.5	7.7	114.8	23.1	10.7	36.4
TQS0115	Number of Reactive plant forced outages	number	3	7	23	2	31	6	3	12
	Table 7.1.2 Service Parameter 2 – Loss of supply event frequency – number in ranges specified									
TQS0116	Number of events greater than (0.2 for 2003-08 and 0.05 for 2008-13) system minutes per annum	number	4	1	4	4	12	7	7	5
TQS0117	Number of events greater than (1.0 for 2003-08 and 0.2 for 2008-13) system minutes per annum	number	0	0	1	2	6	1	5	4
	Table 7.1.3 Service Parameter 3 – Average outage duration									
TQS0118	Average outage duration	minutes	88.46	269.94	200.2	161.27	126.85	242.28	124.76	154.17
	Table 7.1.4 System Parameter 4 – Proper operation of equipment – number of failure events									
TQS0119	Failure of protection system	number	38	26	24	24	49	24	37	24
TQS0120	Material failure of Supervisory Control and Data Acquisition (SCADA) system	number	4	2	13	2	5	5	2	2
TQS0121	Incorrect operational isolation of primary or secondary equipment	number	0	3	7	4	7	4	2	2
	Table 7.2 - Market Impact Component									
TQS02	Market Impact Parameter	Number of dispatch intervals	28385	10935	5548	3719	2259	1772	5325	2927
	7.3 System losses									
TQS03	***System losses***	per cent	2.21%	1.99%	1.73%	2.07%	2.19%	2.15%	2.16%	2.29%

8. Operating environment factors worksheets

Variable_Code	Regulatory year / Variable	Unit	2006	2007	2008	2009	2010	2011	2012	2013
TEF01	**8.1 Terrain factors**									
TEF0101	Total number of vegetation maintenance spans	Number of spans								1494
TEF0102	Average vegetation maintenance span cycle	Years						1.367	1.367	1.367
TEF0103	Average number of trees per vegetation maintenance span	Trees								12
TEF0104	Average number of defects per vegetation maintenance span	Defects								7
TEF0105	Tropical proportion	Number of spans								0
TEF0106	Standard vehicle access	km								4196
TEF0107	Altitude	km								10
TEF0108	Bushfire risk	Number of spans								10918
TEF02	**8.2 Network characteristics**									
TEF0201	Route line length	km	4643	4555	4555	4540	4538	4542	4543	4543
TEF0202	Variability of dispatch	per cent	6	6	8	14	17	21	27	27
TEF0203	Concentrated load distance	km	0	0	0	0	0	0	0	0
TEF0204	Total number of spans	number	13638	13431	13428	13349	13342	13362	13367	13370

TEF03	**8.3 Weather stations**	Post code	Suburb	Materiality
TEF03001	ADELAIDE (BRIGHTON)	23001	5048	BRIGHTON	Y
TEF03002	ADELAIDE (CLARENCE GARDENS BOWLING CLUB)	23093	5039	CLARENCE GARDENS	Y
TEF03003	ADELAIDE (DRY CREEK SALTWORKS)	23079	5110	DRY CREEK	Y
TEF03004	ADELAIDE (GLEN OSMOND)	23005	5065	LINDEN PARK	Y
TEF03005	ADELAIDE (GORGE WEIR)	23909	5134	MONTACUTE	Y
TEF03006	ADELAIDE (HOPE VALLEY RESERVOIR)	23096	5090	HOPE VALLEY	Y
TEF03007	ADELAIDE (KENT TOWN ALERT)	23056	5067	KENT TOWN	Y
TEF03008	ADELAIDE (KENT TOWN)	23090	5067	KENT TOWN	Y
TEF03009	ADELAIDE (KESWICK)	23115	5035	KESWICK	Y
TEF03010	ADELAIDE (MAGILL)	23132	5072	MAGILL	Y
TEF03011	ADELAIDE (MORPHETT VALE)	23732	5162	MORPHETT VALE	Y
TEF03012	ADELAIDE (MORPHETTVILLE RACECOURSE)	23098	5043	MORPHETTVILLE	Y
TEF03013	ADELAIDE (POORAKA)	23026	5095	POORAKA	Y
TEF03014	ADELAIDE (SALISBURY BOWLING CLUB)	23023	5108	SALISBURY	Y
TEF03015	ADELAIDE (SEATON)	23024	5023	SEATON	Y
TEF03016	ADELAIDE (SOMERTON PARK)	23121	5044	SOMERTON PARK	Y
TEF03017	ADELAIDE (TEA TREE GULLY COUNCIL)	23748	5097	ST AGNES	Y
TEF03018	ADELAIDE (TORRENS ISLAND)	23018	5015	TORRENS ISLAND	Y
TEF03019	ADELAIDE AIRPORT	23034	5950	ADELAIDE AIRPORT	Y
TEF03020	ADELAIDE AIRPORT (ANEMOMETER NORTHEAST)	23123	5950	ADELAIDE AIRPORT	Y
TEF03021	ADELAIDE AIRPORT (ANEMOMETER NORTHWEST	23124	5950	ADELAIDE AIRPORT	Y
TEF03022	ADELAIDE AIRPORT (ANEMOMETER SOUTH WEST)	23109	5950	ADELAIDE AIRPORT	Y
TEF03023	ADELAIDE AIRPORT ALERT	23055	5950	ADELAIDE AIRPORT	Y
TEF03024	AGERY	22057	5558	AGERY	Y
TEF03025	ALAWOONA	25000	5311	ALAWOONA	N
TEF03026	ALAWOONA (SCHELLS WELL)	25018	5311	ALAWOONA	N
TEF03027	ALDGATE	23817	5154	ALDGATE	Y
TEF03028	AMATA AIRSTRIP	16008	NIL	NIL	N
TEF03029	AMERICAN RIVER	22800	5221	AMERICAN RIVER	N
TEF03030	AMERICAN RIVER (REDBANKS)	22831	5222	NEPEAN BAY	N
TEF03031	ANDAMOOKA	16065	5722	ANDAMOOKA	Y
TEF03032	ANGASTON	23300	5353	ANGASTON	Y
TEF03033	ANNA CREEK	17004	5734	ANNA CREEK	N
TEF03034	APOINGA (WILIVERE)	21121	5381	APOINGA	Y
TEF03035	APPILA	19001	5481	APPILA	Y
TEF03036	ARDROSSAN	22000	5571	ARDROSSAN	Y
TEF03037	ARDROSSAN (MULARA)	22032	5571	SANDILANDS	Y
TEF03038	ARDROSSAN (VITANA)	22033	5571	ARDROSSAN	Y
TEF03039	ARDROSSAN (WINULTA)	22021	5571	WINULTA	Y
TEF03040	ARKAROOLA	17099	5710	ARKAROOLA VILLAGE	N
TEF03041	ARNO BAY	18001	5603	ARNO BAY	Y
TEF03042	ARTHURTON (LOWANDALE)	22039	5573	MAITLAND	Y
TEF03043	ASHTON	23867	5137	ASHTON	Y
TEF03044	ASHTON CO-OP	23803	5137	ASHTON	Y
TEF03045	ATHELSTONE (BLACK HILL)	23896	5076	ATHELSTONE	Y
TEF03046	AUBURN	21001	5451	AUBURN	Y
TEF03047	AUSTRALIA PLAINS	24501	5374	AUSTRALIA PLAINS	Y
TEF03048	AVENUE (DOWNER)	26078	5271	AVENUE RANGE	Y
TEF03049	BALAKLAVA	21002	5461	BALAKLAVA	Y
TEF03050	BALAKLAVA (DONALEEN)	23128	5460	SALTER SPRINGS	Y
TEF03051	BALAKLAVA (WANAPPE)	21104	5453	STOW	Y
TEF03052	BALHANNAH (KILLARA PARK)	23787	5242	BALHANNAH	Y
TEF03053	BALHANNAH CFS BASESTATION	23918	5242	BALHANNAH	Y
TEF03054	BARMERA	24001	5345	BARMERA	Y
TEF03055	BAROSSA VALLEY (DUCKPONDS CREEK)	23372	5353	STOCKWELL	Y
TEF03056	BEACHPORT	26000	5280	BEACHPORT	Y
TEF03057	BEAUMONT	23114	5066	BEAUMONT	Y
TEF03058	BELAIR	23846	5152	BELAIR	Y
TEF03059	BELAIR (ST JOHNS)	23890	5052	BELAIR	Y
TEF03060	BELAIR (STATE FLORA NURSERY)	23704	5152	BELAIR	Y
TEF03061	BELLEVUE HEIGHTS	23916	5050	BELLEVUE HEIGHTS	Y
TEF03062	BELTANA ROADHOUSE	17119	5731	BELTANA STATION	Y
TEF03063	BELTANA STATION	17012	5710	BELTANA STATION	Y
TEF03064	BELTON (SHADOW VALE)	19004	5432	BELTON	N
TEF03065	BERRI	24025	5343	BERRI	Y
TEF03066	BIMBOWRIE	20000	5440	BIMBOWRIE	N
TEF03067	BIRDWOOD	23705	5233	FORRESTON	Y
TEF03068	BIRDWOOD	23900	5233	BIRDWOOD	Y

TEF03069	BIRDWOOD (MCVITTIES HILL)	
TEF03070	BISCUIT FLAT (WOOLMIT)	
TEF03071	BLACK HILL	
TEF03072	BLACKWOOD (WITTUNGA)	
TEF03073	BLANCHETOWN (WYN-MOOR)	
TEF03074	BLANCHETOWN LOCK 1	
TEF03075	BLINMAN	
TEF03076	BLINMAN (ANGORICHINA)	
TEF03077	BLINMAN (MOOLOOLOO)	
TEF03078	BLINMAN (NARRINA)	
TEF03079	BLINMAN (WIRREALPA)	
TEF03080	BLYTH	
TEF03081	BOLIVAR TREATMENT WORKS	
TEF03082	BON BON	
TEF03083	BOOBOROWIE	
TEF03084	BOOL LAGOON (LOCKSLEY FARM)	
TEF03085	BOOLCOOMATTA	
TEF03086	BOOLEROO CENTRE	
TEF03087	BOOLEROO CENTRE (WILLOWIE)	
TEF03088	BOOLEROO WHIM (CALLUM BRAE)	
TEF03089	BORDERTOWN (BEEAMMA SECTION 95)	
TEF03090	BORDERTOWN (INGLEWOOD)	
TEF03091	BORDERTOWN (YACCA VALE)	
TEF03092	BORDERTOWN INDUSTRIAL ESTATE	
TEF03093	BOWER	
TEF03094	BOWHILL	
TEF03095	BOWILLIA	
TEF03096	BOWMANS (PIGELDEE)	
TEF03097	BRAEMAR	
TEF03098	BRIDGEWATER	
TEF03099	BRINKWORTH	
TEF03100	BRINKWORTH (ANAMA PARK)	
TEF03101	BRINKWORTH (BUNGAREE)	
TEF03102	BROUGHAMS GATE HOUSE (QUINYAMBIE)	
TEF03103	BROWNHILL CREEK (SCOTCH COLLEGE)	
TEF03104	BRUCE	
TEF03105	BUCKLAND PARK (ADELAIDE-S1-RADAR)	
TEF03106	BUCKLEBOO (HI-VIEW)	
TEF03107	BUCKLEBOO (KARINYA)	
TEF03108	BULGUNNIA	
TEF03109	BURNSIDE	
TEF03110	BURRA (BILLABONG)	
TEF03111	BURRA (LEIGHTON)	
TEF03112	BURRA (POONUNDA)	
TEF03113	BURRA (WORLDS END)	
TEF03114	BURRA COMMUNITY SCHOOL	
TEF03115	BUTE	
TEF03116	BUTLER (MOODY VALE)	
TEF03117	BUTLER TANKS (NORTH PARNDA)	
TEF03118	CADNEY PARK (ARCKARINGA STATION)	
TEF03119	CALIPH	
TEF03120	CALLINGTON	
TEF03121	CALLINGTON HILL	
TEF03122	CALTOWIE	
TEF03123	CAMBRAI (KONGOLIA)	
TEF03124	CAMERON CORNER (LINDON)	
TEF03125	CAPE BORDA	
TEF03126	CAPE CASSINI WILDERNESS RETREAT	
TEF03127	CAPE JAFFA (THE LIMESTONE)	
TEF03128	CAPE WILLOUGHBY	
TEF03129	CARRIETON	
TEF03130	CARRIETON (EURELIA)	
TEF03131	CARRIETON (GLENROY ESTATE)	
TEF03132	CASTAMBUL (SIXTH CREEK)	
TEF03133	CEDUNA (GOODE)	
TEF03134	CEDUNA (MALTEE)	
TEF03135	CEDUNA (NUNONG)	
TEF03136	CEDUNA (THEVENARD NTC AWS)	
TEF03137	CEDUNA (UWORRA)	
TEF03138	CEDUNA AMO	
TEF03139	CEDUNA OBSERVATORY	
TEF03140	CHARLESTON	
TEF03141	CHERRY GARDENS	
TEF03142	CLARE	
TEF03143	CLARE (CALCANNIA)	
TEF03144	CLARE (HILL RIVER)	
TEF03145	CLARE (NEAGLES ROCK)	
TEF03146	CLARE HIGH SCHOOL	
TEF03147	CLARE SES BASESTATION	
TEF03148	CLARENDON	
TEF03149	CLEVE	
TEF03150	CLEVE (HEGGATON)	
TEF03151	CLEVE (NINGANA)	
TEF03152	CLEVE (PINEVIEW)	
TEF03153	CLEVE AERODROME	
TEF03154	CLIFTON HILLS	
TEF03155	COCKBURN	
TEF03156	COCKBURN (TEPCO)	
TEF03157	COFFIN BAY	
TEF03158	COMMODORE	
TEF03159	CONCORDIA (TURRETFIELD DAM)	
TEF03160	COOBER PEDY	
TEF03161	COOBER PEDY (MCDOUALL PEAK)	
TEF03162	COOBER PEDY AIRPORT	
TEF03163	COOK	
TEF03164	COOKE PLAINS	

23786	5234	BIRDWOOD	Y
26030	5275	REEDY CREEK	Y
24502	5353	BLACK HILL	Y
23839	5050	BLACKWOOD	Y
25056	5357	NOTTS WELL	Y
24564	5357	BLANCHETOWN	Y
17014	5730	BLINMAN	Y
17097	5730	ANGORIGINA	Y
17032	5710	MOOLOOLOO	Y
17041	5710	NARRINA	N
17054	5730	WIRREALPA	N
21003	5462	BLYTH	Y
23081	5110	BOLIVAR	Y
16041	5710	BON BON	N
21004	5417	BOOBOROWIE	Y
26103	5271	BOOL LAGOON	Y
20001	5440	BOOLCOOMATTA	N
19006	5482	BOOLEROO CENTRE	Y
19047	5483	WILLOWIE	Y
19116	5483	BOOLEROO CENTRE	Y
26058	5268	WESTERN FLAT	Y
25525	5268	SENIOR	Y
26037	5268	WESTERN FLAT	Y
25560	5270	BORDERTOWN	Y
24504	5374	BOWER	Y
25040	5307	BOWHILL	Y
21106	5520	BOWILLIA	Y
21112	5550	BOWMANS	Y
20043	5440	FARAWAY HILL	N
23707	5155	BRIDGEWATER	Y
21007	5464	BRINKWORTH	Y
21000	5464	HART	Y
21010	5453	BUNGAREE	Y
17106	5710	QUINYAMBIE	N
23105	5062	MITCHAM	Y
19008	5485	BRUCE	Y
23130	5501	MIDDLE BEACH	Y
18172	5641	BUCKLEBOO	Y
18190	5641	BUCKLEBOO	N
16003	5710	BULGUNNIA	N
23042	5066	BURNSIDE	Y
21136	5418	BURRA	Y
21100	5417	LEIGHTON	Y
21041	5418	MONGOLATA	Y
21086	5374	WORLDS END	Y
21077	5417	BURRA	Y
21012	5560	BUTE	Y
18175	5607	MOODY	Y
18049	5604	BUTLER	Y
16093	5734	ARCKARINGA	N
25050	5333	CALIPH	N
24508	5254	CALLINGTON	Y
24551	5254	MONARTO	Y
21013	5490	CALTOWIE	Y
24513	5353	CAMBRAI	Y
17115	5731	LINDON	N
22823	5223	CAPE BORDA	N
22842	5223	CASSINI	N
26095	5275	CAPE JAFFA	Y
22803	5222	WILLOUGHBY	N
19009	5432	CARRIETON	Y
19013	5432	EURELIA	Y
19098	5432	BELTON	N
23852	5134	CASTAMBUL	Y
18033	5680	WANDANA	N
18047	5680	MALTEE	N
18218	5690	PENONG	N
18207	NIL	NIL	N
18182	5690	UWORRA	N
18012	5680	CEDUNA	N
18223	5680	WANDANA	N
23907	5244	CHARLESTON	Y
23709	5157	CHERRY GARDENS	Y
21129	5453	CLARE	Y
21075	5453	BARINIA	Y
21025	5453	HILL RIVER	Y
21135	5453	CLARE	Y
21131	5453	CLARE	Y
21107	5453	CLARE	Y
23710	5157	CLARENDON	Y
18014	5640	CLEVE	Y
18198	5602	MANGALO	Y
18184	5642	CAMPOONA	Y
18096	5602	COWELL	Y
18116	5640	CLEVE	Y
17016	5710	CLIFTON HILLS STATION	N
20002	5440	COCKBURN	N
20053	5440	TEPCO STATION	N
18188	5607	COFFIN BAY	Y
17017	5710	FLINDERS RANGES	Y
23141	5352	KINGSFORD	Y
16007	5723	COOBER PEDY	N
16027	5710	MCDOUALL PEAK	N
16090	5723	COOBER PEDY	N
18110	5710	NULLARBOR	N
25502	5261	COOKE PLAINS	Y

TEF03165	COOKE PLAINS (KANBARA)	25555	5264	ASHVILLE	Y
TEF03166	COOMANDOOK	25503	5301	COOMANDOOK	Y
TEF03167	COONALPYN	25504	5265	COONALPYN	Y
TEF03168	COONAWARRA	26091	5277	COONAWARRA	Y
TEF03169	COONDAMBO	16009	5710	COONDAMBO	N
TEF03170	COPEVILLE (FILSELL FLAT)	25057	5308	COPEVILLE	N
TEF03171	COPPER HILL STATION	16094	5734	EVELYN DOWNS	N
TEF03172	CORDILLO DOWNS	17019	5731	CORDILLO DOWNS	N
TEF03173	CORNY POINT	22002	5575	CORNY POINT	N
TEF03174	COULTA	18019	5607	COULTA	Y
TEF03175	COULTA (COLES POINT)	18191	5607	COULTA	Y
TEF03176	COURELA (LINDARNOE)	18162	5661	PETINA	N
TEF03177	COWELL	18022	5602	COWELL	Y
TEF03178	COWELL (WINTER SPRINGS)	18176	5602	MILTALIE	Y
TEF03179	CRADOCK	19010	5434	CRADOCK	Y
TEF03180	CRADOCK (SLATY CREEK)	19109	5432	CRADOCK	Y
TEF03181	CRADOCK (YEDNALUE)	19061	5434	CRADOCK	N
TEF03182	CRAFERS (MT LOFTY)	23901	5152	CRAFERS	Y
TEF03183	CRAFERS WEST	23873	5152	CRAFERS WEST	Y
TEF03184	CRAIGBURN FARM (STURT DAM)	23136	5051	CRAIGBURN FARM	Y
TEF03185	CROMER ROAD	23881	5235	MOUNT PLEASANT	Y
TEF03186	CRYSTAL BROOK	21016	5523	CRYSTAL BROOK	Y
TEF03187	CRYSTAL BROOK SECTION 299	21102	5523	WANDEARAH EAST	Y
TEF03188	CUDLEE CREEK (MILLBROOK)	23731	5232	MILLBROOK	Y
TEF03189	CUDLEE CREEK (O'DEAS ROAD)	23879	5232	CUDLEE CREEK	Y
TEF03190	CUMMINS	18023	5631	CUMMINS	Y
TEF03191	CUMMINS AERO	18217	5631	CUMMINS	Y
TEF03192	CURNOMONA (CURNAMONA)	20004	5440	CURNAMONA	N
TEF03193	CURRAMULKA	22003	5580	CURRAMULKA	Y
TEF03194	CURRAMULKA NORTH	22055	5575	CURRAMULKA	Y
TEF03195	DARKE PEAK	18024	5642	DARKE PEAK	Y
TEF03196	DAWSON (ANDA-VALE)	19014	5431	DAWSON	Y
TEF03197	DRY CREEK (WINGFIELD)	23138	5013	DRY CREEK	Y
TEF03198	DUFFIELD RAMCO	24031	5322	STOCKYARD PLAIN	Y
TEF03199	DUTTON	24509	5356	DUTTON	Y
TEF03200	ECHUNGA	23903	5153	ECHUNGA	Y
TEF03201	ECHUNGA GOLF COURSE	23713	5153	ECHUNGA	Y
TEF03202	EDEN VALLEY (MT ADAM)	23902	5235	FLAXMAN VALLEY	Y
TEF03203	EDEOWIE	19113	5730	FLINDERS RANGES	Y
TEF03204	EDINBURGH RAAF	23083	5111	EDINBURGH	Y
TEF03205	EDITHBURGH	22046	5583	SULTANA POINT	Y
TEF03206	ELLISTON	18069	5670	ELLISTON	N
TEF03207	ELLISTON (LAMBING STATION)	18189	5607	KAPPAWANTA	N
TEF03208	ELLISTON (OAKLANDS)	18213	5607	BRAMFIELD	N
TEF03209	ELLISTON (THREE LAKES)	18204	5670	ELLISTON	N
TEF03210	ERNABELLA (PUKATJA)	16097	NIL	NIL	N
TEF03211	ERUDINA	20005	5730	ERUDINA	N
TEF03212	EUDUNDA	24511	5374	EUDUNDA	Y
TEF03213	EUDUNDA (MOONDAH)	24555	5374	HANSBOROUGH	Y
TEF03214	EVELYN DOWNS	16107	5734	EVELYN DOWNS	N
TEF03215	FARRELL FLAT	21019	5416	FARRELL FLAT	Y
TEF03216	FELIXSTOW (PAYNEHAM)	23101	5070	FELIXSTOW	Y
TEF03217	FINNISS	23714	5255	FINNISS	Y
TEF03218	FLINDERS CHASE (ROCKY RIVER)	22817	5223	FLINDERS CHASE	N
TEF03219	FRANCES	26007	5262	FRANCES	Y
TEF03220	FREELING	23325	5372	FREELING	Y
TEF03221	FROME DOWNS	20006	5710	FROME DOWNS	N
TEF03222	FURNER (KENNION SECTION 235)	26086	5280	FURNER	Y
TEF03223	FURNER (WOOMERA HOMESTEAD)	26101	5280	FURNER	Y
TEF03224	GALGA	25004	5308	GALGA	N
TEF03225	GAMMON RANGES (ARCOONA BLUFF)	17049	5710	GAMMON RANGES	N
TEF03226	GAMMON RANGES (BALCANOONA)	17010	5710	GAMMON RANGES	N
TEF03227	GAMMON RANGES (MOOLAWATANA)	17131	5731	MOOLAWATANA	N
TEF03228	GAMMON RANGES (THE PLATEAU)	17103	5710	GAMMON RANGES	N
TEF03229	GAMMON RANGES (WERTALOONA)	17052	5710	WERTALOONA	N
TEF03230	GAMMON RANGES (WOOLTANA)	17056	5710	WOOLTANA	N
TEF03231	GAWLER	23107	5118	GAWLER WEST	Y
TEF03232	GAWLER COUNCIL DEPOT	23078	5118	WILLASTON	Y
TEF03233	GAWLER RIVER (HEASLIP ROAD)	23111	5117	ANGLE VALE	Y
TEF03234	GEORGETOWN	21020	5472	GEORGETOWN	Y
TEF03235	GERANIUM	25506	5301	GERANIUM	Y
TEF03236	GLADSTONE	21021	5473	GLADSTONE	Y
TEF03237	GLENDAMBO	16084	5710	GLENDAMBO	N
TEF03238	GLUEPOT RESERVE (GLUEPOT)	20028	5417	GLUEPOT	Y
TEF03239	GOOLWA BARRAGE	23825	5214	GOOLWA SOUTH	Y
TEF03240	GOOLWA COUNCIL DEPOT	23718	5214	GOOLWA	Y
TEF03241	GOULD CREEK (HERMITAGE)	23858	5125	GOULD CREEK	Y
TEF03242	GOULD CREEK (LITTLE PARA RESERVOIR)	23915	5114	GOULD CREEK	Y
TEF03243	GREAT VICTORIA DESERT (EMU)	16103	NIL	NIL	N
TEF03244	GREAT VICTORIA DESERT (LENNY'S TREE)	16101	NIL	NIL	N
TEF03245	GREAT VICTORIA DESERT (SHOTLINE)	16102	NIL	NIL	N
TEF03246	GREAT VICTORIA DESERT (TALLARINGA WELL)	16104	NIL	NIL	N
TEF03247	GREENACRES	23133	5086	GREENACRES	Y
TEF03248	GREENOCK	23305	5360	GREENOCK	Y
TEF03249	GREENOCK	23369	5360	GREENOCK	Y
TEF03250	GREENWAYS (CORTINA)	26114	5272	GREENWAYS	Y
TEF03251	GULNARE	21022	5470	GULNARE	Y
TEF03252	GUMERACHA	23719	5233	GUMERACHA	Y
TEF03253	HAHNDORF	23720	5245	HAHNDORF	Y
TEF03254	HALBURY ROAD, SALISBURY (HALBURY ROAD)	23043	5108	PARALOWIE	Y
TEF03255	HALLETT	21023	5419	HALLETT	Y
TEF03256	HALLETT (ASHROSE)	21067	5419	WILLALO	Y
TEF03257	HALLETT (LORRAINE)	21024	5419	WILLALO	Y
TEF03258	HALLETT (OLD CANOWIE)	21062	5491	BELALIE EAST	Y
TEF03259	HALLETT (ULOOLOO)	21085	5420	ULOOLOO	Y
TEF03260	HAMILTON	23361	5373	HAMILTON	Y

TEF03261	HAMILTON STATION
TEF03262	HAMLEY BRIDGE
TEF03263	HAMLEY BRIDGE
TEF03264	HAMLEY BRIDGE (LINWOOD)
TEF03265	HAMMOND (COONATTO)
TEF03266	HANSBOROUGH
TEF03267	HAPPY VALLEY RESERVOIR
TEF03268	HARROGATE
TEF03269	HARTLEY (PINE HILL)
TEF03270	HASLAM
TEF03271	HAWKER
TEF03272	HAWKER (HOLOWILIENA)
TEF03273	HAWKER (WARCOWIE)
TEF03274	HAWKER (WILSON)
TEF03275	HEATHFIELD WORKS DEPOT
TEF03276	HILLTOWN
TEF03277	HILTABA
TEF03278	HINDMARSH ISLAND (MUNDOO BARRAGE)
TEF03279	HINDMARSH ISLAND AWS
TEF03280	HINDMARSH VALLEY (FERNBROOK)
TEF03281	HINDMARSH VALLEY (SPRINGMOUNT)
TEF03282	HOYLETON (ROCKLEIGH)
TEF03283	HUDDLESTON (WILLOW PONDS)
TEF03284	INGLEWOOD
TEF03285	INMAN VALLEY
TEF03286	INNAMINCKA (BOOKABOURDIE)
TEF03287	INNAMINCKA (COOPER CREEK)
TEF03288	INNAMINCKA (DULLINGARI)
TEF03289	INNAMINCKA HOTEL
TEF03290	INNAMINCKA STATION
TEF03291	IRON KNOB
TEF03292	IRON KNOB (GILLES DOWNS)
TEF03293	IRONSTONE ROAD
TEF03294	JAMESTOWN
TEF03295	JAMESTOWN PIRSA
TEF03296	KADINA AWS
TEF03297	KALAMURINA
TEF03298	KALANGADOO
TEF03299	KALANGADOO (MIRNAT)
TEF03300	KANGARILLA (SADDLEBAGS)
TEF03301	KANMANTOO
TEF03302	KANMANTOO (MILLBRAE)
TEF03303	KAPUNDA
TEF03304	KAPUNDA (BAGOT WELL)
TEF03305	KARCULTABY
TEF03306	KAROONDA
TEF03307	KEITH
TEF03308	KEITH (MUNKORA)
TEF03309	KERSBROOK
TEF03310	KERSBROOK (MABENJO)
TEF03311	KEYNETON
TEF03312	KEYNETON (SEDAN HILL)
TEF03313	KI KI (MOORILLA)
TEF03314	KILBURN
TEF03315	KIMBA
TEF03316	KIMBA (BOTENELLA HILLS)
TEF03317	KIMBA (CORTLINYE EVAPORATION)
TEF03318	KIMBA (CORTLINYE)
TEF03319	KIMBA (CURTINYE)
TEF03320	KIMBA (MELALEUCA)
TEF03321	KINGOONYA (NORTH WELL)
TEF03322	KINGSCOTE
TEF03323	KINGSCOTE (KARINGA)
TEF03324	KINGSCOTE AERO
TEF03325	KINGSTON ON MURRAY
TEF03326	KINGSTON SE
TEF03327	KINGSTON SE (KEILIRA STATION)
TEF03328	KINGSTON SE (MOREVIEW)
TEF03329	KOKATHA
TEF03330	KONDOOLKA
TEF03331	KOOLUNGA
TEF03332	KOONAMORE
TEF03333	KOONGAWA (RETAWON)
TEF03334	KOPPIO
TEF03335	KUITPO FOREST RESERVE
TEF03336	KULKAMI
TEF03337	KYANCUTTA
TEF03338	KYANCUTTA (BILLABOWIE)
TEF03339	KYANCUTTA (KYANBRAE)
TEF03340	KYBUNGA (CLOVERLEA)
TEF03341	LAKE EVERARD
TEF03342	LAKE GEORGE (MAHARISHI VEDIC COLLEGE)
TEF03343	LAKE LEAKE (KOOEEYONG)
TEF03344	LAMBINA
TEF03345	LAMEROO (ARTLARINGA)
TEF03346	LAMEROO (AUSTIN PLAINS)
TEF03347	LAMEROO (DESFORD)
TEF03348	LAMEROO COMPARISON
TEF03349	LANGHORNE CREEK
TEF03350	LAURA
TEF03351	LAURA (BEETALOO RESERVOIR)
TEF03352	LEAWOOD GARDENS (EAGLE ON THE HILL)
TEF03353	LEIGH CREEK (MAYNARDS WELL)
TEF03354	LEIGH CREEK (NORTH MOOLOOLOO)
TEF03355	LEIGH CREEK (PFITZNERS WELL)
TEF03356	LEIGH CREEK AIRPORT

16083	5734	ERINGA	N
23095	5401	HAMLEY BRIDGE	Y
23135	5400	HAMLEY BRIDGE	Y
23356	5372	LINWOOD	Y
19108	5485	HAMMOND	Y
23374	5373	HANSBOROUGH	Y
23721	5159	HAPPY VALLEY	Y
23722	5244	HARROGATE	Y
23822	5255	HARTLEY	Y
18118	5661	HASLAM	N
19017	5434	HAWKER	Y
19018	5730	HOLOWILIENA	N
19046	5434	HAWKER	Y
19050	5433	KANYAKA	Y
23843	5153	HEATHFIELD	Y
21059	5453	HILLTOWN	Y
16034	5710	HILTABA	N
23131	5214	HINDMARSH ISLAND	Y
23894	5214	HINDMARSH ISLAND	Y
23823	5211	HINDMARSH TIERS	Y
23824	5211	HINDMARSH VALLEY	Y
21137	5453	HOYLETON	Y
21072	5473	GEORGETOWN	Y
123700	5133	LOWER HERMITAGE	Y
23723	5211	INMAN VALLEY	Y
17125	5731	INNAMINCKA	N
17118	5731	INNAMINCKA	N
17111	5731	INNAMINCKA	N
17121	5731	INNAMINCKA	N
17028	5731	INNAMINCKA	N
18034	5601	IRON KNOB	Y
18031	5600	GILLES DOWNS	Y
23880	5231	FORRESTON	Y
21027	5491	JAMESTOWN	Y
21060	5491	JAMESTOWN	Y
22050	5554	KADINA	Y
17089	5710	KALAMURINA	N
26009	5278	KALANGADOO	Y
26113	5278	TRIHI	Y
23910	5157	KANGARILLA	Y
23724	5252	KANMANTOO	Y
23863	5244	HARROGATE	Y
23307	5373	KAPUNDA	Y
23354	5373	BAGOT WELL	Y
18036	5655	KARCULTABY	N
25006	5307	KAROONDA	Y
25507	5267	KEITH	Y
25557	5267	KEITH	Y
23877	5231	KERSBROOK	Y
23758	5114	KERSBROOK	Y
23725	5353	KEYNETON	Y
24575	5353	KEYNETON	Y
25543	5261	KI KI	Y
23134	5084	KILBURN	Y
18040	5641	KIMBA	Y
18214	5641	WILCHERRY	N
18226	5641	CORTLINYE	N
18193	5641	CORTLINYE	N
18037	5641	KELLY	Y
18177	5641	PINKAWILLINIE	Y
16016	5710	WILGENA	N
22807	5223	KINGSCOTE	N
22808	5223	MACGILLIVRAY	N
22841	5223	CYGNET RIVER	N
24006	5331	KINGSTON ON MURRAY	Y
26012	5275	KINGSTON SE	Y
26010	5271	KEILIRA	Y
26110	5271	BLACKFORD	Y
16021	5720	KOKATHA	N
16022	5710	KONDOOLKA	N
21029	5464	KOOLUNGA	Y
20010	5440	KOONAMORE	N
18101	5650	KOONGAWA	Y
18043	5605	KOPPIO	Y
23887	5157	KUITPO	Y
25036	5307	LAMEROO	N
18044	5650	KYANCUTTA	Y
18208	5650	WARRAMBOO	Y
18170	5650	KYANCUTTA	Y
21073	5453	SPRING GULLY	Y
16024	5720	LAKE EVERARD	N
26109	5280	BEACHPORT	Y
26014	5280	KOORINE	Y
16100	5734	LAMBINA	N
25542	5302	LAMEROO	N
25562	5302	LAMEROO	N
25054	5307	LAMEROO	N
25509	5302	LAMEROO	N
24515	5255	LANGHORNE CREEK	Y
21031	5480	LAURA	Y
21124	5480	BEETALOO VALLEY	Y
23874	5152	LEAWOOD GARDENS	Y
17136	5710	MANNERS WELL	Y
17137	5710	NORTH MOOLOOLOO	Y
17138	5710	NORTH MOOLOOLOO	Y
17110	5710	LEIGH CREEK	Y

TEF03357	LENSWOOD (STRINGYBARK)	23865	5134	LENSWOOD	Y
TEF03358	LENSWOOD RESEARCH CENTRE	23801	5240	LENSWOOD	Y
TEF03359	LILYDALE	20012	5440	MUTOOROO	N
TEF03360	LOBETHAL	23726	5241	LOBETHAL	Y
TEF03361	LOBETHAL	23862	5241	LOBETHAL	Y
TEF03362	LOBETHAL (MAIDMENT ROAD)	23882	5244	LOBETHAL	Y
TEF03363	LOCK	18046	5633	LOCK	Y
TEF03364	LOCK (CALLAMONDAH)	18084	5607	MURDINGA	Y
TEF03365	LOCK (TERRAH WINDS)	18165	5633	LOCK	Y
TEF03366	LONG RIDGE (GREENHILL)	23860	5140	GREENHILL	Y
TEF03367	LONGWOOD	23108	5153	BRADBURY	Y
TEF03368	LONGWOOD	23727	5153	MYLOR	Y
TEF03369	LOWALDIE (CARRAMAR STUD)	25039	5307	KAROONDA	Y
TEF03370	LOXTON (PYAP)	24013	5333	PYAP	Y
TEF03371	LOXTON RESEARCH CENTRE	24024	5333	LOXTON	Y
TEF03372	LUCINDALE (GREENVALE)	26069	5271	WOOLUMBOOL	Y
TEF03373	LUCINDALE POST OFFICE	26016	5272	LUCINDALE	Y
TEF03374	LYNDHURST	17139	5731	LYNDHURST	Y
TEF03375	LYNDOCH	23309	5351	LYNDOCH	Y
TEF03376	LYNTON (METRO SOUTH SES BASESTATION)	23917	5062	LYNTON	Y
TEF03377	LYRUP	24008	5343	LYRUP	Y
TEF03378	MACCLESFIELD	23728	5201	MACCLESFIELD	Y
TEF03379	MACUMBA	17030	5710	MACUMBA	N
TEF03380	MAGPIE CORNER (MURRAY'S COTTAGES)	26112	5277	MAAOUPE	Y
TEF03381	MAITLAND	22008	5573	MAITLAND	Y
TEF03382	MAITLAND (CARINYA)	22056	5573	MAITLAND	Y
TEF03383	MAITLAND (KILKERRAN)	22010	5573	MAITLAND	Y
TEF03384	MALLALA	23009	5502	MALLALA	Y
TEF03385	MALLALA (DOLAGHANS CROSSING)	23129	5502	REDBANKS	Y
TEF03386	MAMBRAY CREEK (BERNIE'S BLOCK)	19120	5495	MAMBRAY CREEK	Y
TEF03387	MANGALO	18173	5602	MANGALO	Y
TEF03388	MANNA HILL	20013	5440	MANNA HILL	N
TEF03389	MANNA HILL (WADNAMINGA)	20048	5440	WADNAMINGA	N
TEF03390	MANNANARIE	19115	5431	MANNANARIE	Y
TEF03391	MANNUM COUNCIL DEPOT	24517	5238	MANNUM	Y
TEF03392	MANOORA	23310	5413	MANOORA	Y
TEF03393	MANOORA (COOINDA)	21076	5415	MINTARO	Y
TEF03394	MANTUNG	25051	5308	MANTUNG	Y
TEF03395	MARALINGA	18114	NIL	NIL	N
TEF03396	MARALINGA (DOBO)	18225	NIL	NIL	N
TEF03397	MARAMA	25032	5307	MARAMA	Y
TEF03398	MARLA POLICE STATION	16085	5724	MARLA	N
TEF03399	MARRABEL	23311	5413	MARRABEL	Y
TEF03400	MARREE (CALLANNA)	17130	5731	CALLANNA	N
TEF03401	MARREE (CLAYTON)	17076	5710	CLAYTON STATION	N
TEF03402	MARREE (DULKANINNA)	17058	5710	DULKANINNA	N
TEF03403	MARREE (ETADUNNA)	17132	5710	ETADUNNA	N
TEF03404	MARREE (FARINA)	17024	5731	FARINA	N
TEF03405	MARREE (MUNDOWDNA STATION)	17038	5731	MUNDOWDNA	N
TEF03406	MARREE (WILPOORINNA STATION)	17129	5731	MUNDOWDNA	N
TEF03407	MARREE (WITCHELINA STATION)	17055	5731	WITCHELINA	N
TEF03408	MARREE AERO	17126	5733	MARREE	N
TEF03409	MARREE COMPARISON	17031	5733	MARREE	N
TEF03410	MCLAREN FLAT (BELTUNGA)	23861	5171	MCLAREN FLAT	Y
TEF03411	MCLAREN VALE (PIRRAMIMMA WINERY)	23876	5171	MCLAREN VALE	Y
TEF03412	MEADOWS	23730	5201	MEADOWS	Y
TEF03413	MELROSE	19024	5483	MELROSE	Y
TEF03414	MELROSE (PARA GUMS)	19042	5483	MELROSE	Y
TEF03415	MELROSE PARK	23144	5039	MELROSE PARK	Y
TEF03416	MENINGIE	24518	5264	MENINGIE	Y
TEF03417	MENINGIE (EGRETTA)	24577	5264	MENINGIE	Y
TEF03418	MENINGIE (GREEN PLAINS)	25556	5264	MENINGIE	Y
TEF03419	MENINGIE (MILL PARK)	25529	5264	MENINGIE	Y
TEF03420	MENINGIE (NARANGA)	25523	5261	FIELD	Y
TEF03421	MENINGIE (WALTOWA)	24537	5264	WALTOWA	Y
TEF03422	MERIBAH (MERALLEN)	25048	5311	MERIBAH	N
TEF03423	MICHAEL PERRY RESERVE, STONYFELL (STONYF	23145	5066	BURNSIDE	Y
TEF03424	MILANG	24519	5256	MILANG	Y
TEF03425	MILANG (NAVARINO)	24576	5255	ANGAS PLAINS	Y
TEF03426	MILANG (POINT STURT)	24550	5256	POINT STURT	Y
TEF03427	MILLERS CREEK	16028	5710	MILLERS CREEK	N
TEF03428	MILLICENT	26018	5280	MILLICENT	Y
TEF03429	MINBURRA	19114	5440	MINBURRA PLAIN	N
TEF03430	MINDARIE	25010	5309	MINDARIE	N
TEF03431	MINLATON	22009	5575	MINLATON	Y
TEF03432	MINLATON (EVERSLEY)	22036	5575	MINLATON	Y
TEF03433	MINLATON AERO	22031	5575	MINLATON	Y
TEF03434	MINNIPA	18053	5654	MINNIPA	Y
TEF03435	MINNIPA (MOONLIGHT FLAT)	18210	5654	MOUNT DAMPER	Y
TEF03436	MINNIPA (WISTILLERE)	18211	5654	MINNIPA	Y
TEF03437	MINNIPA PIRSA	18195	5654	MINNIPA	Y
TEF03438	MINTABIE	16088	NIL	NIL	N
TEF03439	MINTARO	21033	5415	MINTARO	Y
TEF03440	MINTARO (MARTINDALE)	21123	5415	MINTARO	Y
TEF03441	MITCHELL PARK (MARION)	23140	5043	MITCHELL PARK	Y
TEF03442	MONARTO SOUTH (MONARTO SECTION 307)	24589	5254	MONARTO SOUTH	Y
TEF03443	MONARTO ZOOLOGICAL PARK	24582	5254	MONARTO	Y
TEF03444	MONTACUTE	23892	5134	MONTACUTE	Y
TEF03445	MOOLEULOOLOO	20049	5440	MOOLEULOOLOO	N
TEF03446	MOOMBA (DARALINGIE)	17026	5731	STRZELECKI DESERT	N
TEF03447	MOOMBA (TANTANNA)	17022	5731	MULKA	N
TEF03448	MOOMBA (TIRRAWARRA)	17112	5731	GIDGEALPA	N
TEF03449	MOOMBA AIRPORT	17123	5731	GIDGEALPA	N
TEF03450	MOONAREE (KANGAROO WELL)	16086	5720	MOONAREE	N
TEF03451	MOONTA	22011	5558	MOONTA	Y
TEF03452	MOONTA (WARBURTO POINT)	22053	5554	WARBURTO	Y

TEF03453	MOOROOK	24010	5332	MOOROOK SOUTH	Y
TEF03454	MORCHARD (THE ROCKS)	19025	5431	PEKINA	Y
TEF03455	MORGAN (BRENDA PARK STATION)	24578	5320	MORGAN	Y
TEF03456	MORPHETTVILLE	23143	5043	MORPHETTVILLE	Y
TEF03457	MOUNT BARKER	23733	5251	MOUNT BARKER	Y
TEF03458	MOUNT BARRY STATION	16082	5734	MOUNT BARRY	N
TEF03459	MOUNT BOLD RESERVOIR	23734	5157	DORSET VALE	Y
TEF03460	MOUNT BRYAN	21034	5418	MOUNT BRYAN	Y
TEF03461	MOUNT COMPASS	23735	5210	MOUNT COMPASS	Y
TEF03462	MOUNT CRAWFORD (MT CRAWFORD AWS)	23878	5351	MOUNT CRAWFORD	Y
TEF03463	MOUNT CRAWFORD FOREST HEADQUARTERS	23763	5351	MOUNT CRAWFORD	Y
TEF03464	MOUNT DARE	17070	5710	WITJIRA	N
TEF03465	MOUNT EBA	16030	5710	MOUNT EBA	N
TEF03466	MOUNT GAMBIER (BLUE LAKE HOLIDAY PARK)	26085	5290	MOUNT GAMBIER	Y
TEF03467	MOUNT GAMBIER AERO	26021	5291	WANDILO	Y
TEF03468	MOUNT GAMBIER COUNCIL DEPOT	26102	5290	MOUNT GAMBIER	Y
TEF03469	MOUNT HOPE (FAIRVIEW)	18171	5631	MOUNT HOPE	N
TEF03470	MOUNT IVE	16067	5600	MOUNT IVE	N
TEF03471	MOUNT LOFTY	23842	5152	CRAFERS	Y
TEF03472	MOUNT LOFTY (CLELAND CONSERVATION PARK)	23810	5152	CLELAND	Y
TEF03473	MOUNT MARY	24586	5320	MOUNT MARY	Y
TEF03474	MOUNT PENNY	25563	5275	TINTINARA	Y
TEF03475	MOUNT PLEASANT	23737	5235	MOUNT PLEASANT	Y
TEF03476	MOUNT REMARKABLE (ALLIGATOR GORGE)	19071	5485	WILMINGTON	Y
TEF03477	MOUNT SCHANK (JETHIA)	26067	5291	MOUNT SCHANK	Y
TEF03478	MOUNT TEMPLETON (GLENALBYN)	21035	5461	MOUNT TEMPLETON	Y
TEF03479	MOUNT VICTOR	20052	5440	MOUNT VICTOR STATION	N
TEF03480	MOUNT WEDGE	18056	5633	MOUNT WEDGE	N
TEF03481	MOUNT WILSON	23906	5171	MCLAREN FLAT	Y
TEF03482	MOUNT WUDINNA	18057	5652	WUDINNA	Y
TEF03483	MOUNT ZION	21079	5480	BEETALOO VALLEY	Y
TEF03484	MT BOLD (SCOTT CREEK)	23921	5157	DORSET VALE	Y
TEF03485	MT DAVIDSON (WILLIPPA)	19121	5730	WILLIPPA	N
TEF03486	MT TORRENS	24579	5234	MOUNT TORRENS	Y
TEF03487	MULGUNDAWA SALT	24523	5259	MULGUNDAWA	Y
TEF03488	MULOORINA STATION (MULOORINA HOMESTEAD)	17037	5710	MULOORINA	N
TEF03489	MULYUNGARIE	20016	5440	MULYUNGARIE	N
TEF03490	MUNDOORA	21036	5521	MUNDOORA	Y
TEF03491	MUNDOORA (BARUNGA NORTH)	21115	5555	MUNDOORA	Y
TEF03492	MUNGERANIE	17067	5710	MUNGERANIE	N
TEF03493	MUNGERANIE (COWARIE)	17020	5710	COWARIE	N
TEF03494	MURBKO	24587	5330	MURBKO	Y
TEF03495	MURDINGA (MUNGALA)	18164	5642	MURLONG	Y
TEF03496	MURRAY BRIDGE (LOOMOOLOO)	24507	5254	MONARTO SOUTH	Y
TEF03497	MURRAY BRIDGE (PALLAMANA AERODROME)	24584	5254	PALLAMANA	Y
TEF03498	MURRAY BRIDGE (TEPKO)	24533	5254	TEPKO	Y
TEF03499	MURRAY BRIDGE COMPARISON	24521	5253	MURRAY BRIDGE	Y
TEF03500	MURRAY LAGOON (HAWKS NEST)	22822	5223	MACGILLIVRAY	N
TEF03501	MURRAY TOWN (MURRATANA)	19119	5483	BANGOR	Y
TEF03502	MURRAYS LAGOON (BAYSIDE)	22806	5223	SEAL BAY	N
TEF03503	MUTOOROO	20017	5440	MUTOOROO	N
TEF03504	MYLOR (BIGGS FLAT)	23911	5153	MYLOR	Y
TEF03505	MYPONGA	23738	5202	MYPONGA	Y
TEF03506	MYPONGA (LOVELY VALLEY)	23851	5211	HINDMARSH TIERS	Y
TEF03507	MYPONGA RESERVOIR	23783	5202	MYPONGA	Y
TEF03508	NAIRNE	23739	5252	NAIRNE	Y
TEF03509	NANGWARRY FORESTRY SA DEPOT	26098	5277	NANGWARRY	Y
TEF03510	NANTAWARRA (PINE GULLY)	21132	5550	NANTAWARRA	Y
TEF03511	NARACOORTE (BETTWS-Y-COED)	26062	5271	STEWART RANGE	Y
TEF03512	NARACOORTE (VIEW BANK)	26104	5271	LOCHABER	Y
TEF03513	NARACOORTE AERODROME	26099	5271	NARACOORTE	Y
TEF03514	NARRUNG (YALKURI)	24539	5259	NARRUNG	Y
TEF03515	NEPTUNE ISLAND	18115	NIL	NIL	N
TEF03516	NETHERTON (ROCKLEY GRAZIERS)	25558	5301	NETHERTON	Y
TEF03517	NEW WELL (MARFIELD)	25044	5357	NEW WELL	Y
TEF03518	NILDOTTIE	24547	5238	NILDOTTIE	Y
TEF03519	NILDOTTIE (MOBRAE PARK)	24588	5238	NILDOTTIE	Y
TEF03520	NILPINNA	17127	5710	NILPINNA STATION	N
TEF03521	NOARLUNGA	23885	5168	NOARLUNGA DOWNS	Y
TEF03522	NONNING	16032	5600	NONNING	N
TEF03523	NORMANVILLE	23741	5204	YANKALILLA	Y
TEF03524	NORTH ADELAIDE	23011	5006	NORTH ADELAIDE	Y
TEF03525	NORTH SHIELDS (PORT LINCOLN AERODROME)	18071	5607	NORTH SHIELDS	Y
TEF03526	NORTH SHIELDS (PORT LINCOLN AWS)	18192	5607	NORTH SHIELDS	Y
TEF03527	NULLARBOR	18106	5690	NULLARBOR	N
TEF03528	NUNDROO	18060	5690	COORABIE	N
TEF03529	NUNDROO (CHINTULDA WELL)	18199	5690	COORABIE	N
TEF03530	NURIOOTPA	23357	5355	NURIOOTPA	Y
TEF03531	NURIOOTPA TOWN BRIDGE	23320	5355	NURIOOTPA	Y
TEF03532	NURIOOTPA VITICULTURAL	23373	5355	NURIOOTPA	Y
TEF03533	OAK VALLEY	16049	NIL	NIL	N
TEF03534	OAKDALE	18209	5607	TOOLIGIE	Y
TEF03535	OLARY (WIAWERA)	20058	5440	WIAWERA	N
TEF03536	OODLA WIRRA	19031	5440	OODLA WIRRA	N
TEF03537	OODLA WIRRA (MCCOYS WELL)	19106	5440	PARATOO	N
TEF03538	OODNADATTA (ALLANDALE)	17007	5710	ALLANDALE STATION	N
TEF03539	OODNADATTA AIRPORT	17043	5734	OODNADATTA	N
TEF03540	ORROROO	19032	5431	ORROROO	Y
TEF03541	ORROROO (BLACK ROCK)	19005	5431	BLACK ROCK	Y
TEF03542	ORROROO (KYLMORN)	19012	5431	ERSKINE	Y
TEF03543	ORROROO (YALPARA)	19057	5432	YALPARA	N
TEF03544	OUTER HARBOUR (BLACK POLE)	23052	NIL	NIL	Y
TEF03545	OVERLAND CORNER	24012	5345	OVERLAND CORNER	Y
TEF03546	OWEN	23012	5460	OWEN	Y
TEF03547	PADTHAWAY (MARCOLLAT)	26017	5271	MARCOLLAT	Y
TEF03548	PADTHAWAY (SEPPELTS ROAD)	26115	5271	PADTHAWAY	Y

TEF03549	PADTHAWAY SOUTH
TEF03550	PALMER
TEF03551	PANDIE PANDIE
TEF03552	PARACHILNA (MOTPENA)
TEF03553	PARACHILNA (NILPENA)
TEF03554	PARACOMBE (KANGAROO CREEK DAM)
TEF03555	PARADISE, SA 5075 (ATHELSTONE)
TEF03556	PARAFIELD AIRPORT
TEF03557	PARAWA (SECOND VALLEY FOREST AWS)
TEF03558	PARAWA (SHARON)
TEF03559	PARILLA
TEF03560	PARINGA LOCK 5
TEF03561	PARNDANA
TEF03562	PARNDANA (PIONEER BEND)
TEF03563	PARNDANA (TURKEY LANE)
TEF03564	PARNDANA CFS AWS
TEF03565	PARRAKIE
TEF03566	PARUNA
TEF03567	PASKEVILLE
TEF03568	PEAKE
TEF03569	PEEBINGA
TEF03570	PELICAN LAGOON
TEF03571	PELICAN POINT
TEF03572	PENNESHAW
TEF03573	PENOLA POST OFFICE
TEF03574	PENONG
TEF03575	PENONG (PENALUMBA)
TEF03576	PERPONDA
TEF03577	PETERBOROUGH
TEF03578	PETERBOROUGH (AMELIA PARK)
TEF03579	PETERSVILLE
TEF03580	PICCADILLY (MOUNT LOFTY BOTANIC GARDEN)
TEF03581	PICCADILLY (WOODHOUSE)
TEF03582	PINE POINT (AMELIA DOWNS)
TEF03583	PINE VALLEY
TEF03584	PINNAROO
TEF03585	PINNAROO (KOMBALI)
TEF03586	PIPALYATJARA
TEF03587	PLUMBAGO
TEF03588	POINT PASS
TEF03589	POLICEMAN POINT
TEF03590	POOCHERA
TEF03591	PORT AUGUSTA (CARRIEWERLOO STN)
TEF03592	PORT AUGUSTA (STIRLING NORTH)
TEF03593	PORT AUGUSTA AERO
TEF03594	PORT AUGUSTA POWER STATION
TEF03595	PORT AUGUSTA WEST
TEF03596	PORT BROUGHTON
TEF03597	PORT BROUGHTON (WANDEARAH)
TEF03598	PORT CLINTON (KADDYINNA)
TEF03599	PORT CLINTON (YARAROO)
TEF03600	PORT ELLIOT CARAVAN PARK
TEF03601	PORT GAWLER (BUCKLAND PARK)
TEF03602	PORT GERMEIN
TEF03603	PORT GERMEIN (GOWAN BRAE)
TEF03604	PORT KENNY
TEF03605	PORT KENNY (MOUNT COOPER)
TEF03606	PORT LINCOLN (BIG SWAMP)
TEF03607	PORT LINCOLN (WESTMERE)
TEF03608	PORT LINCOLN (WHITE FLAT)
TEF03609	PORT LINCOLN (WOOLGA)
TEF03610	PORT LINCOLN SOUTH
TEF03611	PORT NEILL
TEF03612	PORT PARHAM
TEF03613	PORT PIRIE AERODROME
TEF03614	PORT VICTORIA
TEF03615	PORT VINCENT
TEF03616	PORT WAKEFIELD
TEF03617	PORT WAKEFIELD (PAREORA)
TEF03618	PRICE
TEF03619	PROSPECT HILL
TEF03620	PUNTABIE (EAGLE VIEW)
TEF03621	PURNONG (CLAYPANS)
TEF03622	QUONDONG
TEF03623	QUORN
TEF03624	QUORN (DEPOT FLAT)
TEF03625	QUORN (OLIVE GROVE)
TEF03626	RED CREEK (BURWOOD)
TEF03627	REDHILL
TEF03628	REEVES PLAINS (PARANA PARK)
TEF03629	REGENCY PARK
TEF03630	RENMARK AERO
TEF03631	RENMARK IRRIGATION
TEF03632	RHYNIE
TEF03633	RHYNIE (SALTERS SPRINGS)
TEF03634	RIVERTON
TEF03635	RIVERTON (LEEWARD)
TEF03636	RIVERTON (MAROOMBA)
TEF03637	ROBE (BISCUIT FLAT)
TEF03638	ROBE AIRFIELD
TEF03639	ROBE COMPARISON
TEF03640	ROBERTSTOWN
TEF03641	ROCKLEIGH (BLACK HEATH)
TEF03642	ROCKY RIVER (BROOKLAND PARK)
TEF03643	ROSEDALE (TURRETFIELD RESEARCH CENTRE)
TEF03644	ROSEWORTHY

26100	5271	PADTHAWAY	Y
24525	5237	PALMER	Y
17045	5710	PANDIE PANDIE	N
17098	5710	MOTPENA	Y
17113	5710	NILPENA	Y
23912	5132	PARACOMBE	Y
23094	5075	PARADISE	Y
23013	5106	PARAFIELD	Y
23875	5204	PARAWA	N
23761	5204	PARAWA	N
25013	5303	PARILLA	N
24037	5343	PARINGA	Y
22837	5223	PARNDANA	N
22815	5223	CASSINI	N
22835	5223	DUNCAN	N
22843	5223	SEDDON	N
25512	5301	PARRAKIE	Y
25014	5311	PARUNA	N
22012	5552	PASKEVILLE	Y
25513	5301	PEAKE	Y
25023	5311	PEEBINGA	N
22836	5222	PELICAN LAGOON	N
26111	5291	PELICAN POINT	Y
22809	5222	PENNESHAW	N
26025	5277	PENOLA	Y
18063	5690	PENONG	N
18002	5690	BOOKABIE	N
25025	5307	PERPONDA	Y
19034	5422	PETERBOROUGH	Y
19118	5440	UCOLTA	Y
22037	5571	MAITLAND	Y
23788	5152	CRAFERS	Y
23891	5144	PICCADILLY	Y
22054	5571	PINE POINT	Y
20030	5417	PINE VALLEY STATION	N
25015	5304	PINNAROO	N
25046	5304	KARTE	N
16099	NIL	NIL	N
20050	5440	PLUMBAGO	N
24526	5374	POINT PASS	Y
26049	5264	COORONG	Y
18068	5655	POOCHERA	N
16005	5710	CARRIEWERLOO	Y
19078	5710	STIRLING NORTH	Y
18201	5700	PORT AUGUSTA WEST	Y
19066	5710	PORT PATERSON	Y
18224	5700	PORT AUGUSTA WEST	Y
21042	5522	PORT BROUGHTON	Y
21108	5523	WANDEARAH EAST	Y
22044	5570	CLINTON	Y
22022	5570	KAINTON	Y
23742	5212	PORT ELLIOT	Y
23032	5501	MIDDLE BEACH	Y
19037	5495	PORT GERMEIN	Y
19112	5540	TELOWIE	Y
18150	5607	PORT KENNY	N
18054	5671	COLLEY	N
18017	5607	PEARLAH	Y
18137	5606	SLEAFORD	Y
18092	5607	WHITES FLAT	Y
18107	5607	GREEN PATCH	Y
18205	5606	PORT LINCOLN	Y
18072	5604	PORT NEILL	Y
23076	5501	PARHAM	Y
21118	5540	PIRIE EAST	Y
22013	5573	PORT VICTORIA	Y
22014	5581	PORT VINCENT	Y
21044	5550	PORT WAKEFIELD	Y
21063	5550	PORT WAKEFIELD	Y
22015	5571	PRICE	Y
23799	5201	PROSPECT HILL	Y
18219	5680	PUNTABIE	N
25002	5238	CLAYPANS	Y
20054	5440	QUONDONG	N
19038	5433	QUORN	Y
19002	5433	YARRAH	Y
19030	5433	QUORN	Y
23864	5255	RED CREEK	Y
21045	5521	REDHILL	Y
23087	5501	REEVES PLAINS	Y
23137	5010	REGENCY PARK	Y
24048	5341	OLD CALPERUM	Y
24003	5341	RENMARK	Y
21130	5412	WOOLSHED FLAT	Y
23039	5460	SALTER SPRINGS	Y
23314	5412	RIVERTON	Y
23355	5412	RIVERTON	Y
23306	5411	RIVERTON	Y
26106	5272	CONMURRA	Y
26105	5275	ROBE	Y
26026	5276	ROBE	Y
24528	5381	ROBERTSTOWN	Y
23812	5236	ROCKLEIGH	Y
22820	5223	GOSSE	N
23343	5352	ROSEDALE	Y
23021	5118	ROSEWORTHY	Y

TEF03645	ROSEWORTHY AWS	23122	5400	WASLEYS	Y
TEF03646	ROSSLYN PARK (SEAVIEW)	23085	5072	ROSSLYN PARK	Y
TEF03647	ROSTREVOR (STRADBROKE)	23086	5073	ROSTREVOR	Y
TEF03648	ROWLAND FLAT (NEW JACOBS CREEK)	23376	5351	ROWLAND FLAT	Y
TEF03649	ROXBY DOWNS (OLYMPIC DAM AERODROME)	16096	5725	OLYMPIC DAM	Y
TEF03650	ROXBY DOWNS (PARAKYLIA STATION)	16035	5710	PARAKYLIA	Y
TEF03651	ROXBY DOWNS STATION	16040	5710	ROXBY DOWNS STATION	Y
TEF03652	RUDALL (SWAFFPRO)	18174	5642	RUDALL	Y
TEF03653	SADDLEWORTH	23315	5413	SADDLEWORTH	Y
TEF03654	SADDLEWORTH	23349	5413	SADDLEWORTH	Y
TEF03655	SALT CREEK (PITLOCHRY HOMESTEAD)	26083	5275	DEEPWATER	Y
TEF03656	SALT CREEK (PITLOCHRY OUTSTATION 1)	26065	5275	TILLEY SWAMP	Y
TEF03657	SANDILANDS	22016	5571	SANDILANDS	Y
TEF03658	SECOND VALLEY (POOLAMACCA)	23744	5204	SECOND VALLEY	N
TEF03659	SEDAN	24531	5354	SEDAN	Y
TEF03660	SEDAN (SANDLETON)	24530	5356	SANDLETON	Y
TEF03661	SEDAN (YOOKAMURRA SANCTUARY)	24581	5354	FISHER	Y
TEF03662	SELLICKS BEACH	23871	5173	ALDINGA BEACH	Y
TEF03663	SELLICKS HILL (MOUNT TERRIBLE RADAR)	23886	5172	SELLICKS HILL	Y
TEF03664	SEVENHILL	21127	5453	SEVENHILL	Y
TEF03665	SHEA-OAK LOG (GREENOCK CREEK)	23348	5355	SHEA-OAK LOG	Y
TEF03666	SHERINGA (LAKE HAMILTON)	18045	5632	KIANA	N
TEF03667	SHERLOCK (WARRANA)	25042	5301	SHERLOCK	Y
TEF03668	SIAM	18186	5600	SIAM	N
TEF03669	SMITH BAY (SMITHS BAY)	22811	5223	WISANGER	N
TEF03670	SMITHFIELD	23025	5114	SMITHFIELD	Y
TEF03671	SMOKY BAY	18077	5680	SMOKY BAY	N
TEF03672	SNOWTOWN (BANYULA)	21101	5555	WOKURNA	Y
TEF03673	SNOWTOWN (CONDOWIE)	21015	5555	CONDOWIE	Y
TEF03674	SNOWTOWN (RAYVILLE PARK)	21133	5555	SNOWTOWN	Y
TEF03675	SPALDING	21047	5454	SPALDING	Y
TEF03676	SPALDING (BUNDALEER RESERVOIR)	21009	5471	SPALDING	Y
TEF03677	SPICER FLAT	22052	5575	KOOLYWURTIE	Y
TEF03678	ST KITTS	23360	5373	ST KITTS	Y
TEF03679	STANSBURY	22017	5582	STANSBURY	Y
TEF03680	STEINGARTEN VINEYARD (STEINGARTEN)	23146	5351	ROWLAND FLAT	Y
TEF03681	STENHOUSE BAY	22049	5577	INNESTON	N
TEF03682	STOCKPORT (CLIFTON)	23370	5410	STOCKPORT	Y
TEF03683	STOCKPORT (STOCKWELL ROAD BRIDGE)	23347	5355	LIGHT PASS	Y
TEF03684	STRATHALBYN	23747	5255	STRATHALBYN	Y
TEF03685	STRATHALBYN RACECOURSE	24580	5255	STRATHALBYN	Y
TEF03686	STRATHEARN	20055	5440	MOOLEULOOLOO	N
TEF03687	STREAKY BAY	18079	5680	STREAKY BAY	N
TEF03688	STRUAN	26082	5271	STRUAN	Y
TEF03689	STURT VALE	20022	5440	STURT VALE	N
TEF03690	SUTHERLANDS	24534	5374	SUTHERLANDS	Y
TEF03691	SWAN REACH	24535	5354	SWAN REACH	Y
TEF03692	SWAN REACH (PONDEROSA)	24585	5354	FISHER	Y
TEF03693	TAILEM BEND	24536	5260	TAILEM BEND	Y
TEF03694	TAILEM BEND (RIVER DOWNS (NATURI))	24554	5261	NATURI	Y
TEF03695	TAILEM BEND (WOODLANDS)	24510	5254	CHAPMAN BORE	Y
TEF03696	TALDRA	24017	5333	TALDRA	Y
TEF03697	TANTANOOLA	26027	5280	TANTANOOLA	Y
TEF03698	TANUNDA	23318	5352	TANUNDA	Y
TEF03699	TAPLAN	24032	5333	TAPLAN	Y
TEF03700	TARCOOLA (COMMONWEALTH HILL)	16006	5710	COMMONWEALTH HILL	N
TEF03701	TARCOOLA (MOBELLA)	16059	5710	COMMONWEALTH HILL	N
TEF03702	TARCOOLA (MULGATHING)	16031	5710	MULGATHING	N
TEF03703	TARCOOLA AERO	16098	5710	TARCOOLA	N
TEF03704	TARCOWIE	19043	5431	TARCOWIE	Y
TEF03705	TARCOWIE (OAKLANDS)	19117	5431	TARCOWIE	Y
TEF03706	TARLEE	23319	5411	TARLEE	Y
TEF03707	TARLEE (HAZELTON)	23365	5412	GILES CORNER	Y
TEF03708	TARNMA	23323	5373	HAMILTON	Y
TEF03709	TEROWIE	21050	5421	TEROWIE	Y
TEF03710	THE TWINS STATION	16048	5710	MCDOUALL PEAK	N
TEF03711	THEVENARD WIND	18200	NIL	NIL	N
TEF03712	THURLGA	16046	5710	THURLGA	N
TEF03713	TICKERA	21110	5555	TICKERA	Y
TEF03714	TIEYON	16095	5734	TIEYON	N
TEF03715	TINTINARA	25514	5266	TINTINARA	Y
TEF03716	TINTINARA (COLEBATCH DOWNS)	25526	5275	COLEBATCH	Y
TEF03717	TINTINARA (RICHARDS)	25546	5275	TINTINARA	Y
TEF03718	TODMORDEN	16047	5734	TODMORDEN	N
TEF03719	TRURO	24573	5356	TRURO	Y
TEF03720	TUMBY BAY	18086	5605	TUMBY BAY	Y
TEF03721	TUMBY BAY (WARRATTA VALE)	18091	5605	LIPSON	Y
TEF03722	TUMBY BAY (YADNARIE)	18203	5605	TUMBY BAY	Y
TEF03723	TWO WELLS	23028	5501	TWO WELLS	Y
TEF03724	UNGARRA	18088	5604	UNGARRA	Y
TEF03725	UNLEY (ROBERTS STREET)	23119	5061	UNLEY	Y
TEF03726	UPPER HERMITAGE	23806	5131	UPPER HERMITAGE	Y
TEF03727	URAIDLA	23750	5142	URAIDLA	Y
TEF03728	URAIDLA (SUTTON CREEK)	23905	5144	URAIDLA	Y
TEF03729	VERDUN	23866	5242	VERDUN	Y
TEF03730	VICTOR HARBOR (BERRIMA)	23834	5211	MOUNT JAGGED	Y
TEF03731	VICTOR HARBOR (ENCOUNTER BAY)	23804	5211	VICTOR HARBOR	Y
TEF03732	VICTOR HARBOR (RIVINGTON GRANGE)	23743	5211	BACK VALLEY	Y
TEF03733	VICTOR HARBOR (WAITPINGA CLIFFS)	23889	5211	WAITPINGA	N
TEF03734	VIVONNE BAY (HIGHGATE)	22839	5223	VIVONNE BAY	N
TEF03735	WADDIKEE	18089	5641	WADDIKEE	Y
TEF03736	WAIKERIE (EREMOPHILA PARK)	24029	5308	WOOLPUNDA	Y
TEF03737	WAIKERIE COUNCIL WORKS DEPOT	24038	5308	WAIKERIE	Y
TEF03738	WALLAROO	22020	5556	WALLAROO	Y
TEF03739	WANILLA	18144	5607	WANILLA	Y
TEF03740	WAROOKA	22018	5577	WAROOKA	Y

TEF03741	WARRAMBOO
TEF03742	WATERFALL GULLY (WATERFALL)
TEF03743	WATERVALE
TEF03744	WEETULTA
TEF03745	WELLINGTON (BRINKLEY SOUTH)
TEF03746	WHARMINDA
TEF03747	WHYALLA (BROADVIEW STATION)
TEF03748	WHYALLA (MOOLA)
TEF03749	WHYALLA (MOUNT YOUNG)
TEF03750	WHYALLA (MULLAQUANA)
TEF03751	WHYALLA AERO
TEF03752	WHYTE YARCOWIE
TEF03753	WHYTE-YARCOWIE (GUM PARK)
TEF03754	WIGTON FLAT (DOWLINGVILLE)
TEF03755	WILKAWATT (NEWHOUSE FARM)
TEF03756	WILLALOOKA (NIOKA)
TEF03757	WILLALOOKA (YARDOOKRA)
TEF03758	WILLIAMSTOWN
TEF03759	WILLIAMSTOWN (GLEN GILLIAN)
TEF03760	WILLIAMSTOWN (SOUTH PARA RESERVOIR)
TEF03761	WILLOCHRA PLAIN (GUM GLEN)
TEF03762	WILLUNGA
TEF03763	WILLUNGA HILL
TEF03764	WILMINGTON
TEF03765	WILMINGTON (STONEHAVEN)
TEF03766	WILPENA (MARTINS WELL)
TEF03767	WILPENA (ORAPARINNA)
TEF03768	WILPENA POUND
TEF03769	WIRRABARA
TEF03770	WIRRABARA FOREST
TEF03771	WIRRAMINNA HOMESTEAD
TEF03772	WIRREGA (TAUNTON)
TEF03773	WIRRULLA
TEF03774	WIRRULLA (GAWLER VIEW)
TEF03775	WIRRULLA (PIMBENA)
TEF03776	WOLSELEY
TEF03777	WOLSELEY (HONITON)
TEF03778	WOODSIDE
TEF03779	WOODSIDE (INVERBRACKIE)
TEF03780	WOODSIDE (WICKS ESTATE)
TEF03781	WOOLGANGI
TEF03782	WOOMERA (ARCOONA)
TEF03783	WOOMERA (MAHANEWO)
TEF03784	WOOMERA (OAKDEN HILLS)
TEF03785	WOOMERA (PERNATTY STATION)
TEF03786	WOOMERA (SOUTH GAP STATION)
TEF03787	WOOMERA AERODROME
TEF03788	WOOMERA PROFILER
TEF03789	WORLDS END (NARKUNDA)
TEF03790	WRATTONBULLY (JOEVILLE)
TEF03791	WUDINNA
TEF03792	WUDINNA (LOOKOUT)
TEF03793	WUDINNA AERO
TEF03794	YACKA
TEF03795	YALATA COMMUNITY
TEF03796	YALLUNDA FLAT (MEETIGILLY)
TEF03797	YANINEE
TEF03798	YANKALILLA
TEF03799	YARDEA
TEF03800	YARRAMBA
TEF03801	YEELANA (BRIMPTON LAKE)
TEF03802	YEELANA (BROOKER)
TEF03803	YEELANNA
TEF03804	YELLABINNA REGIONAL RESERVE (JACINTH-AMB
TEF03805	YONGALA
TEF03806	YORKETOWN
TEF03807	YUDNAPINNA
TEF03808	YUNDI (MUNDAWORA)
TEF03809	YUNTA (MELTON)
TEF03810	YUNTA (PANARAMITEE)
TEF03811	YUNTA (PARATOO)
TEF03812	YUNTA (TEETULPA STATION)
TEF03813	YUNTA (WINNININNIE STATION)
TEF03814	YUNTA AIRSTRIP

18090	5650	WARRAMBOO	Y
23908	5064	WATERFALL GULLY	Y
21054	5452	WATERVALE	Y
22058	5572	WEETULTA	Y
24572	5259	BRINKLEY	Y
18113	5603	WHARMINDA	Y
18006	5600	MIDDLEBACK RANGE	Y
18117	5600	MIDDLEBACK RANGE	Y
18221	5600	MIDDLEBACK RANGE	Y
18058	5600	MIDDLEBACK RANGE	Y
18120	5600	MULLAQUANA	Y
21055	5420	WHYTE YARCOWIE	Y
21120	5420	CANOWIE BELT	Y
22048	5571	DOWLINGVILLE	Y
25539	5301	LAMEROO	N
26107	5267	WILLALOOKA	Y
26088	5267	WILLALOOKA	Y
23752	5351	WILLIAMSTOWN	Y
23756	5351	WILLIAMSTOWN	Y
23820	5351	WILLIAMSTOWN	Y
19122	5433	WILLOCHRA	Y
23753	5172	WILLUNGA	Y
23857	5172	WILLUNGA SOUTH	Y
19048	5485	WILMINGTON	Y
19103	5485	WILMINGTON	Y
19111	5730	MARTINS WELL	N
19107	5730	FLINDERS RANGES	Y
19070	5730	FLINDERS RANGES	Y
19052	5481	WIRRABARA	Y
19053	5481	WIRRABARA	Y
16062	5720	WIRRAMINNA	N
25518	5267	WIRREGA	Y
18094	5661	WIRRULLA	N
18197	5661	WALLALA	N
18166	5680	NUNJIKOMPITA	N
25519	5269	WOLSELEY	Y
25561	5269	POOGINAGORIC	Y
23829	5244	WOODSIDE	Y
24583	5244	WOODSIDE	Y
23920	5244	WOODSIDE	Y
20025	5417	WARNES	Y
16000	5720	ARCOONA	Y
16025	5720	MAHANEWO	N
16033	5720	OAKDEN HILLS	Y
16036	5720	PERNATTY	Y
16043	5720	SOUTH GAP	Y
16001	5710	WOOMERA	Y
16105	5710	COONDAMBO	N
21138	5381	HALLELUJAH HILLS	Y
26075	5271	WRATTONBULLY	Y
18095	5652	WUDINNA	Y
18167	5653	WUDINNA	Y
18083	5653	WUDINNA	Y
21057	5470	YACKA	Y
18161	5690	YALATA	N
18104	5605	YALLUNDA FLAT	Y
18098	5653	YANINEE	Y
23754	5203	YANKALILLA	Y
16055	5710	YARDEA	N
20059	5440	YARRAMBA	N
18005	5632	MITCHELL	N
18007	5607	BROOKER	Y
18099	5632	YEELANNA	Y
18222	5710	YELLABINNA	N
19062	5431	YONGALA	Y
22023	5576	YORKETOWN	Y
16056	5710	YUDNAPINNA	Y
23897	5172	YUNDI	Y
20051	5440	MELTON STATION	N
20020	5440	YUNTA	N
20021	5440	GRAMPUS	N
20061	5440	YUNTA	N
20024	5440	WINNININNIE	N
20062	5440	YUNTA	N

ElectraNet

Basis of Preparation

AER Benchmarking

April 2014

Version FINAL RESPONSE

ElectraNet Corporate Headquarters
52-55 East Terrace, Adelaide, South Australia 5000 • PO Box, 7096, Hutt Street Post Office, Adelaide, South Australia 5000
Tel: (08) 8404 7966 • Fax: (08) 8404 7104 • Toll Free: 1800 243 853

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Revision Record

Date	Version	Description	Author	Checked By	Approved By

Contents

Figures

Tables

1. Introduction

On 28 November 2013, ElectraNet Pty Limited was served with a Regulatory Information Notice pursuant to Division 4 of Part 3 of the National Electricity (South Australia) Law (the RIN).

A requirement of the Benchmarking RIN set out in the Instructions and Definitions accompanying the RIN, is that ElectraNet in addition to providing to the AER a completed data template, must provide a 'Basis of Preparation' which explains for each variable inputted to the data template the basis upon which the input has been prepared.

In accordance with the requirements of the RIN, the following sections of this report provides ElectraNet's basis of preparation for all variables inputted to the data template accompanying this report. Consistent with the Instructions and definitions this basis of preparation addresses the following:

- How the information provided is consistent with the requirements of the notice;
- Explains the source from which ElectraNet obtained the information provided;
- Explains the methodology ElectraNet applied to provide the required information, including any assumptions ElectraNet made;
- Where ElectraNet could not provide an input for a variable using actual information and an estimate was required:
    - Why an estimate was required, including why is was not possible for ElectraNet to use actual information; and
    - The basis for the estimate, including the approach used, assumptions made and reasons why the estimate is ElectraNet's best estimate, given the information sought in the notice.
- In the case of financial information, an explanation if applicable, of the nature and impact of any accounting changes adopted by ElectraNet which have materially changed during any of the regulatory years covered by the notice.

Note that this basis of preparation relates to ElectraNet's 'first response' and as such under the notice, the AER does not require the numbers to be audited or verified by statutory declaration. ElectraNet are still in the process of obtaining assurance sign-off and therefore this basis of preparation and accompanying data remains subject to change.

In accordance with the requirements of the RIN, ElectraNet will submit a final audited and verified version of the data template and Basis of Preparation and accompanying audit report on 30 April 2014.

2. Revenue

2.1 Revenue grouping by chargeable quantity (TREV0101-TREV0110)

2.1.1 Data requirement

ElectraNet is required under the instructions and definitions for the final economic benchmarking RIN to report revenues allocated to the chargeable quantity that most closely reflects the basis upon which the revenue was charged by ElectraNet to customers.

Consistent with the RIN instructions and definitions, ElectraNet has reported revenue by chargeable quantity on the following basis:

- Revenues from Exit services where they are bill on a fixed annual charge based on location only 'From Fixed Customer (Exit Point) charges' (TREV0101),
- Revenues from Entry services where they are bill on a fixed annual charge based on location only 'From Fixed Generator (Entry Point) charges' (TREV0103),
- Revenues from TUOS Usage services (also referred to as TUOS Locational from 2009-10) where they are bill on a locational "nominated / agreed" demand basis against 'From Fixed Energy Usage Charges (Charge per day basis)' (TREV0105),
- Revenues from Common Service and TUOS General charges (also referred to TUOS Non-location from 2009-10) where they are billed on an energy accumulation basis against 'From Energy based Common Service and TUOS General Charges' (TREV0107);
- Revenues from Common Service and TUOS General charges (also referred to TUOS Non-location from 2009-10) where they are billed on a "nominated / agreed" demand basis against 'From Fixed Demand based Usage Charges' (TREV0108); and
- Revenues from other source, is revenue from Settlements Residues Auction (SRA) Proceeds, intra-regional settlement residues, under/over recovery of revenue from previous years plus interest (TREV0110).

Please note that ElectraNet does not charge revenue from the following groups:

- From Variable customer (Exit Point) charges, TREV0102;
- From Variable Generator (Entry Point), TREV0104;
- From Variable Energy Usage Charges (Charge per day basis), TREV0106; and
- From Variable Demand based Usage Charges TREV0109.

2.1.2 Data source and methodology

ElectraNet has sourced the revenue information for table 2.1 directly from the Regulatory Financial Reports for the respective years.

Removal of Murraylink revenue (not ElectraNet's revenue): TREV0105, TREV0107 and TREV0108

ElectraNet is the Co-ordinating Network Service Provider for South Australia and collects both ElectraNet's and the Murraylink Transmission Company (MTC)'s regulated revenue entitlements via ElectraNet's prescribed transmission service prices.

As the Regulatory Financial Reports show revenue charge categories that are inclusive of revenue collected by ElectraNet on behalf of MTC, ElectraNet have adjusted the impacted categories.

MTC is required to advise ElectraNet annually of the Aggregate Annual Revenue Requirement (AARR) and optimised replacement cost (ORC) for its transmission system assets which are used to provide prescribed transmission services within the South Australian region. MTC's revenue must be removed from the revenue groupings. Given revenue charged is calculated using the AARR and ORC, we have used this to remove the revenue on the same basis from the relevant categories in table 2.1 of the data template. Revenue amount for Murraylink for each financial year is shown in Table 2-1: Notification of Murraylink revenue amount for each financial year below:

Table 2-1: Notification of Murraylink revenue amount for each financial year

MTC Allocation by Class of Service (GST exclusive)	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Entry service ORC	-	-	-	-	-	-	-	-
Exit service ORC	-	-	-	-	-	-	-	-
TUOS Service ORC	43,652,411	43,652,411	43,652,411	43,652,411	43,652,411	43,652,411	43,652,411	43,652,411
Common Service ORC	2,678,689	2,678,689	2,678,689	2,678,689	2,678,689	2,678,689	2,678,689	2,678,689
Total ORC	46,311,100	46,311,100	46,311,100	46,311,100	46,311,100	46,311,100	46,311,100	46,311,100
AARR	4,845,520	4,977,972	5,084,766	5,147,603	5,420,161	5,386,652	5,463,472	5,549,744

Split of Common service charges and TUOS general charges in line with the RIN revenue categories

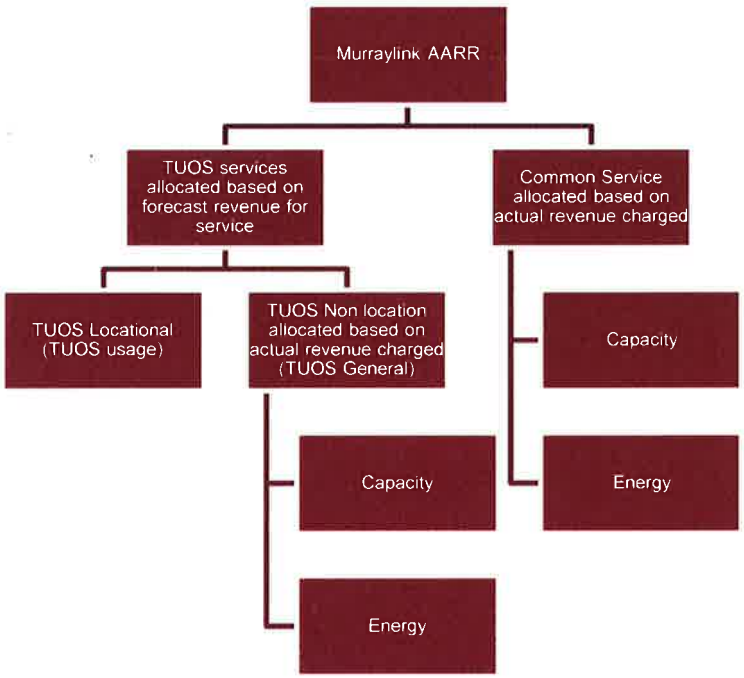
Common service charges and TUOS general charges as reported in the Regulatory Financial Report for each respective year includes both "Energy based Common Service

and General Charges" (TREV0107) and "Fixed Demand based Usage Charges" (TREV0108).

The split between TREV0107 and TREV0108 have been sourced from customer invoices where these charges are individually identified.

Overall, after factoring in the MTC adjustment (detailed above), the sum of Common service charges and TUOS general charges per the Regulatory Financial Reports agree to the sum of variables TREV0107 and TREV0108. The breakdown of MTC AARR service charges is presented in Figure 2-1: MTC service charges below:

Figure 2-1: MTC service charges



2.1.3 Basis of estimation

There is no estimation involved in table 2.1.

2.1.4 Changes to accounting policies

There has been no change to accounting policies that impact revenue by chargeable quantities.

2.2 Revenue grouping by type of connected equipment (TREV0201-0205)

2.2.1 Data requirement

ElectraNet is required under the instructions and definitions for the final economic benchmarking RIN to report in accordance with the type of connection equipment.

External project work and gross proceeds from the sale of assets where related to Prescribed Transmission Services were reported as "other revenue (TREV0205)."

Consistent with the RIN instructions and definitions, ElectraNet has reported revenue by chargeable quantity on the following basis:

- From other connected transmission networks (TREV0201), ElectraNet does not have any other regulated connections to transmission networks thus this is zero for all years.
- From Distribution networks (TREV0202), is revenue charged to the South Australian Distribution Network Service Provider (DNSP) they are referred to as ETSA Utilities or ETSA Transmission Service Charges in the Customer totals sheets for the respective years
- From Directly Connected end users (TREV0203), is revenue charged to directly connected customer of the ElectraNet network it does not contain the Distribution networks customer.
- Revenues from Generators (TREV0204) is the same as (TREV0103), Entry services where they are bill on a fixed annual charge based on location only 'From Fixed Generator (Entry Point) charges' as generators are only charged Entry Services.
- Other revenue (TREV0205) is the same as (TREV0110), Revenues from other sources, this is revenue from SRA Auction Proceeds intra-regional settlement residues, under/over recovery of revenue from previous years plus interest.

2.2.2 Data source and methodology

ElectraNet has sourced the revenue information for TREV0202 through to TREV0204 from customer invoices. Based on customer invoice information, ElectraNet have summarised revenue by type of charge on an annual basis for each customer. The total revenue by charge has been reconciled to the total revenue reported in the Regulatory Financial reports.TREV0205 has been sourced directly from the respective Regulatory Financial Reports.

As stated in 2.1, these revenue numbers contain the revenue collected for both ElectraNet and MTC, thus MTC's revenue must be removed for the purposes of this RIN. ElectraNet collect revenue on behalf of MTC from only Distribution Networks and directly connected end-users (TREV0202 and TREV0203).

The adjustment required to TREV0202 and TREV0203 to remove the AARR for MTC is on the same basis as detailed in section 2.1.2 of this document. The split of revenue collected on behalf of MTC (as advised in the annual AARR letters) between TREV0202 and TREV0203 is based on actual revenue charged by connected equipment type. No estimation or assumptions are involved.

As TREV0204 relates only to entry charges, this line item does not need to be adjusted, nor does the TREV0205 need to be adjusted for Murraylink's revenue.

2.2.3 Basis of estimation

There is no estimation involved in table 2.2.

2.2.4 Changes to accounting policies

There has been no change to accounting policies that impact revenue by chargeable quantities.

2.3 Revenue (penalties) allowed (deducted) through incentive schemes (TREV0301-TREV0303)

2.3.1 Data requirement

ElectraNet is required under the instructions and definitions for the final economic benchmarking RIN to report penalties or rewards of incentive schemes.

Consistent with the RIN instructions and definitions, revenues and penalties from incentives schemes are reported in the year in which the penalty or reward was applied as opposed to the year it was gained.

2.3.2 Data source and methodology

ElectraNet has reported revenue on the following basis from the following sources:

- EBSS (TREV0301), ElectraNet obtained these figures directly from Table 7.9 AER's final decision on annual building block revenue requirement ($m, nominal) labelled Opex efficiency (glide path) allowance from the Final decision ElectraNet transmission determination 2008-09 to 2012-13 dated 11 April 2008.
- STIPS (TREV0302), is the additional revenue or penalty the AER approved as part of the annual Transmission service standards review. The source of the data is taken directly from the letters provided by the AER to ElectraNet annual. The letters are as follows:
    - Letter dated 3 May 2006 – Service standard review for 2005, revenue for the financial year 2006-07
    - Letter dated 24 April 2007 – Transmission service standards compliance review for 2006, revenue for the financial year 2007-08
    - Letter dated 28 April 2008 – Transmission service standards compliance review for 2007, revenue for the financial year 2008-09
    - Letter dated 28 April 2009 – Transmission service standards review for 2008, revenue for the financial year 2009-10
    - Letter dated 30 April 2010 – Transmission service standards review for 2009, revenue for the financial year 2010-11
    - Letter dated 20 April 2011 – Transmission service standards review for 2010, revenue for the financial year 2011-12
    - Letter dated 23 April 2012 – Transmission service standards review for 2011, revenue for the financial year 2012-13
- Other (TREV0303) ElectraNet does not have any other schemes

2.3.3 Basis of estimation

There is no estimation involved in table 2.3.

2.3.4 Changes to accounting policies

There has been no change to accounting policies that impact revenue through incentive schemes.

3. Operating Expenditure ('Opex')

3.1 Operating expenditure categories (TOPEX0101-TOPEX0103A)

3.1.1 Data requirement

As per the AER's RIN requirements, given that ElectraNet's cost allocation approach, basis of preparation for its regulatory accounting statements, or response to the information guidelines have not changed across the Benchmarking reporting period, ElectraNet have not filled out table 3.1.1 but rather used table 3.1.2 for section 3.1.

Table 3.1.2 requires ElectraNet to report Opex activities (for example: network, operations, asset management support and field maintenance) reported in its Information Guidelines response for individual Regulatory Year. For the avoidance of doubt this means that

- The accounting principles applied by the NSP to complete its regulatory Financial Statements for each individual Regulatory Year must be applied when reporting Opex for that Regulatory Year.
- Opex reported must be prepared in a consistent manner to that of Opex reported in the Regulatory Financial Statements.
- Opex line items reported in Table 3.1.2 should equal Opex line items reported in the Regulatory Accounting Statements for each Regulatory Year.

ElectraNet must report, for all Regulatory Years, Opex in accordance with its Cost Allocation Approach and the Regulatory Accounting Statements that were in effect for the relevant Regulatory Year.

Opex must be reported in accordance with the categories for the relevant Regulatory Year and should directly reconcile to the Opex in ElectraNet's response to the Information Guidelines for that year.

The information provided by ElectraNet is sourced from regulatory reporting for the 2009-2013 regulatory period and agrees to the regulatory financial reports for each reported year. Comparable information is provided for the 2006-2008 period.

3.1.2 Data source and methodology

ElectraNet has sourced the opex information from the Regulatory Financial Reports – Historic Opex by Expenditure Category schedule for the years 2009 to 2013. For the 2006 to 2008 years, ElectraNet has compiled comparable information from the historical data available.

3.1.3 Basis of estimation

No estimates have been made in the compilation of this information. Estimates and judgements may be required in accordance with the Transmission Network Service Providers Information Guidelines when compiling the underlying data within the relevant regulatory financial reports. ElectraNet notes that there have been changes to the

business structure and improvements to financial systems which have occurred during the reported period. After any change, ElectraNet has endeavoured to ensure that reported regulatory opex data is as consistent as possible with reset decisions and reporting in prior years.

3.1.4 Changes to accounting policies

There has been a change to the accounting for retirement benefit obligations which was first applied from 1 July 2011. The nature and impact of this change to opex is disclosed in detail within section 3.2.4 Provisions – Changes to accounting policy.

There have been no changes to ElectraNet's cost allocation approach and regulatory accounting principles or policies which affect historical opex reporting.

3.2 Provisions (TOPEX02-TOPEX0212)

3.2.1 Data requirement

ElectraNet must report, for all Regulatory Years, Financial Information on provisions for Prescribed Transmission Services in accordance with the Cost Allocation Approach and the Information Guidelines that were in effect for the relevant Regulatory Year.

ElectraNet must report Financial Information for each of its provisions.

Provisions must be reported in accordance with the regulatory principles and policies within the Information Guidelines for each Regulatory Year.

Financial information on provisions should reconcile to the reported amounts for provisions in the Regulatory Financial Reports for each Regulatory Year.

3.2.2 Data source and methodology

Information on annual and long service leave and self-insurance provisions has been sourced from the Regulatory Financial Report for each financial year.

Information on the retirement benefit obligation provision has been extracted from ElectraNet's Statutory Financial Reports for each financial year. Information has been extracted from the Statutory Financial Reports as there is more detailed information provided to satisfy the data requirements of the RIN (e.g. variables TOPEX0205B and TOPEX0211B).

Leave provisions

The information extracted from the Regulatory Financial Reports is tabled for each year from the Provisions Reconciliation – Prescribed Transmission Services.

Each year there is calculation of the proportion of ElectraNet's cost applicable to prescribed network services. This proportion varies each year. The amounts tabled are the balances and movements applicable to prescribed network services.

Given the proportion of prescribed network services to total network services changes each year, an adjustment is made to the "increases to provisions' row to ensure the

opening balance of the current year is equal to the closing balance of the preceding year. The adjustment is made up of the difference in the current and prior year's prescribed network services percentage, multiplied by the closing value of the preceding year.

To derive the split of provisions between capital expenditure (capex) and opex, ElectraNet have made an estimation based on the labour activity allocation to capex and opex costs. For further details of the estimation refer to 3.2.3 Basis of Estimation.

For long service leave (LSL), for each year from 2009 onwards, ElectraNet has calculated the provision movement due to the change in the annual discount rate applied to the leave accrued for employees who have not reached the full LSL entitlement period of seven years. The previous year's discount rate has been substituted into each annual LSL calculation of the current year to derive the liability using the previous discount rate. The recalculated provision amount is subtracted from the current year's actual calculation to derive the movement.

ElectraNet uses the Commonwealth Government five year bond rate as the annual discount rate. The movement due to the discount rate is shown in TOPEX205A for opex and TOPEX211A for capex, with a corresponding offset in TOPEX202A and TOPEX208A.

Retirement benefit obligation

Information is extracted from the detailed notes which form part of the annual ElectraNet Statutory Financial Reports. The statutory information is more comprehensive than the information disclosed in the annual Regulatory Financial Report.

The information extracted from the ElectraNet Statutory Financial Report is adjusted to the portion applicable to prescribed network services based on the prescribed network services percentage disclosed in the Regulatory Financial Report. Opening and closing balances of the retirement benefit obligation provision agrees with the Regulatory Financial Report balances for each year.

The detailed extracted information is summarised in the format required in table 3.2 of the data template in accordance with the mapping shown in Figure 3-1: Retirement benefit obligations mapping on the following page:

Figure 3-1: Retirement benefit obligations mapping

TOPEX02B Retirement benefit obligations analysis

RIN analysis			
Opex	**Capex**	**Description**	**Statutory financial report analysis**
TOPEX0201B	TOPEX0207B	Opening balance	Net defined benefit liability/(asset) at start of year
TOPEX0202B	TOPEX0208B	Increases to the provision	Current service cost Interest cost Expected return on plan assets Interest income Contributions by scheme participants Benefits paid Taxes & premiums paid
TOPEX0203B	TOPEX0209B	Amounts used (that is, incurred and charged against the provision) during the period	Employer contributions
TOPEX0204B	TOPEX0210B	Unused amounts reversed during the period	N/A
TOPEX0205B	TOPEX0211B	The increase during the period in the discounted amount arising from the passage of time and the effect of any change in the discount rate.	Actuarial gains/(losses) demographic assumption changes Actuarial gains/(losses) financial assumption changes Fair value actuarial gains/(losses) Present value actuarial gains/(losses) Transfers in
TOPEX0206B	TOPEX0212B	Closing balance	Net defined benefit liability/(asset) at end of year

Increase in the retirement benefit obligation provision reflects movements that have been included within historical opex reported.

Amounts used reflect payments by ElectraNet in relation to the retirement benefit obligation.

The increase during the period in the discounted amount arising from the passage of time and the effect of any change in the discount rate includes items presented in other comprehensive income within the Statutory Financial Reports which are not included in reported historical opex.

Each year ElectraNet calculates the proportion of cost applicable to prescribed network services. This proportion varies each year. The amounts tabled are the balances and movements applicable to prescribed network services.

Given the proportion of prescribed network services to total network services changes each year, an adjustment is made to the "increases to provisions' row to ensure the opening balance of the current year is equal to the closing balance of the preceding year. The adjustment is made up of the difference in the current and prior year's prescribed network services percentage, multiplied by the closing value of the preceding year.

Self-insurance

This provision has been reported from 2008/09 onwards and is reported only in each year's Regulatory Financial Report.

Self-insurance is only applicable to opex and therefore no apportionment has been applied between capex and opex.

3.2.3 Basis of estimation

Estimates and judgements are required when compiling the underlying data within the relevant statutory financial reports for leave and retirement benefit obligation provisions. These are made in accordance with the relevant Australian Accounting Standards.

Estimates and judgements may be required in accordance with the Information Guidelines when compiling the underlying data for self-insurance provisions disclosed in the relevant regulatory financial reports.

ElectraNet has calculated a capex and opex split for provisions for the years 2011 to 2013. The cost allocation is derived from the ElectraNet cost accounting system in which labour activities are allocated to capex and opex cost collectors. Using standard SAP report S_ALR_87013611, ElectraNet has analysed primary costs by activity postings to capex and opex, to derive the annual apportionment.

Prior to 2011 ElectraNet operated a less detailed costing system and therefore the same estimation methodology cannot be applied. For the years 2006 to 2010 a 50/50 split has been assumed which was applied during the last revenue reset determination for 2009 to 2013.

3.2.4 Changes to accounting policies

Effective 1 July 2011, ElectraNet adopted the revised *AASB 119 Employee Benefits* standard as issued by the Australian Accounting Standards Board within their Statutory Financial Reports.

The revised accounting standard changed the way retirement benefit obligations were measured and disclosed.

ElectraNet obtained actuary reports which measured the impact of the change in the accounting standard for 2011 & 2012. The impact of these changes is summarised in

Figure 3-2: Retirement benefit obligations analysis on the following page:

Figure 3-2: Retirement benefit obligations analysis

TOPEX02B Retirement benefit obligations analysis		With AASB119 revision	Before AASB119 revision		With AASB119 revision	Before AASB119 revision	
RIN analysis		Reported in RIN	Restated	Change	Restated	Reported in RIN	Change
Opex	Description	2012	2012	2012	2011	2011	2011
TOPEX0201B	Opening balance	7,118	7,118	0	8,320	8,320	0
TOPEX0202B	Increases to the provision	871	496	375	1,078	647	431
TOPEX0203B	Amounts used (that is, incurred and charged against the provision) during the period	(1,011)	(1,011)	0	(839)	(839)	0
TOPEX0204B	Unused amounts reversed during the period	0	0	0	0	0	0
TOPEX0205B	The increase during the period in the discounted amount arising from the passage of time and the effect of any change in the discount rate.	8,671	9,046	(375)	(843)	(412)	(431)
TOPEX0206B	Closing balance	15,649	15,649	0	7,716	7,716	0

		Reported in RIN	Restated	Change	Restated	Reported in RIN	Change
Capex	Description	2012	2012	2012	2011	2011	2011
TOPEX0207B	Opening balance	8,424	8,424	0	8,438	8,438	0
TOPEX0208B	Increases to the provision	1,031	587	444	1,094	657	437
TOPEX0209B	Amounts used (that is, incurred and charged against the provision) during the period	(1,197)	(1,197)	0	(851)	(851)	0
TOPEX0210B	Unused amounts reversed during the period	0	0	0	0	0	0
TOPEX0211B	The increase during the period in the discounted amount arising from the passage of time and the effect of any change in the discount rate.	10,263	10,707	(444)	(855)	(418)	(437)
TOPEX0212B	Closing balance	18,521	18,521	0	7,826	7,826	0

4. Assets (RAB)

4.1 Regulatory asset base values

Table 4.1 in the template is the aggregate of the Asset value roll forward information in Table 4.2.

For details of the data requirement, source, methodology, basis of estimation and changes to accounting policies, refer to the details below within 4.2 Asset value roll forward.

4.2 Asset value roll forward

4.2.1 Data requirement

ElectraNet must report RAB values in accordance with the standard approach per the RIN and the Assets (RAB) Financial Reporting Framework.

RAB Financial Information must be allocated from, and reconcile to, the 'as commissioned' RAB. RAB Financial Information must reconcile to:

- For years prior to any AER determination of RAB values, determinations made in relation to RAB values made by the previous jurisdictional regulator.
- Any decision that the AER has made in relation to RAB values unless that decision incorporates forecasts (for example, for the last year of the previous regulatory period) in which case those forecast values should be replaced with actual values where possible. Actual values must reconcile to amounts reported in the response to the Information Guidelines.
- For years where the AER has not made a decision on values for the RAB, RAB values must be prepared in accordance with the RAB Framework. In this circumstance, actual additions (recognised in the RAB) and disposals must reconcile to amounts reported in the response to the Information Guidelines.

4.2.2 Data source

The information provided by ElectraNet is sourced from the Roll Forward Models (RFM) for the 2003-2008 and 2008-2013 revenue reset periods which have previously been submitted to the AER as part of their revenue determinations.

Forecast values for the year ended 30 June 2013 have been replaced with actual commissioned values that were used in determining the incurred additions in the regulatory financial report submitted to the AER for the period then ended.

Forecast values for the year ended 30 June 2008 have been replaced with actual values and adjusted for during the 30 June 2013 regulatory year as reported in the RFM 2008 – 2013 submitted to the AER.

4.2.3 Methodology

ElectraNet has extracted the RFM information for opening balances, additions, disposals, inflation, depreciation and closing balances directly from the 2003-2008 and 2008-2013 RFMs, and the values used in preparing the regulatory financial report for the year ended 30 June 2013

ElectraNet has mapped the regulatory asset classes shown in the RFM to the RIN categories as shown in Table 4-1: Mapping regulated asset classes to RIN asset categories below:

Table 4-1: Mapping regulated asset classes to RIN asset categories

RIN asset category	Regulated asset class
Overhead transmission assets	Transmission lines - Overhead Refurbishment
Underground transmission assets	Transmission lines - Underground
Transmission switchyards, substations	Substation Establishment Substation Primary Plant Refurbishment Projects 2008-2013 Land - Substations Accelerated Depreciation
Easements	Easements
Other assets with long lives	Substation Secondary Systems - Electromechanical Substation Secondary Systems - Electronic Substation Demountable Buildings Substation Fences Communications - Civil Communications - Other Commercial Buildings Land - Other long life assets Office furniture, movable plant, and misc Capital Work in Progress Equity Raising Cost - 2003 Opening RAB and 2003-08 capex Equity Raising Cost 2013-2018
Other assets with short lives	Network Switching Centres Computers, software, and office machines

The classes of assets previously reported in the 2003-2008 and 2008-2013 RFMs, and the regulatory financial report for the year ended 30 June 2013 are consistent with the RIN asset categories above, except for Land.

Split of land to satisfy the RIN asset categories

The RIN requires Land to be split by, Land – Substations and Land – Other long life assets.

Substation land is included in the "Transmission switchyards and substations" RIN asset category. Other land is included in the "Other assets with long lives" RIN asset category. Other land comprises commercial land for offices and parking, in addition to strategic land purchased in advance of provision of substation assets.

ElectraNet have allocated each parcel of land per ElectraNet's SAP fixed asset register between the two classes based on the actual land use.

This is the most accurate basis of splitting land values between the RIN asset categories given it is based on the actual use of land – i.e. for substations or other purposes. ElectraNet have not adopted the standard approach per the RIN Instructions and Definitions document as the depreciated replacement cost estimates are not applicable to land, and there is insufficient information in the RAB to do so.

4.2.4 Basis of estimation

In some instances, a parcel of land per ElectraNet's fixed asset register comprises substation and other commercial land. Therefore an apportionment is required in order to allocate the value of the parcel of land between the two RIN asset categories. This has been performed based on the land area and its use per area apportionment from survey or the ElectraNet geographical information system (GIS).

This is the best available estimate as it relies on historical accounting records for the book value of the total parcel of land. Two apportionments rely on titles and independent land survey information. The third apportionment relies on the land title and a GIS area calculation.

ElectraNet has calculated an apportionment percentage of total land additions from its fixed asset register between "Transmission switchyards and substations" and "Other assets with long lives". The apportionment percentage is applied to the RFM land additions. Due to the "Difference Between Actual and Forecast Net Capex" and the "Return on Difference – Net Capex" relating to 2008 which are adjusted for in 2013 year within the RFM, the calculation allows for the land asset additions and related CPI inflation for the 2008 year to be adjusted out of the 2008 to 2012 years and to be added into the 2013 land asset category in the RAB. These 2008 land additions were included in the "Difference Between Actual and Forecast Net Capex" in the 2008-2013 RFM. The related "Return on Difference – Net Capex" has also been apportioned between "Transmission switchyards and substations" and "Other assets with long lives" and adjusted in the 2013 year.

A minor adjustment is required to the additions apportionment to reconcile to the closing balance split of land between "Transmission switchyards and substations" and "Other assets with long lives". This adjustment is required to ensure the closing balance of land apportioned to "Transmission switchyards and substations" and "Other assets with long lives" for each year is equal to the closing balances derived by adding through opening balance, additions, disposals and regulatory depreciation.

The land values apportioned to the "Transmission switchyards and substations" and "Other assets with long lives" categories are shown in

Table 4-2: Land value apportionment on the following page:

Table 4-2: Land value apportionment

Closing value ($'000)	2006	2007	2008	2009	2010	2011	2012	2013
Land - transmission switchyards & substations	9,629	9,934	10,502	10,867	11,625	11,954	12,354	24,783
Land - other assets with long lives	1,138	1,174	1,241	1,329	1,948	667	3,386	27,440
Land total	10,767	11,108	11,743	12,196	13,573	12,621	15,739	52,223
Substation land %	89.4%	89.4%	89.4%	89.1%	85.6%	94.7%	78.5%	47.5%

4.2.5 Changes to accounting policies

There are no changes to accounting policies which impact ElectraNet's RAB values.

4.3 Total disaggregated RAB asset values

4.3.1 Data requirement

ElectraNet must report average RAB Asset values that have been disaggregated into the categories in this table. These must be calculated as the average of the opening and closing RAB values for the relevant Regulatory Year for each of the RAB Asset categories and should be directly reconcilable to the opening and closing values in Table 4.2 per the template for the relevant categories.

The information provided by ElectraNet is sourced from the Roll Forward Models for the 2003-2008 and 2008-2013 revenue reset periods.

4.3.2 Data source

ElectraNet has sourced the opening and closing balances for each of the RIN asset categories as reported in table 4.2 of the data template, asset value roll forward.

4.3.3 Methodology

ElectraNet has averaged the opening and closing balances for each of the RIN asset categories in table 4.2 of the data template, asset value roll forward, in accordance with the RIN requirements.

4.3.4 Basis of estimation

No estimation has been applied to calculate the data presented in table 4.3 of the data template.

4.3.5 Changes to accounting policies

There are no changes to accounting policies which impact ElectraNet's RAB values.

4.4 Asset lives

4.4.1 Data requirement

In relation to Table 4.4.1 'Asset Lives – estimated service life of new assets' and Table 4.4.2 'Asset lives – estimated residual service life', ElectraNet must report asset lives for all RAB Assets in accordance with the category definitions provided in chapter 9 in the RIN.

The information provided by ElectraNet is sourced from the detailed asset records to which regulated service lives have been applied and remaining lives calculated.

4.4.2 Data source

ElectraNet has extracted detailed asset information from its SAP fixed asset register.

Regulatory asset lives used are approved by the AER.

4.4.3 Methodology

ElectraNet has used the detailed asset information contained in its fixed asset register for these calculations. This allows a standard basis of calculation for service and remaining lives whereas the RAB contains an averaged remaining service life for each asset class, which would allow a service life calculation but not an average remaining life calculation.

ElectraNet has mapped its asset register asset classes to RFM asset classes and then to the RIN asset categories.

Work in progress assets are excluded from the calculations. These assets are not complete and their cost is not yet allocated to asset classes in ElectraNet's fixed asset register.

Land and easement assets are excluded from the calculations, because they do not have a finite life.

Equity raising costs and accelerated depreciation costs are excluded. These assets are not physical assets with a service life and are not incorporated in ElectraNet's fixed asset register.

The RFM accelerated depreciation asset class is used for reclassifying assets which are intended to be replaced in the next regulatory period (2013-2018). This does not reflect the historical service or residual service lives of those assets and consequently these assets are included in their original asset class.

Table 4.4.1

Regulated asset class service lives have been applied to individual assets. For each financial year covered by the RIN, the service years are multiplied by the asset net book values (NBV) to calculate $_service_years for each asset. For each RIN asset category, the $_service_years are aggregated then divided by the aggregated NBV, to give an average service life in years.

Table 4.4.2

Regulated asset class service lives have been applied to individual assets. For each year covered by the RIN, the remaining regulated life of each individual asset is calculated with reference to the asset register acquisition date and the RFM asset class service life. For each financial year the remaining lives in years are multiplied by the asset net book values (NBV) to calculate $_remaining_years for each asset. For each RIN asset category, the $_remaining_years are aggregated then divided by the aggregated NBV, to give an average remaining life in years.

4.4.4 Basis of estimation

ElectraNet has used the regulated lives per the RAB asset classes. No estimation is involved.

4.4.5 Changes to accounting policies

There are no changes to accounting policies which impact ElectraNet's asset lives.

5. Operational Data

5.1 Energy delivery (TOPED0101-TOPED0103)

5.1.1 Data requirement

According to Economic Benchmarking RIN for Transmission Network Services Provider Instructions and Definitions November 2013 Chapter 5 Section 5.1 ElectraNet are required to report the amount of electricity transported through ElectraNet's network in the relevant Regulatory Year (measured in GWh). This must be as metered at the downstream settlement location rather than the import location to ElectraNet's network. Energy delivered must be actual energy delivered data, unless this is unavailable.

Energy delivery 'To other connected transmission networks' (TOPED0101) must include both imported and exported energy.

Where energy delivery 'To directly connected end–users' (TOPED0103) is confidential, in the public version of the RIN Templates, cells associated with this Variable should be blacked out and energy delivered that would otherwise be reported as part of TOPED0103 must be included in energy delivered 'To Distribution networks' (TOPED0102).

5.1.2 Data source and methodology

National Grid Metering (NGM) data on which the NEM financial settlement is based has been used. This has been previously Quality Controlled by the Metering Data Agent (meter reader) and by the Australian Energy Market Operator (AEMO) prior to use in NEM settlement. It is also checked weekly by ElectraNet's internal processes for reasonableness of Transmission Loss Factor.

NGM Data is extracted from the ElectraNet Oracle database by classification of:

- Generators;
- Interconnectors; and
- Load connections: Wholesale (directly connected end-users) and Distribution.

The extracted data is used to calculate the required RIN parameters on yearly basis via appropriate formulae, following Chapter 9 Definitions of the RIN Instructions and Definitions wherever appropriate.

5.1.3 Basis of estimation

N/A

5.1.4 Changes to accounting policies

N/A – Information reported within 5.1 of the data template relates to non-financial information.

5.2 Connection point numbers

5.2.1 Data requirement

Connection point numbers must be reported as the average of connection point numbers in the relevant Regulatory Year under system normal conditions. The average is calculated as the average of the number of connection points on the first day of the Regulatory Year and on the last day of the Regulatory Year.

ElectraNet must report the number of entry and exit points at each voltage level. ElectraNet must add additional rows as necessary to Table 5.2 to report each voltage level for entry or exit points.

5.2.2 Data source and methodology

Information on all ElectraNet substations was extracted from ElectraNet's SAP Network Statistics report to establish functional location, name, substation start-up date and voltage of the.

System switching diagrams (SSDs) were downloaded from ElectraNet's drawing management system, SPF and the number of unique customers was identified on the SSDs to determine Entry and Exit connection points.

The Network Statistics report was used to identify the SSDs to ensure all substations were captured.

Where multiple voltages for entry and exits exist, new records were manually added and any additional commentary prepared based on the review of single line diagrams.

5.2.3 Basis of estimation

For the basis of this estimation, Connection Point is defined as each unique customer. In the case where a substation has transformers feeding different subsystems, each subsystem has been counted as a separate connection point.

The connection point count includes both regulated and unregulated connection points.

Connection point voltage has been taken to mean the voltage at the high side of the connection transformer, that is, the voltage seen on the ElectraNet side or if applicable the voltage of the line or cable where it is the connection between customers or subsystems.

ElectraNet notes that an alternate basis of estimation would be to count the number of network metering identifiers which are at the physical point of connection to customers. This would result in a materially higher number than the methodology chosen. We have been guided in our choice of estimation methodology by the by the list of connection points in the South Australian Electricity Transmission Code.

Consistent with the email correspondence provided by Andrew Ley from the AER on 12 February 2014, interconnectors have been treated as an exit point.

5.2.4 Changes to accounting policies

N/A – Information reported within 5.2 of the data template relates to non-financial information.

5.3 System demand (TOPSD0101-TOPSD0308)

5.3.1 Annual system maximum demand characteristics (TOPSD0101-TOPDS0206)

5.3.1.1 Data requirement

Table 5.3 of the data template must be completed in accordance with the Economic Benchmarking RIN for Transmission Network Services Provider Instructions and Definitions November 2013 Chapter 9. ElectraNet must provide inputs for these cells if it calculates historical Weather Adjusted Maximum Demands.

Where ElectraNet does not calculate Weather Adjusted Maximum Demands it may estimate the historical Weather Adjusted data or shade the cells black. For Subsequent Regulatory Years ElectraNet will be required to provide Weather Adjusted Maximum Demand on an ongoing basis in accordance with best regulatory practice weather adjustment methodologies.

5.3.1.2 Data source and methodology

National Grid Metering (NGM) data on which the NEM financial settlement is based has been used. This has been previously Quality Controlled by the Metering Data Agent (meter reader) and by AEMO prior to use in NEM settlement. It is also checked weekly by ElectraNet's internal processes for reasonableness of Transmission Loss Factor.

NGM Data is extracted from the ElectraNet Oracle by classification of:

- Interconnectors; and
- Load connections: Wholesale (directly connected end-users) and Distribution.

The extracted data is used to calculate the required RIN parameters via appropriate formulae, following Chapter 9 Definitions of the RIN Instructions and Definitions wherever appropriate.

Both calculations on National Metering Identifier level and Substation level have been considered and we believed that the Substation level base calculation satisfies the intent of the requirement.

The interconnector contribution to maximum MW demand has been included only for those half hours when the interconnector is acting as a load (export to Victoria).

The interconnector contribution to maximum MVA demand has been included only for those half hours when the interconnector is acting as a load (MW half hour exporting to Victoria).

5.3.1.3 Basis of estimation

TOPSD0201 and TOPSD0204

Six of the 212 ElectraNet connection points do not have the kVAR values metered. These are minor connection points in terms of energy consumed. The impact of this lack of actual metered data on the calculation of MVA has been estimated to be of the order of 0.5%. The impact of this on MVA is operationally minimal. As such and considering the accuracy of any estimation method no estimation has been made on these missing KVAR values.

5.3.1.4 Changes to accounting policies

N/A – Information reported within 5.3 of the data template relates to non-financial information.

5.3.2 Power factor (TOPSD0301-TOPSD0308)

5.3.2.1 Data requirement

ElectraNet must report the power factor to allow for conversion between MVA and MW measures for each voltage. If both MVA and MW demand for a network are available then the power factor is the total MW divided by the total MVA. ElectraNet must provide a power factor for each voltage level and for the network as a whole. The average overall power factor conversion (TOPSD0301) is the total MW divided by the total MVA.

If either the MW or MVA measure is unavailable the average power factor conversion can be calculated as an approximation based on best engineering estimates.

When completing the Templates for Regulatory Years subsequent to the 2013 Regulatory Year, if ElectraNet can provide Actual Information for Table 5.3.3 it must do so; otherwise ElectraNet must provide estimated information.

5.3.2.2 Data source and methodology

Data source for this section is from ElectraNet's Subsload database, this contains 30 minute instantaneous SCADA figures. This is used to extract voltage, real power and reactive power.

The data extracted was for every Line that reports either a voltage or real power or reactive power for that day.

The data extracted does not differentiate between regulatory and non-regulatory lines, or the owner of those lines. Therefore, the data may include some SAPN 66kV or BHP 275kV that we have SCADA information for. This is arguably a more accurate picture of the network.

The voltage is shown for the first half hour of each day and this is used for the classification of the line. As system voltage may vary, ranges have been used to determine the nominal voltage of the line. These are:

- Between 50-100 kV = 66kV
- Between 100-200 kV = 132kV

- Between 200-350 kV = 275 kV
- Between 50-350 kV = overall network

As it is the voltage at the first half hour that determines classification if the line is off (i.e. zero) or low voltage (<50kV) this day of calculated power factors for that line is excluded.

There is some small chance of misclassifying a higher voltage line during de-energisation, if the snapshot (first half hour of the day) catches during the voltage going down.

This query will also capture the metering (line CT's) at both ends of a line.

Power factor for a line can have 4 quadrants of operation with lines usually measured at both ends. Convention being that positive is outwards from the bus end and negative is towards the bus, with P being real power and Q being reactive power.

- P+,Q+ = lagging
- P-,Q- = lagging
- P+,Q- = leading
- P-,Q+ = leading

Power factor = P / S (definition as per Instructions) where S = sqrt(P^2 + Q^2).

If power factor is lagging give a negative sign to P / S (usually dimensionless) and if power factor is leading give a positive sign to P / S (usually dimensionless) i.e. + = leading and - = lagging.

In an excel spreadsheet, unity power factor is 1 and to do a proper average of a line that may have reactive power swinging back and forth we need to average around 1, hence we used the following formulas below:

=IF(E3=0,"NA",IF(E3="null","NA",IF(E3=-1,1,IF(E3=1,1,E3))))

The formula above normalises the -1 figure and removes 0's and nulls from the average.

=IF(BB3="NA","NA",IF(BB3<0,BB3*-1,1+(1-BB3)))

The formula above creates a power factor range centred on 1 (unity) if it is greater than 1 = leading, if it is < 1 = lagging. If the power factor is leading this number must be subtracted from 1 and then added back to 1 as a power factor can only range between zero and one.

An average is calculated for all the power factors (every 30min) for that line for a day, then an average determined from that daily average power factor for all lines within the voltage range.

This is the figure ElectraNet have reported in the data template. This number will not reconcile with total MW divided by the total MVA (TOPSD0101/ TOPSD0201) as the AER definitions and instructions specifically ask for power factor on lines whereas TOPS0101 and TOPS0201 relate to loads.

5.3.2.3 Basis of estimation

N/A

5.3.2.4 Changes to accounting policies

N/A – Information reported within 5.3.3 of the data template relates to non-financial information.

6. Physical Assets

6.1 Transmission system capacities variables – Overhead Circuit Length (TPA0101-TPA06)

6.1.1 Data requirement

ElectraNet is required to report overhead network length of circuit at each voltage level. The network length of circuit is the circuit length (measured in kilometres) of lines in service (the total length of lines including interconnectors, backbones and spurs). A double circuit line counts as twice the length. Length does not take into account vertical components such as sag.

6.1.2 Data source

The primary source used to report overhead circuit length and voltage is ElectraNet's Line Schedule database, which contains structure and span information. The information sourced from the database included overhead span lengths, circuits, voltage and section build dates. This is a live database and therefore data downloaded reflects the network status at that moment in time.

SAP, ElectraNet's integrated business and asset management system was used to provide a list of all ElectraNet built sections historically for the network. This was required to provide historical structural and span information and also the date of any lines removed/scrapped.

The Network Statistics Report from the ElectraNet Grazer asset management reporting tool provided an additional source of asset information as well providing a data cross-check for overhead span lengths and voltage by built section including for removed and scrapped lines.

The list of built sections extracted from SAP was reconciled against the built section list in the Line Schedules database and with the Network Statistics Report. This was to ensure only regulated lines were included in the line asset list and to identify what lines were decommissioned and when.

Note that to determine circuit length, Line Schedules data was used.

From the reconciled asset list, line length for each built section at each voltage was then summed to determine total overhead network length of circuit for each voltage type.

6.1.3 Basis of estimation

Some assumptions were made based on the available data to estimate overhead circuit length including:

Date of build

In some instances, the structures and spans in the line schedules did not include start-up/build dates due to some inconsistencies with the data analysed. If these dates were

unavailable, the date was estimated on the one of the basis below depending on availability of information:

1. The date as found in line schedules which is consistent with rest of the built section;

   (a) By definition, a built section is a consistent section of line built at the same time

2. The SAP start-up date;

   (a) Although SAP is not ElectraNet's primary database for line details for some items it may include start-up dates.

3. The terminal substation start-up date from SAP.

   (a) Generally a line is built to reach a substation (certainly for a radial)

As identified in the previous section, the preferred approach if applicable was to use the date found in the Line Schedules data as this information is actively maintained.

Length of circuits within a substation

Consistent with ElectraNet's internal procedures for determining circuit length, information on the length of circuits within a substation is not currently maintained. These have been excluded from the data presented as ElectraNet defines a transmission line as from the substation gantry structure to another substation gantry structure.

Consistent with the AER's data requirement, double circuit lines were counted as twice the length.

The lengths reported in the data templates are in kilometres and are classified by the kV ratings and year.

De-energised lines

De-energised line circuit lengths are included in the provided figures. This is as these lines can be returned to service quickly with minor works and these sections are still maintained.

Decommissioned lines

For scrapped and decommissioned lines the SAP decommissioning date (changed on date) is used for date of line removal and for length and spans of removed lines. For lines removed, old archived historical line schedules were used to determine line length.

6.1.4 Changes to accounting policies

N/A – Information reported within 6.1.1 of the data template relates to non-financial information.

6.2 Underground cable circuit length at each voltage (TPA0201 – TPA0207)

6.2.1 Data requirement

ElectraNet is required to report underground cable circuit length at each voltage level. The underground cable circuit length is the circuit length (measured in kilometres) of lines in service (the total length of lines including interconnectors, backbones and spurs).

6.2.2 Data source and methodology

The primary source used to report underground circuit length and voltage is SAP, ElectraNet's integrated business and asset management system. This database provided a list of all ElectraNet underground built sections over the history of the network, cable circuit length and voltage and section build date. The database also provided the date of any lines removed or scrapped.

Note that unlike for overhead circuit lengths, for underground cables there is no line schedules database as there are no spans and structures. Therefore it was determined that the SAP data available provides the most reliable basis for determining underground circuit length, voltage and asset start-up date.

Google Earth and information from the Network Stats Report was used to establish circuit length for 66kV cable sections.

All other assumptions regarding underground circuit length were consistent with the methodology (only regulated etc.) applied for overhead circuit length described in section 6.1 of this report.

6.2.3 Basis of estimation

Length of circuits within a substation

The length of circuit within substations is not maintained. These have been excluded from the data presented as ElectraNet defines a transmission cable as from substation cable bushing to another substation cable bushing. For 66kV only the end point is classed as the substation fence.

The lengths reported in the data templates are in kilometres and are classified by the kV ratings and year.

66kV Cables

66kV cables have been included based on Google Earth measured lengths, as there is no available data in either the Lines Schedules database or SAP.

6.2.4 Changes to accounting policies

N/A – Information reported within 6.1.2 of the data template relates to non-financial information.

6.3 Estimated overhead network weighted average MVA capacity by Voltage class (TPA0301 – TPA0307)

6.3.1 Data requirement

ElectraNet must provide estimated typical or weighted average capacities for each of the listed voltage classes under normal circumstances taking account of limits imposed by thermal or by voltage drop considerations as relevant.

This information will be used to calculate an overall MVA x km 'carrying capacity' for each voltage class under normal circumstances. ElectraNet is required to provide summer Maximum Demands for summer peaking assets and winter Maximum Demands for winter peaking assets. If ElectraNet's peak has changed from winter to summer (or vice versa) over the time period, winter ratings should be applied for those years where there was a winter peak and summer ratings for those years where there were summer peaks.

Where circuits travel both overhead and underground and the capacity of the overhead and underground components is not available separately, ElectraNet may split the circuit capacity by the ratio of the network that is overhead and underground to form estimates of the overhead capacity and underground capacity components.

6.3.2 Data source and methodology

Base information including circuit length, voltage, energisation date and regulated/unregulated status were derived from the Network Statistics Report that extracts data from SAP.

ElectraNet used the internal Plant and Line Rating database as the source to determine the seasonal thermal normal ratings for all regulated lines.

Where information was not available, usually for decommissioned lines, the historical ratings as per the AEMO ratings workbooks was used as a basis for seasonal thermal normal ratings. If this information was not available a rating was applied that was consistent with those for a line of similar conductor type and design temperature.

All other assumptions in this section are consistent with section 6.1.1 of the data template unless otherwise stated in the basis of estimate in the following section.

6.3.3 Basis of estimation

ElectraNet has provided weighted average capacity by distance. Only summer overhead network weighted Average MVA capacity by voltage has been reported, as ElectraNet is a summer peak demand network.

In the event that the maximum rating achievable at any time during the year was used, consistent with the winter rating, a materially higher number would result.

In preparing weighted average MVA, ElectraNet assumed that all uprating's are from the 1st January each year if no better information is available.

Ratings have been prepared on a per circuit basis. Therefore if a single built section is changed this does not change the commissioning date (commissioning date is defined as the oldest built section in the circuit) or the ratings for the line (limited by lowest rated built section, if this is changed will be captured as an uprating).

There are some small sections of 66 kV which is underground as well as overhead, but the underground component is immaterial and therefore all of the circuit is assumed to be overhead.

Where information was not available, usually for older lines, the historical ratings as per the AEMO ratings workbooks was used as a basis for seasonal thermal normal ratings. If this information was not available a rating was applied that was consistent with those for a line of similar conductor type and design temperature.

De-energised lines were included if the line has a rating in the Plant and Line Rating database.

In some instances, the Network Statistics Report did not include start-up/build date or length of the circuit. This was mainly due to some data lookup errors to do with line tees where there may be different rated circuits that all report to the same feeder number. If these are unavailable, ratings were estimated using either the Line Schedules database or within SAP.

The preferred approach if applicable was to use the data found in the Line Schedules database as opposed to SAP as this information is actively maintained.

6.3.4 Changes to accounting policies

N/A – Information reported within 6.1.3 of the data template relates to non-financial information.

6.4 Estimated underground network weighted average MVA capacity by Voltage class (TPA0401 – TPA0407)

6.4.1 Data requirements

ElectraNet is required to provide estimated typical or weighted average capacities for each of the listed voltage classes under normal circumstances taking account of limits imposed by thermal or by voltage drop considerations as relevant.

This information will be used to calculate an overall MVA x km 'carrying capacity' for each voltage class under normal circumstances. ElectraNet is required to provide summer Maximum Demands for summer peaking assets and winter Maximum Demands for winter peaking assets. If a ElectraNet's peak has changed from winter to summer (or vice versa) over the time period, winter ratings should be applied for those years where there was a winter peak and summer ratings for those years where there were summer peaks.

Where circuits travel both overhead and underground and the capacity of the overhead and underground components is not available separately, ElectraNet may split the circuit capacity by the ratio of the network that is overhead and underground to form estimates of the overhead capacity and underground capacity components.

From the 2015 Regulatory Year onwards ElectraNet is required to report actual overhead and underground capacity.

6.4.2 Data source and methodology

As described in the previous section, base information including circuit length, voltage, energisation date and regulated/unregulated status were derived from ElectraNet's Network Statistics Report. ElectraNet used the internal Plant and Line Rating database as the source to determine ratings for all regulated underground lines.

All other assumptions in this section are consistent with those used in 6.1.2 and 6.1.3 of the data template unless otherwise stated in the basis of estimate.

6.4.3 Basis of estimation

There are some small sections of 66 kV which is underground as well as overhead, but the underground component is immaterial and therefore all of the circuit is assumed to be overhead. This results in a zero for variable TPA0406.

Note that underground cables do not have seasonal ratings so only normal ratings have been reported.

6.4.4 Changes to accounting policies

N/A – Information reported within 6.1.4 of the data template relates to non-financial information.

6.5 Installed transmission system transformer capacity (TPA0501 – TPA0505)

6.5.1 Data requirements

ElectraNet must report transformer capacity involved in transformation levels indicated within the table. For the purposes of these measures the transmission system includes transformers, overhead and underground lines and cables in service that serve a transmission function. The transformer capacities Variables must be reported inclusive of Cold Spare Capacity.

For each level, report the summation of normal assigned continuous capacity or rating (with forced cooling or other capacity improving factors included if relevant). Also include capacity of tertiary windings as relevant. Assigned rating must be, if available, the rating determined from results of temperature rise calculations from testing or otherwise the nameplate rating. Do not include step-up transformers at generation connection location.

For category the 'Transformer Capacity for Directly Connected End–Users Owned by the End–User' (TPA0504), report transformer capacity at connection point to directly connected end user where the capacity is owned by the directly connected end user. Where ElectraNet knows what the directly connected customer's transformer capacity is, it should include that information. Where this information is not available to ElectraNet, a summation of non-coincident individual Maximum Demands of each such directly connected customer whenever they occur (i.e. the summation of a single annual Maximum Demand for each customer) is used as a proxy for capacity within the

customer's installation. The Variable should be the sum of the direct information where this is available and of the proxy MVA measure where the direct measure is not available.

Where ElectraNet utilises installed transformer capacity which is not included in the other categories within this table, report this transformer capacity against 'other installed transformer capacity' (TPA0506) and specify its type.

Interconnector Capacity

This is ElectraNet's Network thermal capacity available for network interconnector purposes to another network – i.e. regarding other network as an export capacity required on the source network.

ElectraNet has provided a data response consistent with the requirement described in the AER's Instructions and Definitions. However, it should be noted that NSPs generally refer to Interconnector capacity on the basis of MWs (real power flow), that is, the power that is capable of doing actual work. Murraylink (V_SA MNSP1) interconnector is a DC interconnector and MVA is only really useful in the context of AC power. Therefore for the purpose of providing capacity data for Murraylink, ElectraNet have assumed MW = MVA assuming the power factor is unity.

6.5.2 Data source and methodology

TPA0501-04

Capacities provided are normal continuous ratings (with forced cooling if available (ODAF)) from nameplate.

The primary source used for transformer capacity information was SAP, ElectraNet's integrated Business and Asset Management System. This database provided all transformer (inc. spares) sizes and dates of energisation and where applicable decommissioning. Note that figures are given as asserts in commission as at 30 June of the reporting year.

ElectraNet's System Switching Diagrams were used to determine if the substation is a transmission transformer substation, if the customer is the DNSP or not, if ElectraNet or a direct connect customer own the transformer and the size of non ElectraNet (customer) Transformers.

The ElectraNet Networks report was used to establish the list of ElectraNet substations and their energisation dates for installed transmission system transformer capacity.

TPA0505 Interconnector capacity

ElectraNet Transmission-Annual Planning Reports was used to source interconnector transfer capacities each year. This is a publicly available document that ElectraNet is required to produce annually under the Rules.

The given figure for the variable TPA0505 is the thermal capacity information for the two interconnectors that connect South Australia to the rest of the NEM.

This figure is comprised of 220 MW at the receiving end from the Murraylink interconnector, this comes from information from the Asset owner, APA Group. The capacity is limited by the power electronics within the HVDC link when working as an inverter.

This figure is comprised of 460 MW from the South East Interconnector (also known as Heywood Interconnector). This information comes from the Asset owner and planner, SPAusnet and AEMO. The capacity is limited by the two Heywood 500/275 kV transformers that are rated at 525 MVA (short term). These transformers set the limit for the interconnector at 460 MW bi-directionally. This is an N-1 capacity.

Note that many other factors can limit the interconnector flow to less than the thermal capacity quoted, including:

- Thermal limitations and voltage stability in the South Australian Network;
- Thermal limitations and transient stability in the Victorian Network; and
- Oscillatory stability limits.

6.5.3 Basis of estimation

To convert MW measure to MVA in relation to Interconnector capacity, ElectraNet assumed MVA = MW assuming power factor is unity.

Station supply (auxiliaries) transformers are excluded as they do not perform a transmission function. SVC transformers are included as transmission transformers.

As the energisation dates and sizes of non-ElectraNet transformers are not known, ElectraNet has assumed the energisation date (from ElectraNet Network Report) of the associated substation or line (as per Line schedules) as a proxy and size as per the Substation Switching Diagrams as this is the best available information.

Tertiary winding capacity is not considered relevant as this capacity is already captured in the nameplate primary to secondary capacity. Capacity taken from the tertiary is normally subtracted from the primary to secondary capacity.

ElectraNet has provided the size of directly connected transformers that are owned by the direct connect customer; this information is based on reporting from the customer, and may be confidential. The onus is on the customer to notify ElectraNet of any changes in size.

For the variable TPA0503, Transformer capacity for directly connected end–users owned by the TNSP, the input includes both regulated and unregulated transformers.

For variables TPA0503, Transformer capacity for directly connected end–users owned by the TNSP and TPA0504, Transformer capacity for directly connected end–users owned by the end–user, generator step up transformers are included. Power station house supply (auxiliaries) transformers are excluded.

For variable TPA0501, Transmission substations and TPA0502, Terminal points to DNSP systems, spare transformers are included.

For variable TPA0504, Transformer capacity for directly connected end–users owned by the end–user only end user, transformers at the boundary between networks is counted (not transformers deeper within their networks)

For all variables, regulators are excluded; this is as the capacity of the fixed tap transformer is captured and this is the capacity of the flow path.

6.5.4 Changes to accounting policies

N/A – Information reported within 6.1.5 of the data response relates to non-financial information.

6.6 Cold Spare capacity (TPA06)

6.6.1 Data requirements

Report the capacity of spare transformers owned by ElectraNet but not currently in use.

6.6.2 Data source and methodology

The primary source used to report cold spare capacity is SAP, ElectraNet's integrated business and asset management system. This provided all transformer (inc. spares) sizes and energisation and decommissioning dates. Regulators have been excluded.

In SAP search query IH06 was used on equipment functional location "TSP" (transmission spare) with functional location description "TF". The functional locations identified were then searched on to identify the transformers within them using query IH08 with equipment description "TRANS."

To identify scrapped spares, search IH08 on equipment description "SPARE" excluding "REG" and technical object type SUBS0028, TRF* excluding the deleted flag was performed in SAP.

For decommissioned spares, a count was performed from start-up to valid from date. For regular spares, a count from valid from date was performed. Ratings and dates were as per the SAP information.

6.6.3 Basis of estimation

As per 6.1.5 in the data template, spare regulators have been excluded; this is as the capacity of the fixed tap transformer is captured and this is the capacity of the flow path.

6.6.4 Changes to accounting policies

N/A – Information reported within 6.1.6 relates to non-financial information.

7. Quality of Services

"Quality of services must be reported in accordance with the definitions specified in the December 2012 electricity transmission network service providers service target performance incentive scheme documents dated December 2012 (the STPIS documents)"

7.1 Service component

7.1.1 Service parameter 1 – Average circuit outage rate (TQS0101-TQS0115)

7.1.1.1 Data requirement

'Outage' means 'loss of connection' rather than loss of supply by a connected system or customer. To allow summation into an overall Average Circuit outage rate, both numerator (No. of Events with defined circuits unavailable per annum) and denominator (Total No. of defined circuits) are needed as well as the calculated percentage rate for each item.

'Number of lines fault outages' (TQS0102) and 'number of defined lines' (TQS0103) must be reported as the amounts used to calculate the "Lines outage rate - fault" (TQS0101).

'Number of Transformer fault outages' (TQS0105) and 'Number of defined Transformers' (TQS0106) must be reported as the amounts used to calculate the 'Transformers outage rate - fault' (TQS0104).

'Number of Reactive plant fault outages' (TQS0108) and 'Number of defined reactive plant'

(TQS0109) must be reported as the amounts used to calculate 'Reactive plant outage rate - fault' (TQS0107).

'Number of Lines forced outages' (TQS0111) must be reported as the amount used to calculate the 'Lines outage rate – forced outage' (TQS0110).

'Number of Transformers forced outages' (TQS0113) must be reported as the amount used to calculate the 'transformer outage rate – forced outage' (TQS0112).

'Number of reactive plant forced outages' (TQS0115) must be reported as the amount used to calculate 'Reactive plant outage rate – forced outage' (TQS0115).

Prior to 2013, the Average Outage Circuit Rate was not required to be submitted to the AER as it was not a service component under the STPIS (data however was being captured within the Events Database). A new worksheet was created in 2013 (within the Workbook - Monthly Report Calendar Year YYYY.xlsm) for the purpose of reporting the new Service Parameter 1 – Average Circuit Outage Rate parameter. This new worksheet was used to generate the figures for the years 2006 to 2013.

7.1.1.2 Data source and methodology

ElectraNet's Events database is the single source of raw data for use in calculating the service components. Exclusions, defined by the AER's "Final Electricity transmission network service providers Service target performance incentive scheme" document, are set within the Events Database against the raw data.

The figures used for the 2014 RIN submission are the actual figures generated out of the Events database, not the annually submitted figures to the AER even though some years the figures will align.

The data relating to SM and AOD is highly dependent on the determination of the events fault cause code. As post fault event analysis to determine the confirmed cause code can take lengthy periods of time, in some cases greater than six months, it is possible, that at the time of the yearly AER submission, not all fault events will have had their cause code determined. At the time of the yearly submission, a fault event that had been included in the STPIS submission due to its initial cause code, is now not included. For example, a fault event that was included at the time of submission, reclassified as 3rd Party post submission, would now be excluded as per the AER STPIS definition for exclusions.

Considering this, ElectraNet have used Events database actual data has and are of the opinion that this will provide the best available source of data into the future.

For service components TQS0101, TQS0102, TQS0104, TQS0105, TQS0107, TQS0108, TQS0110, TQS0111, TQS0112, TQS0113, TQS0114 and TQS0115, the following data sources were used:

1. Workbook - Monthly Report Calendar Year YYYY.xlsm
2. Worksheet – Average Circuit Outage Rate
3. E-Terra Archive Report (database query) - 391Circuit Outage Rates.

For service component TQS0103 (Number of defined lines), the following data sources were used:

1. Workbook - Monthly Report Calendar Year YYYY.xlsm
2. Worksheet – Average Circuit Outage Rate
3. E-Terra Archive Report (database query) – 359 All Enet Lines.

Prior to 2013, where the AER has accepted the STPIS yearly submissions, they have by default, accepted the total number of lines. This is because the total number of lines is required for calculating the "S1 - Transmission Availability Circuit" indicator as part of the yearly STPIS submission. The submissions for 2006 – 2012 have been accepted by the AER under then "Service Standards Compliance Reviews" documentation for each calendar year. These documents can be found on the AER's web site via the link below, but will only show the final submitted, audited and accepted figures which do not include total number of lines. Note that the total number of lines was not required as a separate figure for the yearly submissions.

http://www.aer.gov.au/taxonomy/term/319?order=title&sort=asc&field_type_value=354&field_sector_value=4&field_segment_value=All

Service Components - TQS0106 (number of defined transformers), TQS0109 (number of defined reactive plant)

1. The total number of defined transformers and reactive plant for 2006 – 2013 has been derived from ElectraNet's asset information system, SAP.

2. Total Reactive Plant is the summation of Reactors, Capacitors and SVC's.

3. Assets not providing prescribed transmission services have been excluded (as stated in final STPIS document December 2012 page 22 under the exclusions section).

7.1.1.3 Basis of estimation

N/A – the data used is actual data.

7.1.1.4 Changes to accounting policies

N/A – Information reported within 7.1.1 of the data template relates to non-financial information.

7.1.2 Service parameter 2 – Loss of supply event (TQS0116-TQS0117)

7.1.2.1 Data requirement

ElectraNet must enter the loss of supply event frequency thresholds x and y. Where the loss of supply event frequency thresholds have changed, ElectraNet must specify all loss of supply event frequency thresholds that applied in the period and the years to which they applied.

Prior to 2013, the Average Outage Circuit Rate was not required to be submitted to the AER as it was not a service component under the STPIS (data however was being captured within ElectraNet's Events Database). A sub component of the database was created in 2013 for the purpose of reporting the new Service Parameter 1 – Average Circuit Outage Rate parameter. This was used to generate the figures for the years 2006 to 2013.

For Service Parameter 2 – Loss of supply event frequency – number in ranges specified follow the same definitions as stated in the "Final Electricity transmission network service providers Service target performance incentive scheme December 2012" document.

7.1.2.2 Data source and methodology

As noted in 7.1.1.2, ElectraNet's Events Database is the single source of raw data for use in calculating the service components.

The figures used for the 2014 RIN submission are the actual figures generated out of the Events database, not the annually figures previously audit by the AER. Accordingly some annual figures may not align due to information on primary cause which has come to light post annual audit.

The data relating to SM and AOD is highly dependent on the determination of the events fault cause code. As post fault event analysis to determine the confirmed cause code

can take extended periods of time, in some cases greater than six months, it is possible, that at the time of the yearly AER submission, not all fault events will have had their cause code determined. At the time of the yearly submission, a fault event that had been included in the STPIS submission due to its initial cause code, is now not included. For example, a fault event that was included at the time of submission, reclassified as 3rd Party post submission, would now be excluded as per the AER STPIS definition for exclusions.

X & y values for the period 2003 to 2008 were derived from the AER Web site, "Decision – South Australian Transmission Network Revenue Cap 2003-2007/08" dated 11 December 2002, page 98

X & y values for the period from 2008 to 2013 were derived from the AER Web site, "Final - ElectraNet transmission determination 2008-09 to 2012-13" dated 11 April 2008, page 96.

ElectraNet have included the x and y value applied in each year of the reporting period in the data template as a comment for each input cell.

For the service components TQS0116 and TQS0117 the following data sources were used:

1. Workbook - Monthly Report Calendar Year YYYY.xlsm

2. Worksheet – ETerra Sys Mins (Filtered)

3. E-Terra Archive Report (database query) - 119 System minutes - Filtered.

Within the monthly Eterra System Minutes section of the database ElectraNet entered the start and end dates. The E-Terra Archive query was then used to establish correct number of system minutes.

For the 2008 reporting period the x and y values of 2008H2 were used for the calculation of the 2008 calendar year figures. This provides consistent x and y values across the majority of the reporting periods (2008H2-2013H1 and 2013H1-2018H2) compared to the minority periods (2006 and 2007).

For the 2013 half year reporting the x and y values of 2013 H2 were used for calculation of the 2013 calendar figures. This is purely administrative since the x and y values did not change between the period 2008H2-2013H1 and 2013H2-2018H1.

7.1.2.3 Basis of estimation

N/A – the data used is actual data.

7.1.2.4 Changes to accounting policies

N/A – Information reported within 7.1.2 of the data template relates to non-financial information.

7.1.3 Service parameter 3 – Average outage duration (TQS0118)

7.1.3.1 Data requirement

Service Parameter 3 – Average outage duration the data reported prior to 2013 follow the same definitions as stated in the "Final Electricity transmission network service providers Service target performance incentive scheme December 2012" document.

7.1.3.2 Data source and methodology

As noted in 7.1.1.2, ElectraNet's Events Database is the single source of raw data for use in calculating the service components. As noted in section 7.1.2.2 above, not all outages are determined at the time of the yearly AER submission. Therefore, ElectraNet are of the opinion that the Events database will provide the best available source of actual data into the future for service components TQS0118, the following supporting documentation was used:

1. Workbook - Monthly Report Calendar Year YYYY.xlsm
2. Worksheet – ETerra Sys Mins (Filtered)
3. E-Terra Archive Report (database query) - 119 System minutes - Filtered.

Start and end dateswere defined to establish average outage durations.

7.1.3.3 Basis of estimation

N/A – the data used is actual data.

7.1.3.4 Changes to accounting policies

N/A – Information reported within 7.1.3 of the data template relates to non-financial information.

7.1.4 System parameter – Proper operation of equipment – number of failure events (TQS0119-TQS0121)

7.1.4.1 Data requirement

Quality of services must be reported in accordance with the definitions specified in the December 2012 electricity transmission network service providers service target performance incentive scheme documents dated December 2012 (the STPIS documents).

Number of failures of protection systems (TQS0119)

As defined on page 26 of the STPIS documents::

> *"Protection system failure events" are those events where the relevant protection equipment does not operate for a fault event as designed or where the relevant equipment operates when there is no relevant fault rate.*

Material failure of SCADA system (TQS0120)

As defined on page 26 of the STPIS documents:

> *The number of SCADA failures per annum as notified to the TNSP by the Australian Energy Market Operator (AEMO) on a monthly basis in the SCADA Minutes Lost report.*

Incorrect operational isolation of primary or secondary equipment (TQS0121)

As defined on page 26 of the STPIS documents:

> *The number of "incorrect operational isolation events" per annum where "incorrect operational isolation events" are those events where primary or secondary equipment was not been properly isolated during scheduled or emergency maintenance, irrespective of whether an outage occurred as a result.*

ElectraNet has provided data on quality of services on the basis above which is consistent with the requirements of the AER Benchmarking regulatory information notice.

7.1.4.2 Data source and methodology

Number of failures of protection systems (TQS0119)

A network event is managed by ElectraNet's System Monitoring and Switching Centre (SMSC) who log the event in ElectraNet's Events Database. ElectraNet's fault investigation team review the event and record the results in a fault investigation report. The root cause analysis (RCA) in the fault investigation report identifies if the event is a failure of a protection system.

The Incorrect Protection Operation Count from WebQuery run each month on the Events Database to extract all failure events that occurred. The number of events that occurred for the month is entered in the monthly STPIS and MITC performance reports. The number of events identified in the monthly STPIS performance report for each calendar year has been totalled to determine the total per annum events for the each period.

Material failure of SCADA system (TQS0120)

AEMO provides to ElectraNet on a monthly basis the SCADA minutes lost report which is reported in ElectraNet's monthly STPIS and MITC performance reports. The number of events identified in the monthly STPIS performance report for each calendar year has been totalled to determine the total per annum events for the each period.

Incorrect operational isolation of primary or secondary equipment (TQS0121)

Suspected switching incidents associated with primary plant are advised by field technicians to ElectraNet's System Monitoring and Switching Centre (SMSC) who in turn advise the ElectraNet Switching Committee that a switching incident may have occurred. The Switching Committee's role is to investigate reported events to establish if a switching incident has actually occurred.

In the case that a switching incident where primary plant is not isolated has occurred, it is reported in the monthly STPIS and MITC performance reports. The number of events

identified in the monthly STPIS performance report for each calendar year has been totalled to determine the total per annum events for the each period.

Incorrect isolation events associated with secondary systems are recorded in ElectraNet's Events Database. The SMSC daily log managed within the Events Database records the details of any event where secondary equipment has not been isolated.

To establish the number of incorrect operational isolation events per annum associated with secondary systems, ElectraNet reviewed the SMSC daily log within the Events Database. For each calendar year the number of identified incorrect isolation events identified associated with secondary systems was totalled.

7.1.4.3 Basis of estimation

Number of failures of protection systems (TQS0119)

Prior to the 1st of January 2013 ElectraNet were not required to report protection system failure events as per the definition set out in the December 2012 electricity transmission network service providers service target performance incentive scheme (STPIS) document.

As ElectraNet have historically not been required to report this information, the number of protection system failure events available in the Events Database prior to calendar year 2012 will not be consistent with the current STPIS definition. Historically the protection system failure events were captured for internal purposes, but the information was based on different criteria than that defined in the December 2012 STPIS document.

Therefore, to provide an estimate of the number of protection system failures over the historical period, ElectraNet reviewed the number of protection system failure events against the total failure events for calendar year 2013. ElectraNet then assumed the same proportion as for 2013 calendar year of protection system failure events to total failure events to estimate the number of protection system failure events for prior periods.

Material failure of SCADA system (TQS0120)

No estimations have been made in the compilation of the number of material SCADA system failure events. Whilst material SCADA system failure events historically have not been a performance parameter applicable to TNSPs under STPIS, this information has been collected on a monthly basis over the benchmarking RIN back-cast period as part of existing business performance reporting.

Incorrect operational isolation of primary or secondary equipment (TQS0121)

No estimations have been made in the compilation of the number of incorrect isolation events. Whilst incorrect operational isolation of primary and secondary events historically have not been a performance parameter applicable to TNSPs under STPIS, this information has been collected on a monthly basis over the benchmarking RIN back-cast period as part of existing business performance reporting.

7.1.4.4 Changes to accounting policies

N/A – Information reported within 7.1.4 of the data template relates to non-financial information.

7.2 Market impact component

7.2.1 Data requirement

ElectraNet is required to report the MIC Data in accordance with the definitions specified in the December 2012 Electricity Transmission Network Service Providers Service Target Performance Incentive Scheme (STPIS) document December 2012 Version 4. The difference with respect to MIC between earlier Versions and Version 4 is that "Coordinated Generator Outages" are excludable in earlier Versions but not in Version 4.

7.2.2 Data source and methodology

ElectraNet's MITC Events Database is the source of data from which the report "AER Submission Details by Date Range" is produced on a yearly basis. The "AER Submission Details by Date Range" report summarises the included and excluded constraint Dispatch Intervals in a year. The number of "Coordinated Generator Outage" (CGO) related dispatch intervals that have been excluded per Version 3 or earlier was worked out by applying appropriate data filter to the "AER Submission Details by Date Range" report.

The number of dispatch intervals that excluded Coordinated Generator Outages (CGO) (per Version 3 or earlier) was obtained from Page 40 of AER Explanatory Statement – STPIS – September 2012 for 2006 to 2011. For 2012 it was obtained from the outcome of AER's Service Standards Compliance Review. For 2013, the actual MIC submitted to AER is used. The number of Generator Coordinated Outage related dispatch intervals was worked out by applying data filter for this exclusion.

ElectraNet's "AER Submission Details by Date Range" yearly report has been used to find, by filtering, the number of "Coordinated Generator Outages" related Dispatch Intervals that have been excluded in the year. This number is added to the corresponding Version 3 or earlier MIC data as approved by the AER to work out the Version 4 data.

The process is applied to the Version 3 or earlier MIC data for 2006 – 2012.

For 2013, because the AER changed the MIC submission template in late 2013 ElectraNet has not yet been able to modify the MIC database structure for automatic reporting according to the new template. So for 2013 RIN MIC data the "AER Submission Details by Date Range" report is unavailable. Instead the actual 2013 MIC Submission to the AER is used. The number of "Coordinated Generator Outages" related Dispatch Intervals has been captured for each half year in two versions of the submission, one with the relevant DIs included and one with them excluded. These can be inspected by checking the inclusion and exclusions in each spreadsheet filter.

7.2.3 Basis of estimation

ElectraNet has not captured the data to the STPIS guideline which was produced in 2012 and not scheduled to apply to ElectraNet until the 2018-2023 regulatory control period.

The substantive difference between the 2012 version of the scheme and the previous version is the treatment of exclusions for "Coordinated Generator Outages" from the MIC parameter. Prior to 2012 these outages were excluded entirely whereas under the 2012 version these outages are not excluded.

An appropriate basis for estimation is to add the number of "Coordinated Generator Outages" in each period to the annual performance previously reported to the AER in accordance with the pre 2012 definitions. In addition in the case of the 2013 calendar year data has not yet been approved by the AER.

7.2.4 Changes to accounting policies

N/A

7.3 System losses

7.3.1 Data requirement

ElectraNet must report system losses in accordance with the definitions specified in the Economic Benchmarking RIN for Transmission Network Services Providers Instruction and Definitions November 2013 Chapter 7 Section 7.3 System losses.

7.3.2 Data source and methodology

National Grid Metering (NGM) data on which the NEM financial settlement is based has been used. This has been previously Quality Controlled by the Metering Data Agent (meter reader) and by AEMO prior to use in NEM settlement. It is also checked weekly by ElectraNet's internal processes for reasonableness of Transmission Loss Factor.

NGM Data is manually extracted from the ElectraNet Oracle database through the SA Market V2.0 application to an Excel spreadsheet on yearly basis.

The Electricity Inflow, Electricity Outflow, again on yearly basis, is calculated using the extracted data and appropriate formulae following the formula specified in RIN Instructions and Definitions Chapter 7 Section 7.3.

7.3.3 Basis of estimation

No estimations have been required.

7.3.4 Changes to accounting policies

N/A

8. Operating Environment

8.1 Terrain factors (TEF010-TEF0108)

8.1.1 Data requirement

Complete the table in accordance with the definitions provided in chapter 9.

If ElectraNet records poles rather than spans, the number of spans is the number of poles less one.

We require five years of back cast data for the terrain factors and the following Variables have the most recent Regulatory Year shaded yellow and the remaining four years shaded orange:

- Number of vegetation Maintenance Spans (TEF0101)
- Average Number Of Trees Per Maintenance Span (TEF0103)
- Average number of Defects per vegetation Maintenance Span (TEF0104)
- Tropical proportion (TEF0105)
- Standard Vehicle Access (TEF0106)
- Altitude (TEF0107)
- Bushfire risk (TEF0108)

If ElectraNet has Actual Information, ElectraNet must report all years of available data. If ElectraNet does not have actual information on these variables, then it must estimate data for the most recent Regulatory Year.

Number of vegetation Maintenance Spans

The total count of spans in the network that are subject to vegetation management practices in the relevant year. If ElectraNet records towers rather than spans, the number of spans is the number of towers less one. A maintenance span is defined as a span in ElectraNet's network that is subject to active vegetation management practices in the relevant year. Active vegetation management practices do not include Inspection of vegetation Maintenance Spans.

Average vegetation maintenance span cycle

If there is no available data for the 'average vegetation maintenance span cycle' variable (TEF0102), ElectraNet is required to estimate five years of back cast data. The average vegetation Maintenance Span Cycle (defined as the planned number of years between which cyclic vegetation maintenance is performed) can be calculated based on a simple average of all the Maintenance Span Cycles.

Average number of trees per vegetation Maintenance Span

ElectraNet must report the average number of trees per maintenance span. If ElectraNet does not have actual information for the average number of Trees per Maintenance Span it must, estimate this Variable using one or a combination of the following data sources:

- Encroachment Defects (e.g. ground or aerial Inspections, LiDAR) and/or records of vegetation works scoping, or GIS vegetation density data;
- Field surveys using a sample of Maintenance Spans within each vegetation management zone to assess the number of mature trees within the maintenance corridor. Sampling must provide a reasonable estimate and consider the nature of Maintenance Spans in urban versus rural environments in determining reasonable sample sizes.
- Vegetation data such as:
  - the Normalised Difference Vegetation Index (NDVI) grids and maps available from the Bureau of Meteorology (BOM);
  - data from the National Vegetation Information System (VIS data) overlaid on network GIS data to assess the density of vegetation in the direct vicinity of the Maintenance Spans; or
  - Similar data from other sources such as Geoscience Australia or commercial suppliers of satellite imagery overlaid on network GIS data records.
- Any other data source based on expert advice.

ElectraNet must outline its estimation approach for the Average Number of Trees per Maintenance Span in its Basis of Preparation.

When completing the Templates for Regulatory Years subsequent to the 2013 Regulatory Year, if ElectraNet can provide Actual Information for the average number of trees per vegetation maintenance span it must do so; otherwise ElectraNet must provide Estimated Information.

Average number of Defects per vegetation Maintenance Span

ElectraNet must report the average number of vegetation related Defects that are recorded per Maintenance Span in the relevant year.

In its Basis of Preparation, ElectraNet must specify whether it records the total number of Defects for each vegetation Maintenance Span, or whether it records Defects on a vegetation Maintenance Span as one, regardless of the number of Defects on the span.

When completing the Templates for Regulatory Years subsequent to the 2013 Regulatory Year, if ElectraNet can provide Actual Information for the average number of defects per vegetation maintenance span it must do so; otherwise ElectraNet must provide Estimated Information.

Tropical spans

The tropical spans are the approximate total number of urban and rural Maintenance Spans in the Hot Humid Summer and Warm Humid Summer regions as defined by the Australian Bureau of Meteorology Australian Climatic Zones map (based on temperature and humidity).

When completing the Templates for Regulatory Years subsequent to the 2013 Regulatory Year, if ElectraNet can provide Actual Information for tropical spans it must do so; otherwise ElectraNet must provide Estimated Information.

Standard vehicle access

Areas with Standard Vehicle Access are serviced through made roads, gravel roads and open paddocks (including gated and fenced paddocks). An area with no Standard Vehicle Access would not be accessible by a two wheel drive vehicle. The intended unit of measure for the in the economic benchmarking RIN is the km of route line length that does not have standard vehicle access.

Altitude

The Route Line Length that is 600 metres above sea level.

Bushfire risk

The bushfire risk Variable is the number of Maintenance Spans in high bushfire risk areas as classified by a person or organisation with appropriate expertise on fire risk. This includes but is not limited to:

- ElectraNet's jurisdictional fire authority
- local councils
- insurance companies
- ElectraNet's consultants
- Local fire experts

When completing the Templates for Regulatory Years subsequent to the 2013 Regulatory Year, if ElectraNet can provide Actual Information for bushfire risk it must do so; otherwise ElectraNet must provide Estimated Information.

Note that for TEF0101 and TEF0103 to TEF0108, ElectraNet are not required to provide historical data for the regulatory period 2006-12 as ElectraNet does not currently measure the information in accordance with the variable requirement and it would be unnecessarily burdensome to estimate and it is illogical to enter'0'.

8.1.2 Data source and methodology

Number of Vegetation Maintenance Spans (TEF0101)

ElectraNet in establishing total number of vegetation maintenance spans, average number of trees per span and defects relied on information estimated by the vegetation maintenance contractor, Vemco.

A maintenance Span is defined as a span in ElectraNet's network that is subject to active vegetation management practices during the relevant year. ElectraNet has included spans requiring tree trimming, removal or scrub removal, but does not include inspection or measuring of vegetation in spans. This is based on expert advice from ElectraNet's vegetation maintenance contractor, Vemco.

To establish the total number of maintenance spans, ElectraNet have been advised that Vemco reviewed an Access database which contains collated data from Vemco inspector and cutting crew worksheets for the 2013 regulatory year. This data provided the number of spans that are actively managed by Vemco during the year.

Average vegetation maintenance span cycle (TEF0102)

ElectraNet operates under more than one vegetation maintenance span cycle. Routinely, ElectraNet actively manages all spans on a 3 year cycle. However, for spans in bushfire and high bushfire risk areas, ElectraNet also performs pre-bushfire season vegetation maintenance on an annual basis.

Therefore to reasonably estimate the average vegetation maintenance span cycle, the number of bushfire spans as a proportion of total spans for the 2013 regulatory year was determined and a weighted average span cycle calculated for all spans.

The proportion of bushfire spans to total spans for the 2013 regulatory year was then used to estimate a weighted average span cycle for prior regulatory years.

It is ElectraNet's opinion that this is reasonable as the ratio of bushfire to non-bushfire spans has not changed significantly over the period as it is estimated that the total number of spans has only grown by around 2% over the back-cast period.

Average number of trees per vegetation maintenance span (TEF0103)

Average number of trees per span has been estimated based on expert advice from Vemco. ElectraNet were advised that Vemco sourced information on number of trees per span from an Access database which provides collated information from daily worksheets from inspectors and cutting crews for the 2013 regulatory year.

To estimate the number of trees per vegetation span, ElectraNet were advised that Vemco took the number of trees actively maintained (trimmed, removed or scrub removal) divided by the number of spans requiring vegetation maintenance.

Average number of defects per vegetation maintenance span (TEF0104)

Average number of defects per span was estimated based on advice from Vemco advice. Vemco estimated the average number of defects per vegetation maintenance span by reviewing information for the 2013 regulatory year in an Access database which provides collated daily worksheet information from inspectors and cutting crews.

Note that ElectraNet records the total number of defect for each vegetation maintenance span. Vemco's records identified the total number of defect spans inspected and total number of trees actively maintained (removed or scrub removed) in each defect span. Total number of trees actively maintained within defect spans was divided by the number of defect spans to estimate number of defects per maintenance span.

Tropical Proportion (TEF0105)

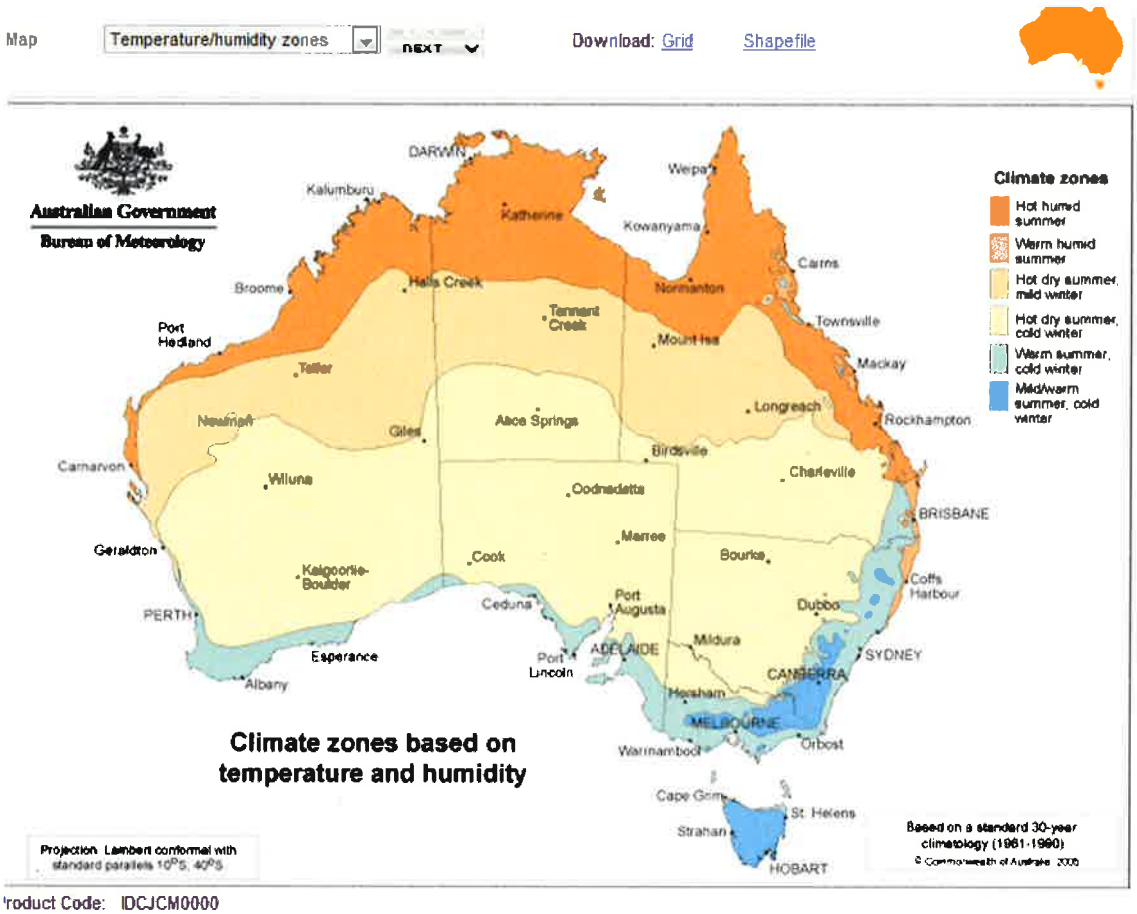
The Australian Bureau of Meteorology (BOM) Australian Climatic Zones map (based on temperature and humidity) was used to determine the number of spans in hot humid summer and warm humid summer regions. Link to the zone map is below:

http://www.bom.gov.au/jsp/ncc/climate_averages/climate-classifications/index.jsp

ElectraNet reviewed the Climatic Zone map to assess the number of spans ElectraNet has within hot humid summer or warm humid summer climate zones. Based on this assessment, ElectraNet can confirm that 0% proportion of spans is in in hot humid summer and warm humid summer regions.

A copy of the Australian Climatic Zones map used to review the ElectraNet network is included as Figure 8-1: Climate Zones Based on Temperature and Humidity below:

Figure 8-1: Climate Zones Based on Temperature and Humidity



Standard vehicle access - kms

Information for standard vehicle access was sourced from road information from South Australian Government Data Directory (once loaded into the GIS) as well as ElectraNet's internal network data for the GIS system.

Note that reporting standard vehicle access kilometres in ElectaNet's case is likely to be of limited value to the AER as all ElectraNet's access easements are only accessible by diesel vehicles due to bushfire risk consistent with ElectraNet poilcy. ElectraNet's vehicle fleet is almost entirely made up of diesel 4WD vehicles and these are the only type of vehicle used by ElectraNet and its contractors to access asset easements.

However, for the purposes of this response, ElectraNet have calculated standard vehicle access as being the route length that is not able to be accessed by a 2WD vehicle.

As all ElectraNet access (easement) tracks are 4WD only, all Government roads except those that cannot support 2WD access for inspecting line assets are included to calculate the number of kilometres of standard vehicle access. Government roads excluded were roads with a bus thoroughfare as vehicles are not allowed to traverse the bus lane, freeways as they do not enable vehicles to stop to inspect lines and 4WD tracks as these do not enable standard vehicle access. These roads are the nearest access available to a standard vehicle (2WD) to ElectraNet lines. From these 2WD accessible roads a 50m buffer either side of a road is created in the GIS system. The total distance of road contained within this buffer zone is subtracted from the total route length, residual amount of route line length taken to be accessible for a 2WD vehicle. 50m is used as the criteria as this is approximately the longest distance from which it is reasonably possible to inspect a line from the ground clearly (insulator string intact).

Route line length is calculated using a consistent methodology as with TEF0201 (route line length) described in section 8.2 of this response. The calculation includes the regulated network only and excludes lines not owned by ElectraNet.

Altitude (TEF0107)

Altitude information is sourced from the Line Schedules spreadsheet as described in section 6.1 of this response. The spreadsheet is filtered to show the structures that are greater than 600m in altitude. A review was then performed over structures identified as being over 600m in altitude and obvious data anomalies were removed from the list.

Examples of exclusions are structure heights greater than the highest point in South Australia, heights recorded as being over 600m in known low lying areas and structures with no height value entered. We note the number of excluded items and data anomalies is sufficiently small as to be immaterial for the purposes of this calculation.

From the listing, the route length either side of each identified structure is divided by two and summed to calculate a total route line length for this variable.

Bushfire Risk (TEF0108)

The Line Schedule database (using the same preparation methods and assumptions as described in section 6.1 of this response) in the Grazer asset management reporting tool was used as a source for this variable.

To identify bushfire risk areas, ElectraNet relied on the classifications of the Government of South Australia, Office of the Technical Regulator (SA OTR)defined schedule 4 of the Electricity (Principles of Vegetation Clearance) Regulations 2010. Each section in ElectraNet's Line Schedule is historically assigned a bushfire risk, based on data from the SA OTR.

The Line Schedules spreadsheet was filtered to show bushfire risk area by built section. The number of structures assigned as having a bushfire risk was then summed to give the total variable value.

Unregulated and non-ElectraNet owned lines are excluded, which is consistent with the assumptions used for the TEF0204 variable. As ElectraNet is using poles rather than spans for this section, the number of spans is the number of poles less one.

8.1.3 Basis of estimation

The above methodology represents ElectraNet's best estimate of the requirements.

As ElectraNet contracts out vegetation maintenance activities, for TEF0101-TEF0104, ElectraNet have had to rely on estimated information from the contractor to provide the data requirements.

Average number of trees per vegetation maintenance span (TEF0103)

Note that this is an approximation to the nearest thousand and therefore this parameter is not provided to 4 significant figures.

Average number of defects per vegetation maintenance span (TEF0104)

Number of trees (collated through daily worksheets from inspectors/cutting crews for the period) is an approximation to the nearest ten. Hence this parameter is not provided to 4 significant figures.

8.1.4 Changes to accounting policies

N/A – Information reported within 8.1 of the data template relates to non-financial information.

8.2 Network characteristics

8.2.1 Data requirement

Route line length

ElectraNet must input the route line length of lines for ElectraNet's network. This is based on the distance between line segments and does not include vertical components such as line sag. The route line length does not necessarily equate to the circuit length as the circuit length may include multiple circuits.

Variability of Dispatch

ElectraNet must input the Variability of dispatch. This is the proportion of energy dispatch from non-thermal generators.

Concentrated load distance

ElectraNet must input the concentrated load distance. This is the greatest distance (Route Line Length) from node having at least 30 per cent of generation capacity to

node having at least 30 per cent of load, where a node is a connection point from a generation source or location to the (transmission) network at source end and a connection point to a load or distribution system at the destination end.

Where there is no concentrated source or load above 30 per cent, respond relative to the largest concentrated source and load and indicate the generation and load magnitudes.

Total number of spans

ElectraNet must input the total number of spans.

8.2.2 Data source and methodology

Route line length (TEF0201)

Route line length data has been sourced from the same spreadsheet as the circuit length pivot sheet as described in ElectraNet's response in section 6.1. Single circuit kilometres were totalled for each voltage. Note that double and triple circuits were excluded from the listing, as per the AER requirement to report true route line length (not necessarily equal to circuit length).

The filtered spreadsheet only included route line length for regulated lines and de-energised lines. Cables have been excluded from the calculation.

Variability of Dispatch (TEF0202)

A grid entry metering report was run from SAMarket which is an SQL database viewer, which shows thermal versus non-thermal energy generation for each half hour time period for the regulatory year. Non thermal energy generation is taken as a percentage of total energy generation for each of the reporting years.

ElectraNet divided all Wind Farm energy generation by the sum of all Wind Farm energy generation and Power Station energy (as classified in SA Market) generation at every half hour and then averaged these half hours across the year. This analysis excluded the Interconnector. All generators included in the report are listed in Figure 8-2: SA Generators on the following page:

Figure 8-2: SA Generators

- Power Stations
  - Canowie (Hallet)
  - Dry Creek Power Station
  - Ladbroke Grove Power Station
  - Mintaro Power Station
  - Northern Power Station
  - OCPL
  - Pelican Point Power Station
  - Playford Power Station
  - Port Lincoln Power Station
  - Quarantine Power Station
  - Snuggery Power Station
  - Torrens Island A Power Station
  - Torrens Island B Power Station
- Wind Farms
  - Canowie (Hallet)
  - Cathedral Rocks
  - Clements Gap Windfarm
  - Hallett Hill Windfarm
  - Mayurra
  - Mt Millar
  - North Brown Hill
  - Porcupine Range (Bluff) WF
  - Snowtown WF Stage 1
  - Snowtown WF Stage 2
  - Waterloo East Windfarm
  - Wattle Point

Concentrated Load Distance (TEF0203)

It is unclear what purpose the Concentrated Load Distance (TEF0203) serves in an SA network context. The largest load AMD connection point is the Metro Southern Suburbs (as per T-APR 2013). The largest generation node (by nameplate capacity) is Torrens Island (also SA's Regional Reference Node), which is also metro generation (this generates into the Metro Western suburbs); and these metro nodes can be meshed. For this reason 0km has been entered as the nodes are effectively coincident.

ElectraNet suggests that a more appropriate figure may be the South East Interconnector to Metro Area (approximately 350 km line of sight). This would reflect SA's increased energy reliance on the South East Interconnector.

The Northern generating node (Northern and Playford power stations) to the Metro Area (approximately 250 km line of sight) may also be more appropriate. This is the largest conventional generation centre outside the metro area.

Total Number of Spans (TEF0204)

Total number of spans is calculated from the same spreadsheet as circuit lengths as described in section 6.1 of this response. The spreadsheet was filtered to identify the number of individual spans which were then totalled to identify the total number of spans for each regulatory year.

The filtered spreadsheet only included route line length for regulated lines and de-energised lines only. Cables and have been excluded from the calculation.

8.2.3 Basis of estimation

N/A

8.2.4 Changes to accounting policies

N/A – Information reported within 8.2 of the data template relates to non-financial information.

8.3 Weather stations

8.3.1 Data requirement

ElectraNet must input the weather station number, post code, suburb/locality for all weather stations in its service area. The weather station details are available from the BOM.

Where ElectraNet considers weather data from a weather station is not relevant to the management of its network, ElectraNet must input a 'no' in the 'Materiality' column and provide supporting evidence (in its Basis of Preparation) as to why the weather station is not relevant. For all other weather stations, ElectraNet must input a 'yes' in the 'Materiality' column.

ElectraNet must also input a Variable code for each weather station (for example, TEF03001 for the first weather station).

ElectraNet must add (or remove) rows from Table 8.3 such that all weather stations within its network will be included.

8.3.2 Data source and methodology

ElectraNet reviewed a number of data sources to prepare a list of weather stations in accordance with the requirements set out in the instructions and definitions. ElectraNet used the GIS system to identify all ElectraNet weather stations in ElectraNet's service area.

To establish BOM weather stations used in the management of the network, ElectraNet reviewed weather station data from the Australian Bureau of Meteorology (BOM) to identify the weather station name, location and weather station type.

ElectraNet downloaded BOM weather station data from the link identified below as a text file that was pasted into an excel spreadsheet. The data in the spreadsheet was filtered to identify all active South Australian stations:

http://www.bom.gov.au/climate/cdo/about/sitedata.shtml - All BOM stations

The South Australian Government Data Directory suburbs data available at the link below was then used to apply suburb names to each weather station based on the weather station location in the spreadsheet:

http://data.sa.gov.au/dataset/suburb-boundaries/

Suburb names were then matched to postcodes in the spreadsheet using the Australian Bureau of Statistics post code data available as per the link below:

http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/33A877E7086CA98FCA25731A00217F82/$File/2923030001poa06aaust.zip

This provided a list included in the data template which includes all in-service BOM weather stations in ElectraNet's service area.

The BOM weather text file used to derive base BOM weather site information was uploaded to ElectraNet's GIS system. Two spatial intersection queries were produced, BOM site to post code and BOM site to post code to suburb and exported to an excel spreadsheet.

8.3.3 Basis of estimation

A weather station is classed as material if it is within 50km of the ElectraNet network (including unregulated and non-ElectraNet lines, this is as the weather does not change due to classification and the use of power at the end of a non-ElectraNet line due to local weather will affect ElectraNet's network). The 50km figure is chosen as it gives a reasonable representation of the conditions experienced by the network (distance at which weather (temp and wind) is likely to be consistent).

Note that weather sites situated over water or in the Far North West of SA will not have a suburb or postcode.

Note that as a post code can exist across multiple suburbs. To produce a unique list of BOM weather stations to postcode to suburb, the first Post code suburb match was used.

8.3.4 Changes to accounting policies

N/A – Information reported within 8.3 of the data template relates to non-financial information.

STATUTORY DECLARATION

I, IAN FRANCIS STIRLING
(Full Name)

of 52-55 EAST TERRACE ADELAIDE
(Address)

in the State of South Australia CHIEF EXECUTIVE OFFICER
do solemnly and sincerely declare that: (Occupation)

1. I am an officer, for the purposes of the *National Electricity (South Australia) Law* (**NEL**), of ElectraNet Pty Limited (ACN 094 482 416), a regulated network service provider for the purposes of section 28D of the NEL. I am authorised by ElectraNet Pty Limited to make this statutory declaration as part of the response of ElectraNet Pty Limited (**ElectraNet**) to the Regulatory Information Notice dated 28 November 2013 (**Notice**) served on ElectraNet by the Australian Energy Regulator (**AER**).

2. Having had regard to the Notice, I say that the actual information provided in ElectraNet's response to the Notice is, to the best of my information, knowledge and belief:

   (a) in accordance with the requirements of the Notice; and

   (b) true and accurate.

3. Where it is not possible to provide actual information to comply with the Notice, ElectraNet has, to the best of my information, knowledge and belief, for the purposes of complying with the Notice:

   (a) provided ElectraNet's best estimate of the information in accordance with the requirements of the Notice; and

   (b) provided the basis for each estimate, including assumptions made and reasons why the estimate is the best estimate, given the information sought in the Notice.

And I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the Oaths Act, 1936.

Signature .....

Declared and subscribed at ADELAIDE

in the said State by the said IAN STIRLING

this 14th day of APRIL, 20 14

Before me:

DOROTHY ANNE SHORNE J.P 23893

Note– This Declaration must be signed before a Justice of the Peace, a Commissioner for Taking Affidavits, or a Notary Public.

Any alteration made must be initialled by both the applicant and the Justice of the Peace.

DOROTHY SHORNE
JUSTICE of the PEACE 23893

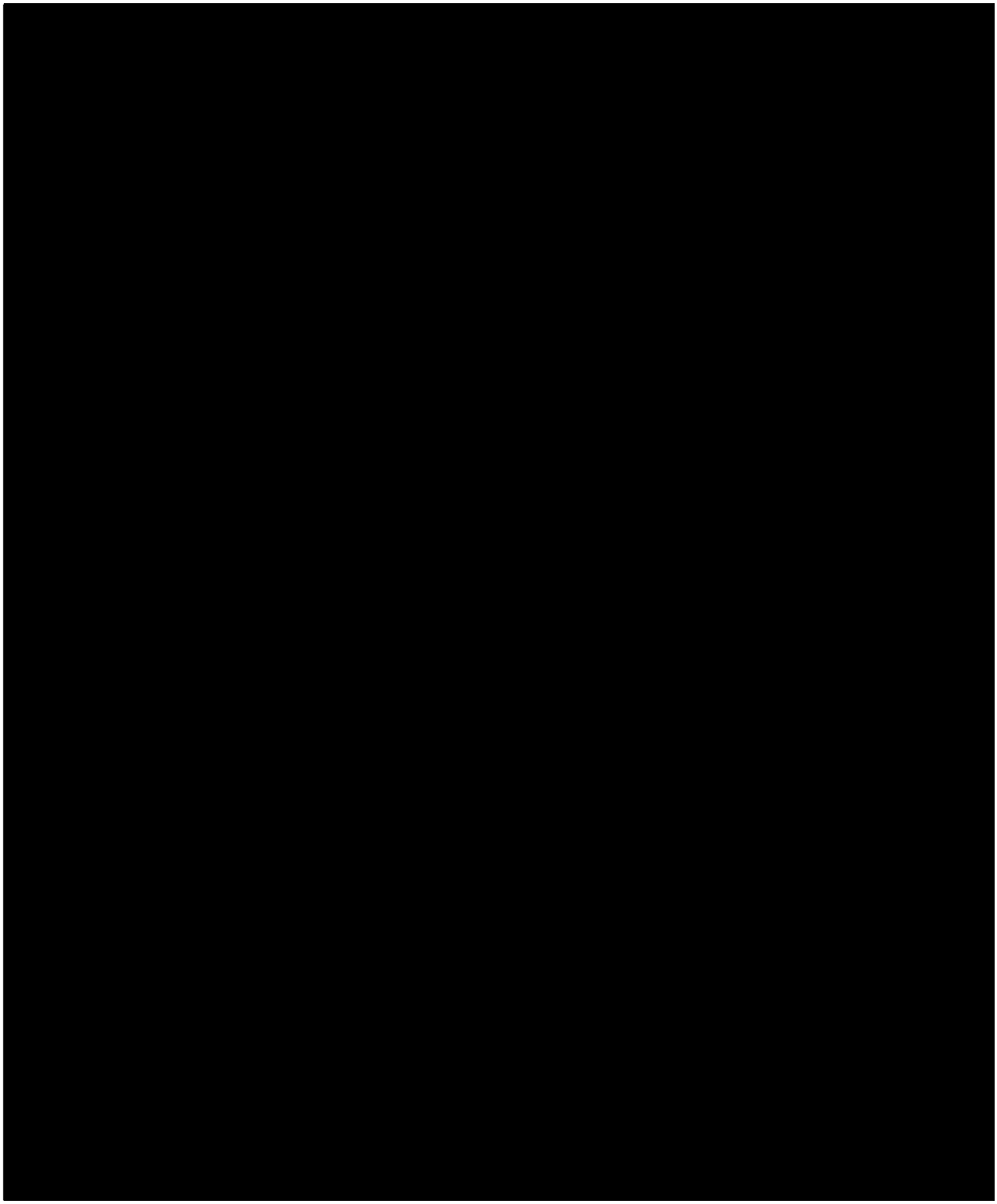
FOR IDENTIFICATION
PwC
ADELAIDE

pwc

[redacted]

PricewaterhouseCoopers, ABN 52 780 433 757
91 King William Street, ADELAIDE SA 5000, GPO Box 418, ADELAIDE SA 5001
T: +61 8 8218 7000, F: +61 8 8218 7999, www.pwc.com.au

pwc



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