TEMPLATE EXPLANATION

This template must be used by the TNSP to report service performance information for the previous calendar year.

Yellow worksheets (**'Inputs - Performance'** and **'Inputs - Exclusions'**) are for inputs, including performance and exclusion information. The TNSP only needs to enter data on these worksheets.

Purple worksheets '**S1' to 'S6'** are the s-factor results based on the performance inputs from the 'Inputs - Performance' worksheet.

Blue worksheet '**Revenue Calculation'** quantifies the appropriate revenue to be applied to the s-factor results adjusted for CPI.

Red worksheet '**Outcomes'** shows the total performance, s-factor and financial incentive results based on the TNSP's performance in 'Inputs-Performance' and 'Revenue Calculation' worksheets.

Orange worksheet '**Exclusion Definitions'** are the defined exclusions for each TNSP which should form the basis of exclusion requests under 'Inputs-Exclusions' worksheet.

TransGrid - SERVICE STANDARDS PERFORMANCE

Performance Inputs								
S	Performance parameter	Collar	Target	Cap	Revenue at Risk	Performance (Without exclusions)	Performance (With exclusions)	Checksum
S1	Transmission line availability	99.05%	99.26%	99.36%	0.20%	98.573202%	98.949516%	0.00
S2	Transformer availability	97.33%	98.61%	98.89%	0.15%	97.491813%	97.500575%	
S3	Reactive plant availability	98.65%	99.12%	99.33%	0.10%	98.285587%	98.285587%	
S4	Loss of supply event frequency >0.05 system minutes	7	4	2	0.250%	5	4	0.00
S5	Loss of supply event frequency >0.25 system minutes	2	1	0	0.100%	0	0	
S6	Average outage duration	999	824	649	0.200%	1467	1494.8067	-4045.87

Revenue Determination Inputs	
TNSP:	TransGrid
STPIS version:	March, 2008
Regulatory Determination	2009/10 - 2013/14
Base Year Allowed Revenue	$678,400,000
Base Year	2009-10
X-factor	-5.61%
Commencement of regulatory year	1-Jul-09

Other inputs	
Assessment Period	2013
Financial year to affect revenue:	2014/15
Date prepared:	
Revision date:	
Network information	
No of circuits	201.5
No of transformers	181.91667
No of reactive plant	131

Average outage duration information - performance without exclusions	
Number of events	124
Total unplanned outage duration (system minutes)	181900

Average outage duration information - performance with exclusions	
Number of excluded connection point events	5
Total unplanned outage duration (system minutes)	177882
Total number of connection point events	119

Other Inputs						
Annual revenue adjusted for	Mar-09	Mar-10	Mar-11	Mar-12	Mar-13	Mar-14
CPI (old base)	166.2	171.0	176.7	179.5		
CPI (new base)	92.5	95.2	98.3	99.9	102.4	

NOTE:

Pink cells - Performance without exclusions input cells

Orange cells - Performance with exclusions input cells

Green cells - Other inputs

Blue cells - Inputs sourced from the revenue determination

Performance is based on a calendar year or the proportion of a calendar year that applies in each regulatory period.

TransGrid - Proposed exclusions

CIRCUIT AVAILABILITY		Event proposed for exclusion	Description of the event and its impact on the network and performance	Cause of the event	Start date	Start time	End date	End time	Total hours unavailable	Circuits affected	Reactive plant or transformer	Quantitative impact	Reasons for exclusion request	Further references
Name of any circuit availability parameters		Name of the event	Detail of the event. Such as: the action of any third parties, the actions of the TNSP, assets damaged or interrupted.	A description of the cause of the event	Start date and time of event		End date and time of event			Name of circuits or plant affected	Name of any equipment affected	Impact of exclusion event on availability sub-parameter	Full details of the reason/s for excluding this event. Should include a reference to the defined exclusions and explain how it meets this exclusion definition (see Exclusion definition tab). Eg. Exclusion 1.2 Third party event.	A TNSP may provide further details of an exclusion event. TNSP to provide reference.
S1		124472	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	1/01/13	0:00	4/01/13	23:44	95.73	3W		-0.000054235547	Exclusion 1.3 - Outage to control fault levels	
S1		124952	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	5/01/13	2:17	5/01/13	10:38	8.35	3W		-0.000004730503	Exclusion 1.3 - Outage to control fault levels	
S1		124961	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	5/01/13	19:26	6/01/13	15:38	20.20	3W		-0.000011443851	Exclusion 1.3 - Outage to control fault levels	
S1		124980	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	6/01/13	19:51	7/01/13	7:47	11.93	3W		-0.000006760559	Exclusion 1.3 - Outage to control fault levels	
S1		125315	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	11/01/13	22:21	12/01/13	20:17	21.93	3W		-0.000012425832	Exclusion 1.3 - Outage to control fault levels	
S1		125367	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	14/01/13	8:16	16/01/13	8:24	48.13	3W		-0.000027268847	Exclusion 1.3 - Outage to control fault levels	
S1		125544	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	16/01/13	21:27	17/01/13	7:30	10.05	3W		-0.000005693599	Exclusion 1.3 - Outage to control fault levels	
S1		125690	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	20/01/13	20:36	21/01/13	6:36	10.00	3W		-0.000005665273	Exclusion 1.3 - Outage to control fault levels	
S1		125763	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	21/01/13	22:07	22/01/13	6:40	8.55	3W		-0.000004843808	Exclusion 1.3 - Outage to control fault levels	
S1		125838	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	22/01/13	22:43	23/01/13	8:23	9.67	3W		-0.000005476431	Exclusion 1.3 - Outage to control fault levels	
S1		125900	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	23/01/13	21:37	24/01/13	7:17	9.67	3W		-0.000005476431	Exclusion 1.3 - Outage to control fault levels	
S1		126022	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	25/01/13	22:21	26/01/13	8:30	10.15	3W		-0.000005750252	Exclusion 1.3 - Outage to control fault levels	
S1		126047	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	26/01/13	22:26	27/01/13	11:14	12.80	3W		-0.000007251549	Exclusion 1.3 - Outage to control fault levels	
S1		126296	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	30/01/13	20:56	31/01/13	7:24	10.47	3W		-0.000005929652	Exclusion 1.3 - Outage to control fault levels	
S1		126459	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	31/01/13	22:27	1/02/13	8:01	9.57	3W		-0.000005419778	Exclusion 1.3 - Outage to control fault levels	
S1		126531	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	1/02/13	18:35	3/02/13	0:48	30.22	3W		-0.000017118567	Exclusion 1.3 - Outage to control fault levels	
S1		126641	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	3/02/13	6:43	4/02/13	7:45	25.03	3W		-0.000014182067	Exclusion 1.3 - Outage to control fault levels	
S1		126754	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	4/02/13	18:59	5/02/13	6:33	11.57	3W		-0.000006552832	Exclusion 1.3 - Outage to control fault levels	
S1		126843	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	5/02/13	21:36	6/02/13	7:49	10.22	3W		-0.000005788021	Exclusion 1.3 - Outage to control fault levels	
S1		126965	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	6/02/13	23:17	7/02/13	7:33	8.27	3W		-0.000004683292	Exclusion 1.3 - Outage to control fault levels	
S1		127172	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	7/02/13	22:43	8/02/13	7:48	9.08	3W		-0.000005145956	Exclusion 1.3 - Outage to control fault levels	
S1		127335	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	10/02/13	22:08	11/02/13	9:56	11.80	3W		-0.000006685022	Exclusion 1.3 - Outage to control fault levels	
S1		127455	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	12/02/13	22:28	13/02/13	7:14	8.77	3W		-0.000004966556	Exclusion 1.3 - Outage to control fault levels	
S1		127553	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	14/02/13	18:24	14/02/13	20:51	2.45	3W		-0.000001387992	Exclusion 1.3 - Outage to control fault levels	
S1		127639	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	15/02/13	23:51	16/02/13	2:40	2.82	3W		-0.000001595719	Exclusion 1.3 - Outage to control fault levels	
S1		127640	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	16/02/13	9:16	16/02/13	22:44	13.47	3W		-0.000007629234	Exclusion 1.3 - Outage to control fault levels	
S1		127909	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	20/02/13	21:56	21/02/13	5:46	7.83	3W		-0.000004437797	Exclusion 1.3 - Outage to control fault levels	
S1		127959	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	21/02/13	21:58	24/02/13	16:11	66.22	3W		-0.000037513549	Exclusion 1.3 - Outage to control fault levels	
S1		128025	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	25/02/13	0:23	25/02/13	6:40	6.28	3W		-0.000003559680	Exclusion 1.3 - Outage to control fault levels	
S1		129469	UG 41 switched out for voltage control as directed by AEMO	Request from AEMO	14/03/13	23:20	15/03/13	5:29	6.15	41		-0.000003484143	Exclusion 1.3 - Outage to control fault levels	
S1		129583	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	17/03/13	7:28	17/03/13	17:09	9.68	3W		-0.000005485873	Exclusion 1.3 - Outage to control fault levels	
S1		129674	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	18/03/13	20:08	20/03/13	15:39	43.52	3W		-0.000024653380	Exclusion 1.3 - Outage to control fault levels	
S1		130000	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	20/03/13	21:11	21/03/13	6:00	8.82	3W		-0.000004994882	Exclusion 1.3 - Outage to control fault levels	
S1		130136	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	21/03/13	20:53	22/03/13	4:11	7.30	3W		-0.000004135649	Exclusion 1.3 - Outage to control fault levels	
S1		130225	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	22/03/13	21:56	26/03/13	4:52	78.93	3W		-0.000044717888	Exclusion 1.3 - Outage to control fault levels	
S1		130290	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	27/03/13	3:50	27/03/13	7:44	3.90	3W		-0.000002209456	Exclusion 1.3 - Outage to control fault levels	
S1		130529	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	27/03/13	22:40	2/04/13	8:14	129.57	3W		-0.000073403054	Exclusion 1.3 - Outage to control fault levels	
S1		130712	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	2/04/13	19:21	3/04/13	5:00	9.65	3W		-0.000005466988	Exclusion 1.3 - Outage to control fault levels	
S1		130769	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	3/04/13	21:13	4/04/13	5:00	7.78	3W		-0.000004409471	Exclusion 1.3 - Outage to control fault levels	
S1		130916	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	4/04/13	6:00	4/04/13	14:33	8.55	3W		-0.000004843808	Exclusion 1.3 - Outage to control fault levels	
S1		130917	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	4/04/13	20:16	5/04/13	8:32	12.27	3W		-0.000006949402	Exclusion 1.3 - Outage to control fault levels	

S1		131186	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	5/04/13	20:23	9/04/13	6:37	82.23	3W		-0.000046587428	Exclusion 1.3 - Outage to control fault levels	
S1		131838	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	19/04/13	22:10	23/04/13	2:46	76.60	3W		-0.000043395991	Exclusion 1.3 - Outage to control fault levels	
S1		131904	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	23/04/13	5:30	24/04/13	1:15	19.75	3W		-0.000011188914	Exclusion 1.3 - Outage to control fault levels	
S1		131970	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	24/04/13	4:13	25/04/13	1:13	21.00	3W		-0.000011897073	Exclusion 1.3 - Outage to control fault levels	
S1		131997	TL 3W switched out for voltage control as directed by AEMO	Request from AEMO	25/04/13	9:09	30/04/13	16:41	127.53	3W		-0.000072251115	Exclusion 1.3 - Outage to control fault levels	
S1		124421	TL M7 isolated for work on direct connected SHL's Murray PS Units 7-8 330kV installation.	Request from Snowy Hydro.	2/01/13	12:28	3/01/13	12:40	24.20	M7		-0.000013709961	Exclusion 1.2 - 3rd party outage	Excluded Outage 124421 2 1-3 1 2013 Restoration times modification for M7 line.msg
S1		124872	U7 Upper Tumut to Tumut 2 power station 330kV transmission line outage was as a result of a fault on generator units 7 & 8	Generator fault	3/01/13	11:03	5/01/13	14:17	51.23	U7		-0.000029025082	Exclusion 1.2 - 3rd party outage	Excluded outage 124872 U7 on 03-01-13.msg
S1		124155	TL U3 isolated for work on direct connected SHL's Upper Tumut PS Units 3-4 330kV installation.	Request from Snowy Hydro.	12/01/13	6:03	13/01/13	13:18	31.25	U3		-0.000017703978	Exclusion 1.2 - 3rd party outage	Excluded Outage 124155 18 12 2013 FW Snowy Hydro Outage UTSS U3.msg
S1		125444	TL M1 isolated for work on direct connected SHL's Murray PS Units 1-2 330kV installation.	Request from Snowy Hydro.	15/01/13	11:37	15/01/13	13:27	1.83	M1		-0.000001038633	Exclusion 1.2 - 3rd party outage	Excluded Outage 125444 FW M1 330kV line TODAY 15 1 2013 late notice urgent work .msg
S1		125976	TL 939 is owned by TransGrid and Endeavour Energy and is isolated for work on Endeavour's portion of their installation	Request from Endeavour Energy.	25/01/13	8:03	25/01/13	17:40	9.62	939		-0.000005448104	Exclusion 1.2 - 3rd party outage	Excluded Outage 125976 - Verbal request OPSLog Entry.msg
S1		125727	TL M1 isolated for work on direct connected SHL's Murray PS Units 1-2 330kV installation.	Request from Snowy Hydro.	30/01/13	6:31	30/01/13	16:30	9.98	M1		-0.000005655831	Exclusion 1.2 - 3rd party outage	Excluded outage 125727 30 1 2013 FW Snowy Hydro Outage MSS M1.msg
S1		123799	TL U3 isolated for work on direct connected SHL's Upper Tumut PS Units 3-4 330kV installation.	Request from Snowy Hydro.	2/02/13	6:12	3/02/13	15:38	33.43	U3		-0.000018940896	Exclusion 1.2 - 3rd party outage	Excluded outage 123799 4 2 2013 FW Snowy Hydro Outage UTSS U3.msg
S1		125472	TL 945 is owned by TransGrid and Essential Energy and is isolated for work on Essential's portion of their installation	Request from Essential Energy.	5/02/13	5:51	5/02/13	14:53	9.03	945		-0.000005117630	Exclusion 1.2 - 3rd party outage	Excluded outage 125472 TL 945 5 2 2013.msg
S1		123815	TL U1 isolated for work on direct connected SHL's Upper Tumut PS Units 1-2 330kV installation.	Request from Snowy Hydro.	9/02/13	6:01	15/02/13	12:47	150.77	U3		-0.000085413433	Exclusion 1.2 - 3rd party outage	Excluded outage 123815 FW U3 (T1 units 3-4) 330kV line 9 2 to 12 2 2013.msg
S1		126385	TL U3 isolated for work on direct connected SHL's Upper Tumut PS Units 3-4 330kV installation.	Request from Snowy Hydro.	9/02/13	6:01	10/02/13	15:07	33.10	U1		-0.000018752054	Exclusion 1.2 - 3rd party outage	Excluded outage 126385 FW U1 (T1 units 1-2) 330kV line 9 2 to 10 2 2013.msg
S1		123816	TL U3 isolated for work on direct connected SHL's Upper Tumut PS Units 3-4 330kV installation.	Request from Snowy Hydro.	15/02/13	12:55	17/02/13	14:46	49.85	U3		-0.000028241386	Exclusion 1.2 - 3rd party outage	Excluded Outage 123816 16 2 2013 FW Snowy Hydro Outage UTSS U1 and U3.msg
S1		126726	TL 94M is owned by TransGrid and Essential Energy. Essential Energy requested isolation from all points of supply to allow protection checks including the closing of fault thrower at Essential Energy's Mudgee substation	Request from Essential Energy.	27/02/13	13:37	27/02/13	15:19	1.70	94M		-0.000000963096	Exclusion 1.2 - 3rd party outage	Excluded outage 126726 FW 94M - 132 kV Line - From TG Beryl To Mudgee Feb 27 2013 07 30.msg
S1		128104	TL M9 isolated for work on direct connected SHL's Murray PS Units 9-10 330kV installation.	Request from Snowy Hydro.	1/03/13	12:01	3/03/13	13:46	49.75	M9		-0.000028184733	Exclusion 1.2 - 3rd party outage	Excluded outage 128104 2 3 2013 FW Snowy Hydro Outage MSS M9.msg
S1		127394	TL U1 isolated for work on direct connected SHL's Upper Tumut PS Units 1-2 330kV installation.	Request from Snowy Hydro.	2/03/13	5:07	3/03/13	16:57	35.83	U1		-0.000020300562	Exclusion 1.2 - 3rd party outage	Excluded outage 127394 TL U1 2 3 2012 FW Snowyhydro current outage listing.msg
S1		127504	TL U3 isolated for work on direct connected SHL's Upper Tumut PS Units 3-4 330kV installation.	Request from Snowy Hydro.	2/03/13	5:55	3/03/13	17:42	35.78	U3		-0.000020272235	Exclusion 1.2 - 3rd party outage	Excluded outage 127504 TL U3 2 3 2013 FW Snowyhydro current outage listing.msg
S1		128504	M9 330kV transmission line tripped, interrupting 80MW of generation. The trip was a result of Snowy Hydro staff working at Murray 1 power station inadvertently cutting the CT secondaries on generator unit 10 causing the differential protection to operate.	Snowy Hydro staff error	4/03/13	14:19	4/03/13	17:37	3.30	M9		-0.000001869540	Exclusion 1.2 - 3rd party outage	Excluded outage 128504 4 3 2013 2013-F-0176.msg
S1		128553	TL 932 is owned by TransGrid and Endeavour Energy and has been isolated for work on Endeavour's portion of their installation	Request from Endeavour Energy.	5/03/13	5:20	7/03/13	16:00	58.67	932		-0.000033236268	Exclusion 1.2 - 3rd party outage	Excluded Outage 128553 Fdr 932 Sydney West(210370)correction doc.msg
S1		129107	96F 132kV transmission line is owned by TransGrid and AusGrid. There was a fault on this line, which was calculated to be approximately 4.4km from Tomago. This is on Ausgrid's portion of the line.	Ausgrid line fault	11/03/13	8:36	11/03/13	8:38	0.03	96F		-0.000000018884	Exclusion 1.2 - 3rd party outage	Excluded Outage 129107 - Ausgrid section of line fault.msg
S1		129110	TransGrid was requested to isolate and earth TL U7 330kV line at UTSS to allow Snowy Hydro to perform transformer changeover on their installation	Request from Snowy Hydro.	16/03/13	5:05	17/03/13	13:56	32.85	U7		-0.000018610422	Exclusion 1.2 - 3rd party outage	Excluded outage 129110 U7 FW Snowy Hydro Outages 16-17 3 13.msg
S1		129108	TransGrid was requested to isolate and earth the TLs U1 & U3 330kV lines at UTSS to allow Snowy Hydro to perform replacement and installation work on their installation.	Request from Snowy Hydro.	16/03/13	6:14	17/03/13	12:15	30.02	U1		-0.000017005261	Exclusion 1.2 - 3rd party outage	Excluded outage 129108 U! FW Snowy Hydro Outages 16-17 3 13.msg

S1		129109	TransGrid was requested to isolate and earth the TLs U1 & U3 330kV lines at UTSS to allow Snowy Hydro to perform replacement and installation work on their installation.	Request from Snowy Hydro.	16/03/13	6:50	17/03/13	12:48	29.97	U3		-0.000016976935	Exclusion 1.2 - 3rd party outage	Excluded outage 129109 TL U3 FW Snowy Hydro Outages 16-17 3 13.msg
S1		127528	TL 963 isolation requested by Augrid for clearance for work on 11kV feeder below.	Request from Ausgrid	26/03/13	5:42	26/03/13	16:12	10.50	963		-0.000005948537	Exclusion 1.2 - 3rd party outage	Excluded Outage 127528 ADVICE FOR FEEDER963 26 03 2013.msg
S1		129160	L M9 isolated for to perform installation and control upgrade work on direct connected SHL's Murray PS Units 9-10	Request from Snowy Hydro.	28/03/13	8:59	23/05/13	8:52	1343.88	M9		-0.000761346598	Exclusion 1.2 - 3rd party outage	Excluded Outage 129160 28 03 13 MSS M9 switching Update.msg
S1		130562	TransGrid was requested to switch out TL U1 line to allow Snowy Hydro to perform installation work.	Request from Snowy Hydro.	6/04/13	4:59	7/04/13	14:30	33.52	U3		-0.000018988107	Exclusion 1.2 - 3rd party outage	Excluded Outage 130562 - 6 4 13 Snowy Hydro Outage UTSS U1 and U3 .msg
S1		130561	TransGrid was requested to switch out U3 line to allow Snowy Hydro to perform installation work.	Request from Snowy Hydro.	6/04/13	4:59	7/04/13	13:47	32.80	U1		-0.000018582095	Exclusion 1.2 - 3rd party outage	Excluded Outage 130561 & 130562 Snowy Hydro Outage UTSS U1 and U3.msg
S1		130642	TransGrid was requested to switch out M7 330kV line to allow Snowy Hydro to perform preparation for transformer installation work.	Request from Snowy Hydro.	9/04/13	7:46	9/04/13	14:16	6.50	M7		-0.000003682427	Exclusion 1.2 - 3rd party outage	Excluded Outage 130642 Snowy Hydro Outages 4 4 13.msg
S1		131229	TransGrid was requested to switch out M7 330kV line to allow Snowy Hydro to perform installation work on there installation	Request from Snowy Hydro.	11/04/13	9:45	14/04/13	15:55	78.17	M7		-0.000044283551	Exclusion 1.2 - 3rd party outage	Excluded Outage 131229 M7 - Snowy Hydro Outages 5 4 13.msg
S1		130955	TransGrid was requested to switch out U3 line to allow Snowy Hydro to perform work on there installation (asbestos removal)	Request from Snowy Hydro.	11/04/13	14:15	15/04/13	15:37	97.37	U3		-0.000055160875	Exclusion 1.2 - 3rd party outage	Excluded Outage 130955 U3 on 11-04-13 FW Snowy Hydro Outages 4 4 13.msg
S1		130954	TransGrid was requested to switch out U3 line to allow Snowy Hydro to perform work on there installation (asbestos removal)	Request from Snowy Hydro.	11/04/13	15:14	12/04/13	8:34	17.33	U1		-0.000009819807	Exclusion 1.2 - 3rd party outage	Excluded Outage 130954 U1 at 11-04-13 Snowy Hydro Outages 4 4 13.msg
S1		130957	TransGrid was requested to switch out U1 line to allow Snowy Hydro to perform work on there installation.	Request from Snowy Hydro	13/04/13	7:20	14/04/13	15:31	32.18	U1		-0.000018232737	Exclusion 1.2 - 3rd party outage	Excluded Outage 130957 U1 13-04-13 Snowy Hydro Outages 4 4 13.msg
S1		131606	TransGrid was requested to switch out M7 line to allow Snowy Hydro to perform work on there installation.	Request from Snowy Hydro	16/04/13	6:30	16/04/13	10:31	4.02	M7		-0.000002275551	Exclusion 1.2 - 3rd party outage	Excluded Outage 131606 M7 330kV line outage 16 4 13 Late Notice.msg
S1		130638	TransGrid was requested to isolate 96P 132kV line by Essential Energy so they can perform maintenance work on there installation	Request from Essential Energy.	17/04/13	7:10	17/04/13	12:58	5.80	96P		-0.000003285858	Exclusion 1.2 - 3rd party outage	Excluded Outage 130638 96P 66kV Line - From TG Taree to Stroud - Apr 17 2013 08 00.msg
S1		131789	TransGrid was requested to switch out Line 97B to allow Snowy Hydro Limited to work on their instalation at Blowering Power Station. TG line is directly connected to SHL installation and SHL reported a damaged surge diverter.	Request from Snowy Hydro	18/04/13	19:26	21/04/13	10:31	63.08	O97		-0.000035738431	Exclusion 1.2 - 3rd party outage	Excluded Outage 131789 verbal request - IR#10471 - Snowy Hydro Ltd - Unclassified.msg
S1		131646	TransGrid was requested to switch out M7 line to allow Snowy Hydro to perform work on there installation. Stated in communication: Clearance purposes for installation of M1 generator units 9-10 red phase refurbished TX (outage 16240) Isolate 07:30, restore 15:00.	Request from Snowy Hydro	19/04/13	8:13	19/04/13	14:45	6.53	M7		-0.000003701312	Exclusion 1.2 - 3rd party outage	Excluded Outage 131646 M7 line outage Fri 19 4.msg
S1		129364	TrasGrid was requested to isolate and earth line U3 to allow Snowy Hydro to perform work on there instalation. Stated in communication: Remove HV bushing no. 6 and the busbar between the bushing and the surge arrester. Install work platform.	Request from Snowy Hydro	20/04/13	8:25	21/04/13	17:12	32.78	U3		-0.000018572653	Exclusion 1.2 - 3rd party outage	Excluded Outage 129364 U3 line outage 20 & 21 4 .msg
S1		131451	TrasGrid was requested to isolate and earth O60 to allow SP AusNet to perform work on there instalation.	Request from SP AusNet	23/04/13	8:34	23/04/13	14:11	5.62	O60		-0.000003181995	Exclusion 1.2 - 3rd party outage	Excluded Outage 131451 WOTS - Jindera 330kV Line (060) 23 4 13.msg
S1		131834	Transgrid was requested to isolate and earth the U7 330kV line at UTSS at 10:00 on Sun 28/04 and restore at 15:00 on 2/05	Request from Snowy Hydro	28/04/13	10:22	3/05/13	10:29	120.12	U7		-0.000068049371	Exclusion 1.2 - 3rd party outage	Excluded Outage 131834 U7 line outage - 28 4- date change.msg
S1		131493	Transgrid was requested to isolate and earth feeder 963. Stated in communication: Feeder required out for clearance for 11kV work below.	Request from Ausgrid	30/04/13	8:13	30/04/13	14:28	6.25	963		-0.000003540796	Exclusion 1.2 - 3rd party outage	Excluded Outage 131493 Outage Request Feeder 963 30 04 2013 amendment 1.msg
S1		131411	Transgrid was requested to isolate and earth TL 23 for black start testing.	Request from Delta Electricity	30/04/13	8:37	30/04/13	17:40	9.05	23		-0.000005127072	Exclusion 1.2 - 3rd party outage	Excluded Outage 131411 line 23 on 30-04-13.msg
S1		132228	TransGrid was requested to isolate and earth U3 at UTSS to enable Snowy Hydro to perform work on their installation	Request from Snowy Hydro	4/05/13	15:50	5/05/13	17:29	25.65	U3		-0.000014531425	Exclusion 1.2 - 3rd party outage	Excluded Outage 132228 U3 on 04-05-13 15 50 Snowy Hydro Outages.msg

S1		131742	TransGrid was requested to isolate and earth TL O96B 132kV line, to enble Snowy Hydro to perform work on their installation at Blowering Power Station. TG line is directly connected to SHL installation and SHL reported a damaged surge diverter	Request from Snowy Hydro	6/05/13	8:36	13/06/13	12:24	915.80	O97		-0.000518825702	Exclusion 1.2 - 3rd party outage	Excluded Outage 131742 starting 06-05-13 Blowering 132kV switchyard upgrade - 097B line .msg
S1		132037	TransGrid was requested to isolate and earth 96X 132kV (dual ownership) line, to enble Ausgrid to perform work on their installation	Request from Ausgrid	8/05/13	6:27	8/05/13	15:26	8.98	96X		-0.000005089304	Exclusion 1.2 - 3rd party outage	Excluded Outage 132037 at 08-05-13 Outage Request Feeder 96X.msg
S1		132038	TransGrid was requested to isolate and earth 96Y 132kV (dual ownership) line, to enble Ausgrid to perform work on their installation	Request from Ausgrid	9/05/13	6:30	9/05/13	17:11	10.68	96Y		-0.000006052400	Exclusion 1.2 - 3rd party outage	Excluded outage 132038 - Outage Request Feeder 96Y.msg
S1		132159	Transgrid was requested to isolate and earth TL U3 for black start testing	Request from Snowy Hydro	11/05/13	8:19	11/05/13	12:34	4.25	U3		-0.000002407741	Exclusion 1.2 - 3rd party outage	Excluded outages 132159 132160 132161 132162 TLs U3 U5 L5 64 starting 11 5 2013 SH 30-4-12.msg
S1		132160	Transgrid was requested to isolate and earth TL U5 for black start testing	Request from Snowy Hydro	11/05/13	8:19	11/05/13	12:34	4.25	U5		-0.000002407741	Exclusion 1.2 - 3rd party outage	Excluded outages 132159 132160 132161 132162 TLs U3 U5 L5 64 starting 11 5 2013 SH 30-4-12.msg
S1		132162	Transgrid was requested to isolate and earth TL L5 for black start testing	Request from Snowy Hydro	11/05/13	8:22	11/05/13	13:20	4.97	L5		-0.000002813752	Exclusion 1.2 - 3rd party outage	Excluded outages 132159 132160 132161 132162 TLs U3 U5 L5 64 starting 11 5 2013 SH 30-4-12.msg
S1		132161	Transgrid was requested to isolate and earth TL 64 for black start testing	Request from Snowy Hydro	11/05/13	8:24	11/05/13	13:22	4.97	64		-0.000002813752	Exclusion 1.2 - 3rd party outage	Excluded outages 132159 132160 132161 132162 TLs U3 U5 L5 64 starting 11 5 2013 SH 30-4-12.msg
S1		137940	TransGrid was requested to switch out U3 line to allow Snowy Hydro to perform installation work.	Request from Snowy Hydro	14/05/13	7:14	18/05/13	16:12	104.97	U3		-0.000059466482	Exclusion 1.2 - 3rd party outage	Excluded outage 137940 14 5 2013 Snowy Hydro Outage UTSS U3 140513 - Amendment 2.msg
S1		138960	TransGrid was requested to switch out 97G-132kV line, to allow Snowy Hydro to conduct a trial Murray restart test	Request from Snowy Hydro	18/05/13	8:16	18/05/13	11:53	3.62	97G		-0.000002048940	Exclusion 1.2 - 3rd party outage	Excluded outages 138913 & 138960 & 138959 & 138958 & 138925 & 138924 & 138803.msg
S1		138913	TransGrid was requested to switch out 97L - 132kV line, to allow Snowy Hydro to conduct a trial Murray restart test	Request from Snowy Hydro	18/05/13	8:16	18/05/13	11:53	3.62	97L		-0.000002048940	Exclusion 1.2 - 3rd party outage	Excluded outages 138913 & 138960 & 138959 & 138958 & 138925 & 138924 & 138803.msg
S1		138925	TransGrid was requested to switch out M7 - 330kV line, to allow Snowy Hydro to perform work on their instalation	Request from Snowy Hydro	18/05/13	9:36	18/05/13	12:28	2.87	M7		-0.000001624045	Exclusion 1.2 - 3rd party outage	Excluded outages 138913 & 138960 & 138959 & 138958 & 138925 & 138924 & 138803.msg
S1	Transmission line availability	138803	TransGrid was requested to switch out M13 - 330kV line, to allow Snowy Hydro to conduct a trial Murray restart test	Request from Snowy Hydro	18/05/13	9:36	18/05/13	12:56	3.33	M13		-0.000001888424	Exclusion 1.2 - 3rd party outage	Excluded outages 138913 & 138960 & 138959 & 138958 & 138925 & 138924 & 138803.msg
S1		138924	TransGrid was requested to switch out M1 - 330kV line, to allow Snowy Hydro to perform work on their instalation	Request from Snowy Hydro	18/05/13	9:36	18/05/13	12:28	2.87	M1		-0.000001624045	Exclusion 1.2 - 3rd party outage	Excluded outages 138913 & 138960 & 138959 & 138958 & 138925 & 138924 & 138803.msg
S1		138328	TransGrid was requested to switch out U3 - 330kV transmission line, to allow Snowy Hydro to conduct a AEMO witnessed Tumut system restart test	Request from Snowy Hydro	19/05/13	8:12	19/05/13	11:54	3.70	U3		-0.000002096151	Exclusion 1.2 - 3rd party outage	Excluded outages 138330 & 138332 &138329 & 138328 TLs 64 & L5 & U5 & U3 19 5 2013.msg
S1		138332	TransGrid was requested to switch out L5 - 330kV transmission line, to allow Snowy Hydro to conduct a AEMO witnessed Tumut system restart test	Request from Snowy Hydro	19/05/13	8:12	19/05/13	11:30	3.30	L5		-0.000001869540	Exclusion 1.2 - 3rd party outage	Excluded outages 138330 & 138332 &138329 & 138328 TLs 64 & L5 & U5 & U3 19 5 2013.msg
S1		138329	TransGrid was requested to switch out U5 - 330kV transmission line, to allow Snowy Hydro to conduct a AEMO witnessed Tumut system restart test	Request from Snowy Hydro	19/05/13	8:12	19/05/13	11:54	3.70	U5		-0.000002096151	Exclusion 1.2 - 3rd party outage	Excluded outages 138330 & 138332 &138329 & 138328 TLs 64 & L5 & U5 & U3 19 5 2013.msg
S1		138330	TransGrid was requested to switch out 64 - 330kV transmission line, to allow Snowy Hydro to conduct a AEMO witnessed Tumut system restart test	Request from Snowy Hydro	19/05/13	8:16	19/05/13	11:57	3.68	64		-0.000002086709	Exclusion 1.2 - 3rd party outage	Excluded outages 138330 & 138332 &138329 & 138328 TLs 64 & L5 & U5 & U3 19 5 2013.msg
S1		139708	TransGrid was requested to switch out 97L - 330kV line, to allow Snowy Hydro to conduct a trial Murray restart test	Request from Snowy Hydro	2/06/13	8:58	2/06/13	11:52	2.90	97L		-0.000001642929	Exclusion 1.2 - 3rd party outage	Excluded outage 139321 & 139708 ETC FW Snowyhydro listing Murray restart tests 02 06 2013.msg
S1		139773	TransGrid was requested to switch out 97G - 330kV line, to allow Snowy Hydro to conduct a trial Murray restart test	Request from Snowy Hydro	2/06/13	8:58	2/06/13	11:52	2.90	97G		-0.000001642929	Exclusion 1.2 - 3rd party outage	Excluded Outages 139708 139773 139322 139719 139720 139774 139776 - Black Start 02 06 2013.msg
S1		139322	TransGrid was requested to switch out M13 - 330kV line, to allow Snowy Hydro to conduct a trial Murray restart test	Request from Snowy Hydro	2/06/13	9:25	2/06/13	12:13	2.80	M13		-0.000001586276	Exclusion 1.2 - 3rd party outage	Excluded Outages 139708 139773 139322 139719 139720 139774 139776 - Black Start 02 06 2013.msg
S1		139719	TransGrid was requested to switch out M7 - 330kV line, to allow Snowy Hydro to conduct a trial Murray restart test	Request from Snowy Hydro	2/06/13	9:25	2/06/13	12:13	2.80	M7		-0.000001586276	Exclusion 1.2 - 3rd party outage	Excluded Outages 139708 139773 139322 139719 139720 139774 139776 - Black Start 02 06 2013.msg
S1		139720	TransGrid was requested to switch out M1 - 330kV line, to allow Snowy Hydro to conduct a trial Murray restart test	Request from Snowy Hydro	2/06/13	9:25	2/06/13	12:13	2.80	M1		-0.000001586276	Exclusion 1.2 - 3rd party outage	Excluded Outages 139708 139773 139322 139719 139720 139774 139776 - Black Start 02 06 2013.msg
S1		139779	TransGrid was requested to switch out M9 - 330kV line, to allow Snowy Hydro to conduct a trial Murray restart test	Request from Snowy Hydro	4/06/13	8:38	6/06/13	16:06	55.47	M9		-0.000031423381	Exclusion 1.2 - 3rd party outage	Excluded Outages 139708 139773 139322 139719 139720 139774 139776 - Black Start 02 06 2013.msg

S1		139515	TransGrid was requested to switch out U3 - 330kV line, to allow Snowy Hydro to conduct a trial Murray restart test	Request from Snowy Hydro	5/06/13	7:01	6/06/13	15:04	32.05	U3		-0.000018157200	Exclusion 1.2 - 3rd party outage	Excluded Outage 139515 FW UT U3 (T1 Units 3-4) 330kV line outage 5 6 13.msg
S1		140500	TransGrid was requested to isolate and earth U3 at UTSS to enable Snowy Hydro to perform work on their installation	Request from Snowy Hydro	14/06/13	23:53	17/06/13	14:35	62.70	U3		-0.000035521262	Exclusion 1.2 - 3rd party outage	Excluded Outage 140500 and 140499 - U1 & U3 outages this weekend - changes to restoration time .msg
S1		140499	TransGrid was requested to isolate and earth U1 at UTSS to enable Snowy Hydro to perform work on their installation	Request from Snowy Hydro	15/06/13	7:32	16/06/13	15:00	31.47	U1		-0.000017826726	Exclusion 1.2 - 3rd party outage	Excluded Outage 140500 and 140499 - U1 & U3 outages this weekend - changes to restoration time .msg
S1		141782	TransGrid was requested to isolate M9 line at Murray Switchyard, to enable Snowy Hydro to perform fault tests and work on their installation.	Request from Snowy Hydro	6/07/13	7:27	6/07/13	14:33	7.10	M9		-0.000004022344	Exclusion 1.2 - 3rd party outage	Excluded Outage 141782 on 6-July-13 Murray SwYd to M1PS M9 Line.msg
S1		140975	TransGrid was requested to isolate 76 line to enable Endeavour Energy to re-direct Fdr 132kV 93Y overhead mains & poles	Request from Endeavour Energy	7/07/13	7:32	7/07/13	17:29	9.95	77		-0.000005636947	Exclusion 1.2 - 3rd party outage	Excluded Outage 140975 Line 76 Line 77 (7th July only) & 93Y (4th to 8th July).msg
S1		141007	TransGrid was requested to isolate 77 line to enable Endeavour Energy to re-direct Fdr 132kV 93Y overhead mains & poles	Request from Endeavour Energy	7/07/13	7:36	7/07/13	17:32	9.93	76		-0.000005627505	Exclusion 1.2 - 3rd party outage	Excluded Outage 141007 Line 76 Line 77 (7th July only) & 93Y (4th to 8th July).msg
S1		142544	TransGrid was requested to isolate and earth M5 (M1 units 5-6) 330kV line, to enable Snowy Hydro to perform work on their installation	Request from Snowy Hydro	11/07/13	10:00	11/07/13	13:56	3.93	M5		-0.000002228341	Exclusion 1.2 - 3rd party outage	Excluded Outage 142544 M5 line outage Thurs 11 7.msg
S1		142545	TransGrid was requested by Essential Energy to take 132kV line 96P out of service. The request states: "Essential Energy staff require 132kV CT`s on 96P to be offline for Oil Sampling - Clearance from TransGrid will be requested to Offload 96P at Stroud. No further requirement from TransGrid."	Request from Essential Energy	16/07/13	8:22	16/07/13	11:26	3.07	96P		-0.000001737350	Exclusion 1.2 - 3rd party outage	Excluded Outage 142545 96P 66kV Line - From TG Taree to Stroud - Jul 16 2013 08 00.msg
S1		143327	TransGrid was requested to isolate 97L 132kV transmission line to allow Snowy Hydro to perform work on their installation	Request from Snowy Hydro	16/07/13	11:51	19/07/13	15:30	75.65	97L		-0.000042857790	Exclusion 1.2 - 3rd party outage	Excluded Outage 143327 - 97L on 16-7-13 Snowyhydro outage listing JPS.msg
S1		143599	TransGrid was requested to isolate and earth M3 (M1 units 3-4) 330kV line, to enable Snowy Hydro to perform work on their installation	Request from Snowy Hydro	25/07/13	9:33	25/07/13	14:24	4.85	M3		-0.000002747657	Exclusion 1.2 - 3rd party outage	Excluded Outage 143599 on 25 7 13 Snowy Outage Plan Changed date for M3 Line.msg
S1		138449	TransGrid was requested to take 330kV line No.13 out of service to allow Telstra to perform antenna installation work	Request from Telstra	28/07/13	7:33	28/07/13	17:38	10.08	13		-0.000005712484	Exclusion 1.2 - 3rd party outage	Excluded Outage 138449 - Telstra Antenna Instalation.msg
S1		143963	TransGrid was requested to take 132kV line 98F out of service to allow Endeavour Energy to perform work on their instalation	Request from Endeavour Energy	29/07/13	6:27	29/07/13	7:32	1.08	98F		-0.000000613738	Exclusion 1.2 - 3rd party outage	Excluded Outage 143963 FDR 98F Outage Mon 29 7 13 Version 2 Discard Original.msg
S1		144613	TransGrid was requested to take 132kV feeder No. 250 from Sydney North to Berowra out of service. This was to allow Ausgrid to perform contractor tree trimming work	Request from Ausgrid	8/08/13	17:24	9/08/13	18:06	24.70	250		-0.000013993224	Exclusion 1.2 - 3rd party outage	Excluded Outage 144613 FW Amended - 250 I&E 9 Aug 2013 doc.msg
S1		145849	The 132kV transmission line no. 963 from Taree to Tomago substations is patialy owned by TransGrid and partialy by Ausgrid. A fault occurred on Ausgrid's portion of the line	Ausgrid's section of line fault	17/08/13	7:04	17/08/13	7:04	0.00	963		0.000000000000	Exclusion 1.2 - 3rd party outage	Excluded Outage 145849 Ausgrid section of line fault.msg
S1		145643	TransGrid was requested to isolate the 330kV L1 transmission line to allow Snowy Hydro to perform HV testing of transformers	Request from Snowy Hydro	19/08/13	8:14	23/08/13	12:59	100.75	L1		-0.000057077626	Exclusion 1.2 - 3rd party outage	Excluded Outage 145643 on 19-08-13 Snowy Request.msg
S1		146135	TransGrid was requested to switch out U3 - 330kV line to allow Snowy Hydro to install temperature measuring equipment	Request from Snowy Hydro	4/09/13	7:07	4/09/13	18:05	10.97	U3		-0.000006212916	Exclusion 1.2 - 3rd party outage	Excluded Outage 146135 on 04-09-13 Snowyhydro outage listing UTSS modified outages.msg
S1		146139	TransGrid was requested to switch out U5 - 330kV line to allow Snowy Hydro to install temperature measuring equipment	Request from Snowy Hydro	5/09/13	7:28	5/09/13	17:56	10.47	U5		-0.000005929652	Exclusion 1.2 - 3rd party outage	Excluded Outage 146139 on 05-09-13 Snowyhydro outage listing UTSS modified outages.msg
S1		147185	TransGrid was requested to switch out U3 - 330kV line to allow Snowy Hydro to Investigate/repair oil leaks on transformer no. 7	Request from Snowy Hydro	14/09/13	6:04	15/09/13	14:32	32.47	U3		-0.000018393253	Exclusion 1.2 - 3rd party outage	Excluded Outage 147185 U3 (T1 Units 3-4) 330kV line 14 9 to 15 9.msg
S1		147930	TransGrid was requested to switch out 97L 132kV line to allow Snowy Hydro perform work on their instalation.	Request from Snowy Hydro	15/09/13	6:14	16/09/13	3:51	21.62	97L		-0.000012246432	Exclusion 1.2 - 3rd party outage	Excluded Outage 147930 97L on 15 and 16 Oct 2013 OPSLog entry.msg
S1		147328	TransGrid was requested to switch out U3 - 330kV line to allow Snowy Hydro to facilitate M1 U6 isolation for controls upgrade	Request from Snowy Hydro	20/09/13	8:44	22/09/13	16:02	55.30	M5		-0.000031328960	Exclusion 1.2 - 3rd party outage	Excluded Outage 147328 M5 (M1 units 5-6) 330kV line - 20 9 to 22 9.msg
S1		148242	Transgrid requested to deenergise 132kV transmission line 97L by Snowy Hydro to allow local operation of ROIs	Request from Snowy Hydro	21/09/13	6:13	22/09/13	4:56	22.72	97L		-0.000012869612	Exclusion 1.2 - 3rd party outage	Excluded Outage 148242 - 21-09-13 Snowyhydro outage listing 97L.msg

S1		148225	TransGrid was requested to switch out U1 - 330kV line to allow Snowy Hydro to perform work on their instalation.	Request from Snowy Hydro	21/09/13	7:07	21/09/13	15:08	8.02	U1		-0.000004541661	Exclusion 1.2 - 3rd party outage	Excluded Outage 148225 on 21-09-13 Outage requirements changed OMS 20063.msg
S1		147008	TransGrid was requested to switch out U3 - 330kV line to allow Snowy Hydro to remove previously installed temperature test equipment	Request from Snowy Hydro	21/09/13	7:32	21/09/13	16:05	8.55	U3		-0.000004843808	Exclusion 1.2 - 3rd party outage	Excluded Outage 147008 on 21-09-13.msg
S1		147188	TransGrid was requested to switch out U5 - 330kV line to allow Snowy Hydro to remove previously installed temperature test equipment	Request from Snowy Hydro	22/09/13	6:50	23/09/13	15:16	32.43	U5		-0.000018374369	Exclusion 1.2 - 3rd party outage	Excluded Outage 147188 on 22-02-13 U5 (T2 Units 5-6) 330kV line.msg
S1		148794	TransGrid was requested to switch out L5 - 330kV line to allow Snowy Hydro to perform maintenance work on their installation	Request from Snowy Hydro	8/10/13	7:13	11/10/13	13:44	78.52	L5		-0.000044481835	Exclusion 1.2 - 3rd party outage	Excluded Outage 148794 08-10-13 Snowyhydro outage listing LTSS L5 and auto sync mods .msg
S1		147971	TransGrid was requested to switch out M3 - 330kV line to allow Snowy Hydro to perform upgrade work on their installation	Request from Snowy Hydro	14/10/13	6:08	15/10/13	13:56	31.80	M3		-0.000018015568	Exclusion 1.2 - 3rd party outage	Excluded Outage 147971 on 14-10-13 Snowyhydro outage listing MSS M3 Auto sync mods.msg
S1		147970	TransGrid was requested to switch out L3 - 330kV line to allow Snowy Hydro to perform maintenance work on their installation	Request from Snowy Hydro	14/10/13	6:48	17/10/13	9:52	75.07	L3		-0.000042527316	Exclusion 1.2 - 3rd party outage	Excluded Outage 147970 14-10-13 Showyhydro outage listing LTSS L3.msg
S1		149668	TransGrid was requested to switch out M3 - 330kV line to allow Snowy Hydro to perform commissioning work on their installation	Request from Snowy Hydro	15/10/13	8:25	15/10/13	13:56	5.52	M3		-0.000003125342	Exclusion 1.2 - 3rd party outage	Excluded Outage 149668 15-10-13 Snowyhydro outage listing MSS M3 Auto sync mods.msg
S1		149002	TransGrid was requested to switch out L3 - 330kV line to allow Snowy Hydro to perform commissioning tests on their installation	Request from Snowy Hydro	18/10/13	6:27	18/10/13	9:34	3.12	L3		-0.000001765677	Exclusion 1.2 - 3rd party outage	Excluded Outage 149002 18-10-13 Showyhydro outage listing LTSS L3.msg
S1		148881	TransGrid was requested to switch out 132kV line 996 (Wagga 330kV to ANM substations) to allow Essential Energy to make its initial parallel of Morven Zone with the 66kV No1 Culcairn feeder ex Wagga Wagga 132	Request from Essential Energy	19/10/13	9:04	19/10/13	10:16	1.20	996		-0.000000679833	Exclusion 1.2 - 3rd party outage	Excluded Outage 148881 Wagga BSP - Outage Date from - Sat Oct 19 2013 10 00.msg
S1		147973	TransGrid was requested to switch out M11 - 330kV line to allow Snowy Hydro to perform commissioning work of a new M11 line auto sync.	Request from Snowy Hydro	22/10/13	6:33	23/10/13	13:06	30.55	M11		-0.000017307409	Exclusion 1.2 - 3rd party outage	Excluded Outage 147973 M11 Line Auto Synch Upgrade 22 10 13 (8).msg
S1		150219	TransGrid was requested to switch out M3 - 330kV line to allow Snowy Hydro to perform work on their installation	Request from Snowy Hydro	23/10/13	9:25	23/10/13	13:10	3.75	M3		-0.000002124477	Exclusion 1.2 - 3rd party outage	Excluded Outage 150219 M11 Line Auto Synch Upgrade 22 10 13.msg
S1		147972	TransGrid was requested to switch out M1 - 330kV line to allow Snowy Hydro to perform line auto sync upgrade work on their installation	Request from Snowy Hydro	24/10/13	6:36	25/10/13	9:34	26.97	M1		-0.000015277353	Exclusion 1.2 - 3rd party outage	Excluded Outages 150396 & 147972 - M1 (M1 units 1-2) 330kV line autosynch upgrade 24 & 25 10 .msg
S1		150396	TransGrid was requested to switch out M1 - 330kV line to allow Snowy Hydro to perform line auto sync commissioning checks on their installation	Request from Snowy Hydro	25/10/13	8:07	25/10/13	11:11	3.07	M1		-0.000001737350	Exclusion 1.2 - 3rd party outage	Excluded Outages 150396 & 147972 - M1 (M1 units 1-2) 330kV line autosynch upgrade 24 & 25 10 .msg
S1		150164	TransGrid was requested to switch out M11 - 330kV line to allow Snowy Hydro to perform testing on their installation	Request from Snowy Hydro	28/10/13	6:33	1/11/13	14:41	104.13	M11		-0.000058994376	Exclusion 1.2 - 3rd party outage	Excluded Outage 150164 on 28 Oct 13 Snowy Hydro Outages (7).msg
S1		150688	TransGrid was requested to switch out 97K - 132kV line to allow Essential Energy to perform equipment replacement work on their installation.	Request from Essential Energy	2/11/13	7:15	8/11/13	16:20	153.08	97K		-0.000086725888	Exclusion 1.2 - 3rd party outage	Excluded Outage 150688 97K - 132kV Line - From TG Cooma to Munyang Snowy Adit - Sat Nov 2 2013 07 00.msg
S1		150542	TransGrid was requested to switch out 37 - 330kV line to allow Endeavour Energy to re-direct section of over head mains on their installation.	Request from Endeavour Energy	4/11/13	5:33	4/11/13	8:43	3.17	37		-0.000001794003	Exclusion 1.2 - 3rd party outage	Excluded Outage 150542 TL 37 (Macarthur to Kemps Crk) - Mon 4th Nov 2013.msg
S1		150180	TransGrid was requested to switch out 932 - 132kV line to allow Endeavour Energy to perform work on their installation.	Request from Endeavour Energy	4/11/13	6:09	4/11/13	15:59	9.83	932		-0.000005570852	Exclusion 1.2 - 3rd party outage	Excluded Outage 150180 932 Sydney West(210370)correction doc.msg
S1		150689	TransGrid was requested to switch out 97K - 132kV line to allow Essential Energy to perform equipment replacement work on their installation.	Request from Essential Energy	12/11/13	7:32	18/11/13	15:59	152.45	97K		-0.000086367087	Exclusion 1.2 - 3rd party outage	Excluded Outage 150689 97K - 132kV Line - From TG Cooma to Munyang Snowy Adit - Tue Nov 12 2013 07 00.msg
S1		151541	TransGrid was requested to switch out M3 - 330kV line to allow Snowy Hydro to perform work on their installation.	Request from Snowy Hydro	15/11/13	11:25	16/11/13	11:22	23.95	M3		-0.000013568329	Exclusion 1.2 - 3rd party outage	Excluded Outage 151541 Snowy outages Murray M3 Line 15 11 13.msg
S1		152436	TransGrid was requested to switch out M1 - 330kV line to allow Snowy Hydro to perform work on their installation.	Request from Snowy Hydro	18/11/13	17:03	19/11/13	19:14	26.18	M1		-0.000014833573	Exclusion 1.2 - 3rd party outage	Excluded Outage 152436 Snowyhydro outage listing M11 autosync testing.msg
S1		151253	TransGrid was requested to switch out 939 - 132kV line to allow Endeavour Energy to perform work on their directly connected installation.	Request from Endeavour Energy	19/11/13	11:35	19/11/13	14:15	2.67	939		-0.000001510739	Exclusion 1.2 - 3rd party outage	Excluded Outage 151253 Fdr 939 Syd West to Mamre(230354) doc.msg

S1		152428	TransGrid was requested to switch out U1 - 330kV line to allow Snowy Hydro to perform work on their installation.	Request from Snowy Hydro	20/11/13	6:16	20/11/13	14:19	8.05	U1		-0.000004560545	Exclusion 1.2 - 3rd party outage	Excluded Outage 152428.msg
S1		152083	TransGrid was requested to switch out 96F - 132kV line to allow Essential Energy to perform project work on their installation.	Request from Essential Energy	21/11/13	5:15	21/11/13	15:28	10.22	96F		-0.000005788021	Exclusion 1.2 - 3rd party outage	Excluded Outage 152083 96F 132kV Line - From Stroud to Tomago tee Brandy Hill - Nov 21 2013 07 00.msg
S1		152308	TransGrid was requested to switch out U3 - 330kV line to allow Snowy Hydro to perform work on their installation.	Request from Snowy Hydro	21/11/13	6:25	21/11/13	15:16	8.85	U3		-0.000005013767	Exclusion 1.2 - 3rd party outage	Excluded Outage 153238 96F 132kV Line - From Stroud to Tomago tee Brandy Hill - Nov 28 2013 07 00.msg
S1		151586	TransGrid was requested to switch out U1 - 330kV line to allow Snowy Hydro to perform work on their installation.	Request from Snowy Hydro	22/11/13	6:07	24/11/13	17:25	59.30	U1		-0.000033595069	Exclusion 1.2 - 3rd party outage	Excluded Outage 151586 - 22 11 13 Snowy Outages Upper Tumut U1 Line.msg
S1		151580	TransGrid was requested to switch out M3 - 330kV line to allow Snowy Hydro to perform work on their installation.	Request from Snowy Hydro	22/11/13	6:32	22/11/13	14:54	8.37	M3		-0.000004739945	Exclusion 1.2 - 3rd party outage	Excluded Outage 151580 Snowy Hydro - M3 (M1 units 3-4) 330kV line - date change from 20 11 to 22 11 .msg
S1		151577	TransGrid was requested to switch out 96F - 132kV line to allow Essential Energy to perform project work on their installation.	Request from Essential Energy	25/11/13	7:07	25/11/13	11:13	4.10	964		-0.000002322762	Exclusion 1.2 - 3rd party outage	Excluded Outage 151577 964 -132kV Line - From TG Taree to TG Port Macquarie tee Herons Creek - Nov 25 2013.msg
S1		147967	TransGrid was requested to switch out L1 - 330kV line to allow Snowy Hydro to perform work on their installation.	Request from Snowy Hydro	26/11/13	6:56	28/11/13	17:17	58.35	L1		-0.000033056868	Exclusion 1.2 - 3rd party outage	Excluded outage 147967 L1 (T3 units 1-2) 330kV line autosynch upgrade - 26 11 to 28 11.msg
S1		152125	TransGrid was requested to switch out 96F - 132kV line to allow Essential Energy to perform project work on their installation.	Request from Essential Energy	27/11/13	6:34	27/11/13	15:19	8.75	96F		-0.000004957114	Exclusion 1.2 - 3rd party outage	Excluded Outage 152125 96F 132kV Line - From Stroud to Tomago tee Brandy Hill - Nov 27 2013 07 00.msg
S1		153238	TransGrid was requested to switch out 96F - 132kV line to allow Essential Energy to perform project work on their installation.	Request from Essential Energy	28/11/13	5:53	28/11/13	17:06	11.22	96F		-0.000006354548	Exclusion 1.2 - 3rd party outage	Excluded Outage 153238 96F 132kV Line - From Stroud to Tomago tee Brandy Hill - Nov 28 2013.msg
S1		153271	TransGrid was requested to switch out 96F - 132kV line to allow Essential Energy to perform project work on their installation.	Request from Endeavour Energy	29/11/13	6:36	29/11/13	17:12	10.60	96P		-0.000006005189	Exclusion 1.2 - 3rd party outage	Excluded Outage 153271 96P 66kV Line - From - Fri Nov 29 2013 12 00.msg
S1		148167	TransGrid was requested to switch out 96F - 132kV line to allow Essential Energy to perform project work.	Request from Ausgrid	29/11/13	6:36	29/11/13	17:31	10.92	96F		-0.000006184590	Exclusion 1.2 - 3rd party outage	Excluded Outage 148167 96F 132kV Line - Outage Date from - Fri Nov 29 2013 06 30.msg
S1		153006	TransGrid was requested to switch out 39 - 330kV line for clearance purposes to allow Endeavour Energy to perform work on their installation.	Request from Endeavour Energy	29/11/13	7:33	29/11/13	8:38	1.08	39		-0.000000613738	Exclusion 1.2 - 3rd party outage	Excluded Outage 153006 330kV TL 39 (Clearance Outage for 29 11 13).msg
S1		151802	TransGrid was requested to switch out U3 - 330kV line to allow Snowy Hydro to perform work on their installation.	Request from Snowy Hydro	29/11/13	13:33	1/12/13	17:32	51.98	U3		-0.000029449978	Exclusion 1.2 - 3rd party outage	Excluded Outage 151802 - Upper Tumut U3 TL on 29 11 2013 by Snowy Hydro.msg
S1		153182	TransGrid was requested to take 132kV feeder No. 250 from Sydney North to Berowra out of service. This was to allow Ausgrid to perform repairs.	Request from Ausgrid	4/12/13	17:24:00	5/12/13	15:49:00	22.42	250		-0.000012699654	Exclusion 1.2 - 3rd party outage	Excluded Outage 153182 250 I&E 5 Dec 2013 doc (5).msg
S1		153334	TransGrid was requested to switch out 27 - 330kV TL for clearance purposes to allow Ausgrid to perform work on their installation.	Request from Ausgrid	4/12/13	19:18:00	5/12/13	16:18:00	21.00	27		-0.000011897073	Exclusion 1.2 - 3rd party outage	Excluded Outage 153334 330kV FDR 27 I&E 5 Dec 2013 doc (3).msg
S1		148998	TransGrid was requested to switch out 96P - 132kV line to allow Essential Energy to perform project work.	Request from Essential Energy	6/12/13	05:57:00	6/12/13	17:28:00	11.52	96P		-0.000006524506	Exclusion 1.2 - 3rd party outage	Excluded Outage 148998 - 96P 66kV TL TG Taree to Stroud on 06 12 2013 by Essential Energy.msg
S1		153541	TransGrid was requested to switch out 96F - 132kV line to allow Essential Energy to perform project work.	Request from Essential Energy	6/12/13	05:57:00	6/12/13	17:28:00	11.52	96F		-0.000006524506	Exclusion 1.2 - 3rd party outage	Excluded Outage 153541 96P 66kV Line - From TG Taree to Stroud - Fri Dec 6 2013.msg
S1		153335	TransGrid was requested to take 132kV feeder No. 250 from Sydney North to Berowra out of service. This was to allow Ausgrid to perform repairs.	Request from Ausgrid	8/12/13	16:33:00	9/12/13	16:20:00	23.78	250		-0.000013473908	Exclusion 1.2 - 3rd party outage	Excluded Outage 153335 250 I&E 9 Dec 2013 doc.msg
S1		154533	TransGrid was requested to switch out L3 - 330kV line to allow Snowy Hydro to perform work on their installation.	Request from Snowy Hydro	11/12/13	09:01:00	13/12/13	09:35:00	48.57	L3		-0.000027514343	Exclusion 1.2 - 3rd party outage	Excluded Outage 154533 L3 on 11-12-13.msg
S2		128568	TransGrid was requested to isolate No.1 330/132/11kV main transformer at Wallerawang 330kV by Delta Electricity. Description of work stated as: Protection testing of station transformer group 1.	Request from Delta Electricity	16/04/13	07:55:00	16/04/13	17:55:00	10.00		No.1 Tx WW1	-0.000006275140	Exclusion 1.2 - 3rd party outage	Excluded Outage 128568.msg
S2		131629	TransGrid was requested to isolate transformer No.2 at Wagga 132kV substation by Essential Energy for work on their installation at Forest Hill zone substation.	Request from Essential Energy	16/04/13	09:43:00	16/04/13	14:02:00	4.32		No.2 Tx WG2	-0.000002708769	Exclusion 1.2 - 3rd party outage	Excluded Outage 131629 - see 3 attached emails.msg
S2		138958	TransGrid was requested to switch out No.1 330/132/11kV Transformer at Murray Substation, to allow Snowy Hydro to conduct a trial Murray power station restart test.	Request from Snowy Hydro	18/05/13	09:36:00	18/05/13	12:28:00	2.87		No.1 Tx MUR	-0.000001798873	Exclusion 1.2 - 3rd party outage	Excluded outages 138913 & 138960 & 138959 & 138958 & 138925 & 138924 & 138803.msg

S2	Transformer availability	138959	TransGrid was requested to switch out No.2 330/132/11kV Transformer at Murray Substation, to allow Snowy Hydro to conduct a trial Murray power station restart test.	Request from Snowy Hydro	18/05/13	09:36:00	18/05/13	12:28:00	2.87		No.2 Tx MUR	-0.000001798873	Exclusion 1.2 - 3rd party outage	Excluded outages 138913 & 138960 & 138959 & 138958 & 138925 & 138924 & 138803.msg
S2		139774	TransGrid was requested to switch out No.1 330/132/11kV Transformer at Murray Substation, to allow Snowy Hydro to conduct a trial Murray power station restart test.	Request from Snowy Hydro	2/06/13	09:25:00	2/06/13	12:13:00	2.80		No.1 Tx MUR	-0.000001757039	Exclusion 1.2 - 3rd party outage	Excluded Outages 139708 139773 139322 139719 139720 139774 139776 - Black Start 02 06 2013.msg
S2		139776	TransGrid was requested to switch out No.2 330/132/11kV Transformer at Murray Substation, to allow Snowy Hydro to conduct a trial Murray power station restart test.	Request from Snowy Hydro	2/06/13	09:25:00	2/06/13	12:13:00	2.80		No.2 Tx MUR	-0.000001757039	Exclusion 1.2 - 3rd party outage	Excluded Outages 139708 139773 139322 139719 139720 139774 139776 - Black Start 02 06 2013.msg
S2		140014	TransGrid was requested to isolate No.1 330/132/11kV main transformer at Wallerawang 330kV to enable Delta Electricity to perform instalation work.	Request from Delta Electricity	24/06/13	06:51:00	28/06/13	12:26:00	101.58		No.1 Tx WW1	-0.000063744960	Exclusion 1.2 - 3rd party outage	Excluded Outage 140014 on 24 06 2013 Wallerawang 330kV No 1 Tx Delta request.msg
S2		142829	TransGrid's No.1 330/132/11kV transformer at Vales Point 330kV substation is tied to the Delta Electricity No.3 station transfromer. There was Buchholz trip on the No.3 station transformer owned by Delta Electricity due to low oil levels, resulting in a trip of Transgrid's No.1	Fault on Delta Electricity station transformer	8/07/13	07:31:00	8/07/13	15:59:00	8.47		No.1 Tx VP1	-0.000005312952	Exclusion 1.2 - 3rd party outage	Excluded Outage 142829 Follow-up 2013-F-0267-713 1 VP 330kV No 1 Tx 330 132 11kV 08 07 2013.msg
S2		151150	TransGrid's No.2 330/132/11kV transformer at Vales Point 330kV substation is tied to the Delta Electricity No.4 station transfromer. There was a trip on the No.4 station transformer owned by Delta Electricity resulting in a trip of Transgrid's No.2 transformer	Fault on Delta Electricity station transformer	5/11/13	17:16:00	5/11/13	21:12:00	3.93		No.2 Tx VP1	-0.000002468222	Exclusion 1.2 - 3rd party outage	Excluded Outage 151150 IR#11249 - 5 11 13 VP1 - Forced Outage .msg
S3	Reactive plant availability								0.00			0.000000000000		
S3									0.00			0.000000000000		
S3									0.00			0.000000000000		
S3									0.00			0.000000000000		
S3									0.00			0.000000000000		
S3									0.00			0.000000000000		
S3									0.00			0.000000000000		

TransGrid - Proposed exclusions

LOSS OF SUPPLY EVENT FREQUENCY		Event proposed for exclusion	Description of the event and its impact on the network and performance	Cause of the event	Start date	Start time	End date	End time	Circuits affected	Maximum system demand	Demand shed and time	Quantitative impact	Reasons for exclusion request	Further references
Name of any loss of supply parameters		Name of the event	Detail of the event. Such as: the action of any third parties, the actions of the TNSP, assets damaged or interrupted.	A description of the cause of the event	Start date and time of event		End date and time of event		Name of circuits or plant affected	The max system demand that occurred up until the time of the event	The (MW) demand shed and the duration it was shed for.	Impact of exclusion event on LOS Parameter	Full details of the reason/s for excluding this event. Should include a reference to the defined exclusions and explain how it meets this exclusion definition (see Exclusion definition tab). Eg. Exclusion 1.2 Third party event	A TNSP may provide further details of an exclusion event. TNSP to provide reference.
S4	Loss of supply event frequency >0.05 system minutes	125366	At Narrabri 132kV S/S on 13th January 2013 at 17:34 hours (EST) 132kV transmission line 96M tripped due to severe storms in the area. This was in addition to the earlier trip and lock-out of 132kV transmission lines 9U3 Gunnedah - Narrabri and 968 Tamworth - Narrabri at 17:02 hours and 17:11 hours (EST) respectively due to damaged structures on the lines caused by the same storm. The trip of 96M resulted in a loss of load to the Narrabri area. 18MW of load was lost for 2 hours and 44 minutes. Supply was restored at 19:18 hours.	Extraordinary and unmanageable storm event	13/01/2013	17:34	13/01/2013	19:18	96M	13946	18MW for 2 hours and 44 minutes	1	Force Majeure	Narrabri ENS 13_01_2013 Force Majeuer Exclusion Files\
S4														
S4														
S4														
S4														
S4														
S5	Loss of supply event frequency >0.25 system minutes													
S5														
S5														
S5														
S5														
S5														
S5														

TransGrid - Proposed exclusions

AVERAGE OUTAGE DURATION		Event proposed for exclusion	Description of the event and its impact on the network and performance	Cause of the event	Start date	Start time	End date	End time	Circuits affected		Quantitative impact	Capped impact (if applicable)	Reasons for exclusion request	Further references
Name of any average outage duration parameters		Name of the event	Detail of the event. Such as: the action of any third parties, the actions of the TNSP, assets damaged or interrupted.	A description of the cause of the event	Start date and time of event		End date and time of event		Name of circuits or plant affected		Impact of exclusion event on AOD Parameter	Impact of capped exclusion event on AOD parameter	Full details of the reason for excluding this event. Should include a reference to the defined exclusions and explain how it meets this exclusion definition (see Exclusion definition tab). Eg. Exclusion 1.2 Third party event	A TNSP may provide further details of an exclusion event. TNSP to provide reference.
S6	Average outage duration	142829	TransGrid's No.1 330/132/11kV transformer at Vales Point 330kV substation is tied to the Delta Electricity No.3 station transfromer. There was Buchholz trip on the No.3 station transformer owned by Delta Electricity due to low oil levels, resulting in a trip of Transgrid's No.1 transformer.	Fault on Delta Electricity station transformer	8/07/13	07:31:00	8/07/13	15:59:00		No.1 Tx VP1	508.000		Exclusion 1.2 - 3rd party outage	Excluded Outage 142829 Follow-up 2013-F-0267-713 1 VP 330kV No 1 Tx 330 132 11kV 08 07 2013.msg
S6		151150	TransGrid's No.2 330/132/11kV transformer at Vales Point 330kV substation is tied to the Delta Electricity No.4 station transfromer. There was a trip on the No.4 station transformer owned by Delta Electricity resulting in a trip of Transgrid's No.2 transformer.	Fault on Delta Electricity station transformer	5/11/13	17:16:00	5/11/13	21:12:00		No.2 Tx VP1	236.000		Exclusion 1.2 - 3rd party outage	Excluded Outage 151150 IR#11249 - 5 11 13 VP1 - Forced Outage .msg
S6		124872	U7 Upper Tumut to Tumut 2 power station 330kV transmission line outage was as a result of a fault on generator units 7 & 8.	Generator fault	3/01/13	11:03:00	5/01/13	14:17:00	U7		3074.000		Exclusion 1.2 - 3rd party outage	Excluded outage 124872 U7 on 03-01-13.msg
S6		128504	M9 330kV transmission line tripped, interrupting 80MW of generation. The trip was a result of Snowy Hydro staff working at Murray 1 power station inadvertently cutting the CT secondaries on generator unit 10 causing the differential protection to operate.	Snowy Hydro staff error	4/03/13	14:19:00	4/03/13	17:37:00	M9		198.000		Exclusion 1.2 - 3rd party outage	Excluded outage 128504 4 3 2013 2013-F-0176.msg
S6		129107	96F 132kV transmission line is owned by TransGrid and AusGrid. There was a fault on this line, which was calculated to be approximately 4.4km from Tomago. This is on Ausgrid's portion of the line.	Ausgrid line fault	11/03/13	08:36:00	11/03/13	08:38:00	96F		2.000		Exclusion 1.2 - 3rd party outage	Excluded Outage 129107 - Ausgrid section of line fault.msg
S6														

TransGrid - S1 - Transmission line availability

Performance Targets	Graph start	Collar	Target	Cap	Graph end
Transmission line availability	98.90%	99.05%	99.26%	99.36%	99.60%
Weighting	-0.20%	-0.20%	0.00%	0.20%	0.20%

Performance Formulae		Formulae					Conditions					S- Calc 1	S- Calc 2
Performance	=	-0.002000							Availability	<	99.05%	-0.002000	-0.002000
	=	0.952381	x	Availability	+	-0.945333	99.05%	≤	Availability	≤	99.26%	-0.006541	-0.002957
	=	2.000000	x	Availability	+	-1.985200	99.26%	≤	Availability	≤	99.36%	-0.013736	-0.006210
	=	0.002000					99.36%	<	Availability			0.002000	0.002000

Performance Outcomes		Performance (Without Exclusions)	Performance (Exclusions)
Transmission line availability	=	98.573202%	98.949516%
S-Factor	=	-0.200000%	-0.200000%

NOTE:

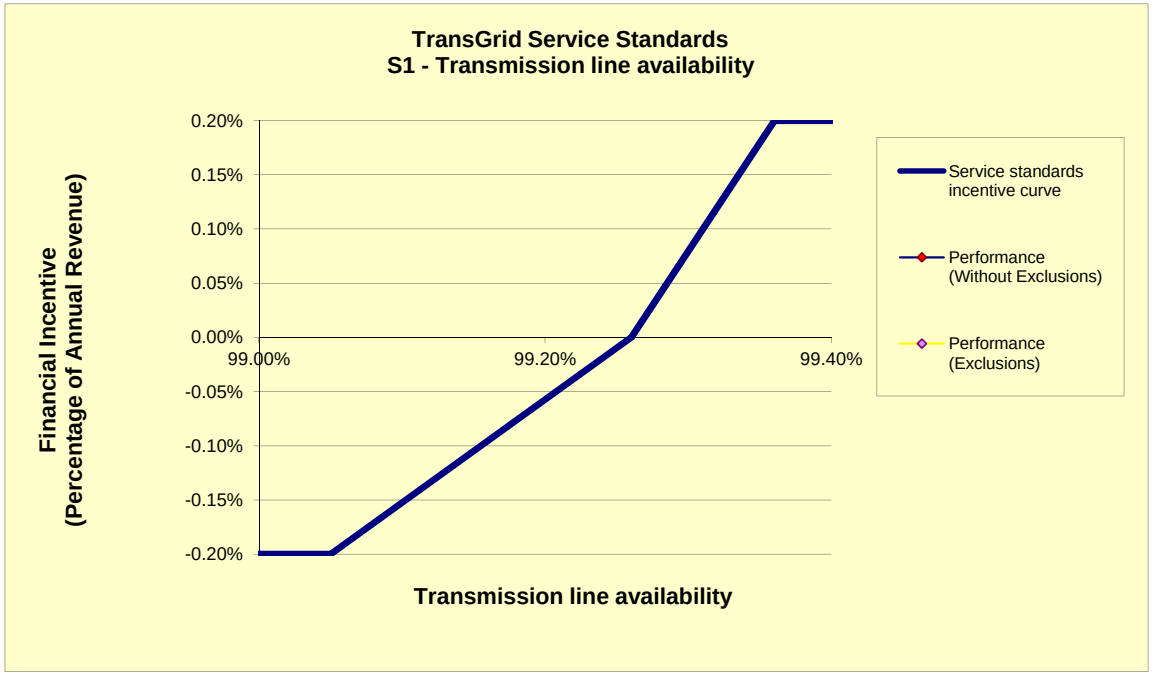
This sheet will automatically update based on data in input sheets

Blue cells show the TNSP's performance targets and weightings

Yellow/Green cells show the TNSP's performance formulae and related formula conditions based on performance targets and weightings

Pink cells show the TNSP's performance outcomes without any events excluded from performance data

Orange cells show the TNSP's performance outcomes with events excluded from performance data



TransGrid - S2 - Transformer availability

Performance Targets	Graph start	Collar	Target	Cap	Graph end
Transformer availability	97.10%	97.33%	98.61%	98.89%	99.10%
Weighting	-0.15%	-0.15%	0.00%	0.15%	0.15%

Performance Formulae		Formulae					Conditions					S- Calc 1	S- Calc 2
Performance	=	-0.001500					When:		Availability	<	97.33%	-0.001500	-0.001500
	=	0.117188	x	Availability	+	-0.115559	97.33%	≤	Availability	≤	98.61%	-0.001310	-0.001300
	=	0.535714	x	Availability	+	-0.528268	98.61%	≤	Availability	≤	98.89%	-0.005990	-0.005943
	=	0.001500					98.89%	<	Availability			0.001500	0.001500

Performance Outcomes		Performance (Without Exclusions)	Performance (Exclusions)
Transformer availability	=	97.491813%	97.500575%
S-Factor	=	-0.131038%	-0.130011%

NOTE:

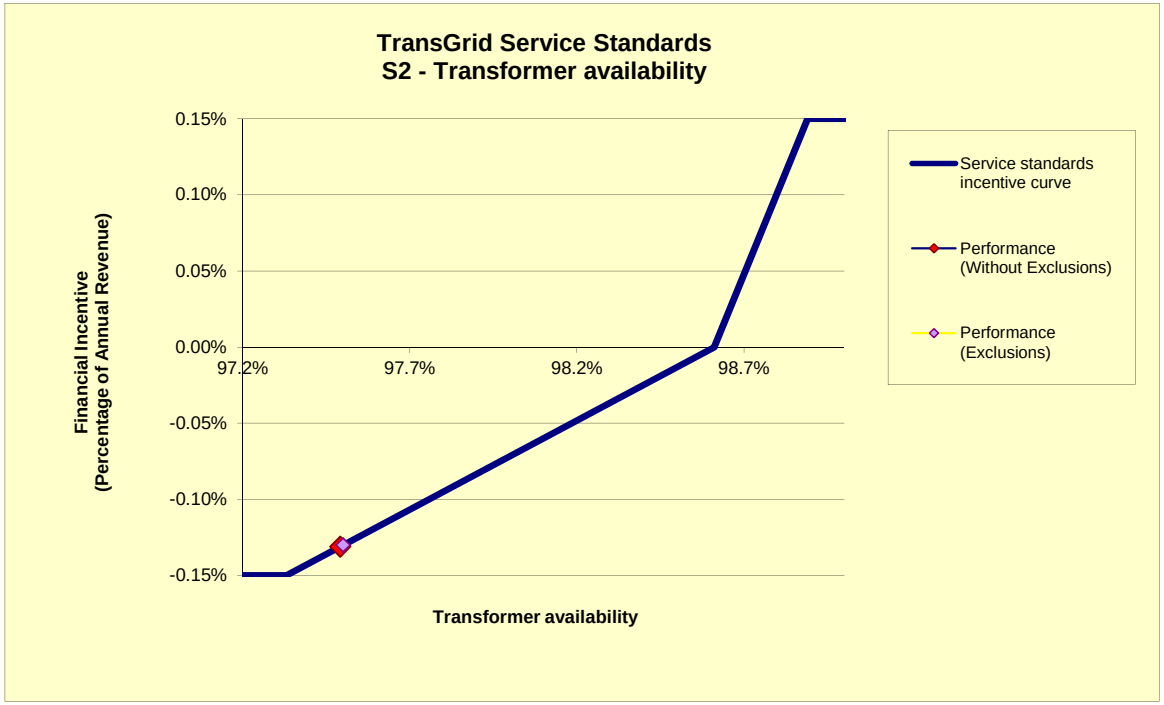
This sheet will automatically update based on data in input sheets

Blue cells show the TNSP's performance targets and weightings

Yellow/Green cells show the TNSP's performance formulae and related formula conditions based on performance targets and weightings

Pink cells show the TNSP's performance outcomes without any events excluded from performance data

Orange cells show the TNSP's performance outcomes with events excluded from performance data



TransGrid - S3 - Reactive plant availability

Performance Targets	Graph start	Collar	Target	Cap	Graph end
Reactive plant availability	98.50%	98.65%	99.12%	99.33%	99.50%
Weighting	-0.10%	-0.10%	0.00%	0.10%	0.10%

Performance Formulae		Formulae					Conditions					S- Calc 1	S- Calc 2
Performance	=	-0.001000					When:		Availability	<	98.65%	-0.001000	-0.001000
	=	0.212766	x	Availability	+	-0.210894	98.65%	≤	Availability	≤	99.12%	-0.001775	-0.001775
	=	0.476190	x	Availability	+	-0.472000	99.12%	≤	Availability	≤	99.33%	-0.003973	-0.003973
	=	0.001000					99.33%	<	Availability			0.001000	0.001000

Performance Outcomes		Performance (Without Exclusions)	Performance (Exclusions)
Reactive plant availability	=	98.285587%	98.285587%
S-Factor	=	-0.100000%	-0.100000%

NOTE:

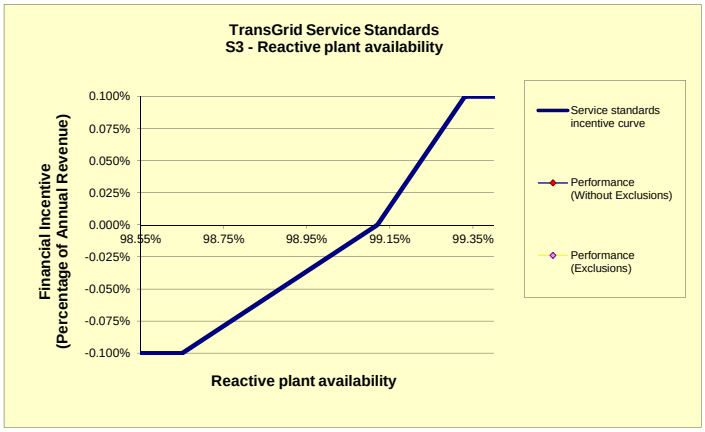
This sheet will automatically update based on data in input sheets

Blue cells show the TNSPt's performance targets and weightings

Yellow/Green cells show the TNSP's performance formulae and related formula conditions based on performance targets and weightings

Pink cells show the TNSP's performance outcomes without any events excluded from performance data

Orange cells show the TNSP's performance outcomes with events excluded from performance data



TransGrid - S4 - Loss of supply event frequency >0.05 system minutes

Performance Targets	Graph start	Collar	Target	Cap	Graph end
Loss of supply event frequency >0.05 system minutes	9	7	4	2	-
Weighting	-0.25%	-0.250%	0.00%	0.250%	0.25%

Performance Formulae		Formulae					Conditions					S- Calc 1	S- Calc 2
Performance	=	-0.002500					7	<	No. of events			-0.002500	-0.002500
	=	-0.000833	x	No. of events	+	0.003333	4	≤	No. of events	≤	7	-0.000833	-0.000833
	=	-0.001250	x	No. of events	+	0.005000	2	≤	No. of events	≤	4	-0.001250	-0.001250
	=	0.002500							No. of events	<	2	0.002500	0.002500

Loss of supply event frequency >0.05 system minutes	=	Performance (Without Exclusions)	Performance (Exclusions)
Loss of supply event frequency >0.05 system minutes	=	5	5
S-Factor		-0.083333%	-0.083333%

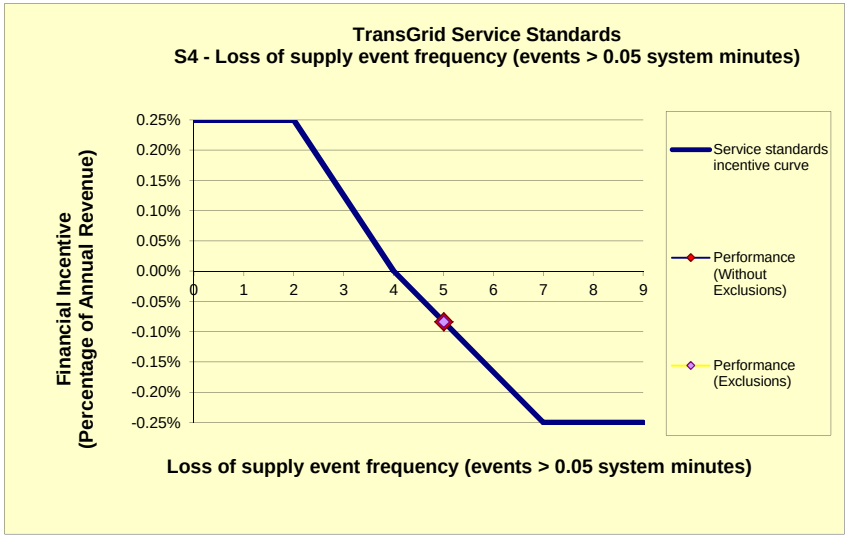
NOTE: This sheet will automatically update based on data in input sheets

Blue cells show the TNSP's performance targets and weightings

Yellow/Green cells show the TNSP's performance formulae and related formula conditions based on performance targets and weightings

Pink cells show the TNSP's performance outcomes without any events excluded from performance data

Orange cells show the TNSP's performance outcomes with events excluded from performance data



TransGrid - S5 - Loss of supply event frequency >0.25 system minutes

Performance Targets	Graph start	Collar	Target	Cap	Graph end
Loss of supply event frequency >0.25 system minutes	4	2	1	0	0
Weighting	-0.10%	-0.100%	0.00%	0.100%	0.10%

Performance Formulae		Formulae					Conditions					S- Calc 1	S- Calc 2
Performance	=	-0.001000					2	<	No. of events			-0.001000	-0.001000
	=	-0.001000	x	No. of events	+	0.001000	1	≤	No. of events	≤	2	0.001000	0.001000
	=	-0.001000	x	No. of events	+	0.001000	0	≤	No. of events	≤	1	0.001000	0.001000
	=	0.001000							No. of events	=	0	0.001000	0.001000

Loss of supply event frequency >0.25 system minutes	=	Performance (Without Exclusions)	Performance (Exclusions)
Loss of supply event frequency >0.25 system minutes	=	0	0
S-Factor		0.100000%	0.100000%

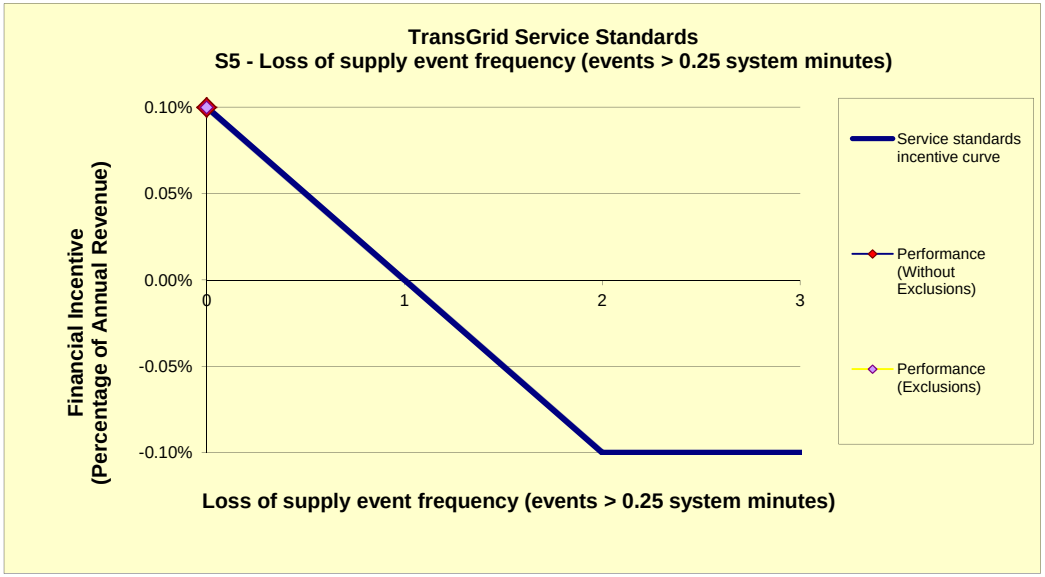
NOTE: This sheet will automatically update based on data in input sheets

Blue cells show the TNSP's performance targets and weightings

Yellow/Green cells show the TNSP's performance formulae and related formula conditions based on performance targets and weightings

Pink cells show the TNSP's performance outcomes without any events excluded from performance data

Orange cells show the TNSP's performance outcomes with events excluded from performance data



TransGrid - S6 - Average outage duration

Performance Targets	Graph start	Collar	Target	Cap	Graph end
Average outage duration	1,199	999	824	649	-
Weighting	-0.20%	-0.200%	0.00%	0.200%	0.20%

Performance Formulae		Formulae					Conditions					S- Calc 1	S- Calc 2
Performance	=	-0.002000					999	<	Duration			-0.002000	-0.002000
	=	-0.000011	x	Duration	+	0.009417	824	≤	Duration	≤	999	-0.007348	-0.007666
	=	-0.000011	x	Duration	+	0.009417	649	≤	Duration	≤	824	-0.007348	-0.007666
	=	0.002000							Duration	<	649	0.002000	0.002000

Average outage duration	=	Performance (Without Exclusions)	Performance (Exclusions)
Average outage duration	=	1466.935484	1494.806723
S-Factor		-0.200000%	-0.200000%

NOTE:

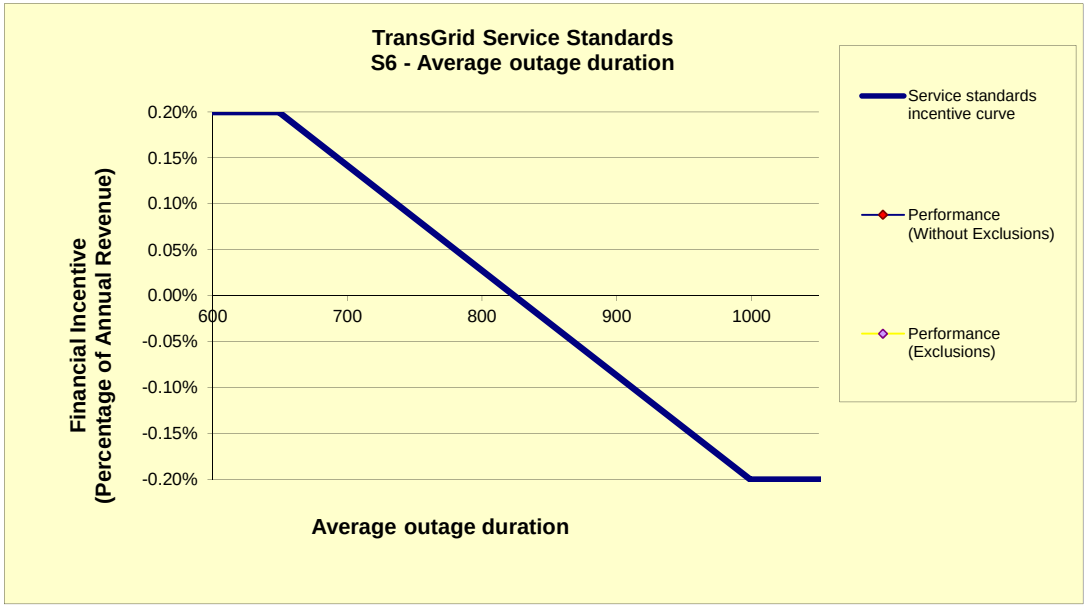
This sheet will automatically update based on data in input sheets

Blue cells show the TNSP's performance targets and weightings

Yellow/Green cells show the TNSP's performance formulae and related formula conditions based on performance targets and weightings

Pink cells show the TNSP's performance outcomes without any events excluded from performance data

Orange cells show the TNSP's performance outcomes with events excluded from performance data



TransGrid - Revenue Calculation

Revenue cap information	
Base year allowed revenue	$678,400,000
Base year	2009-10
X-factor	-5.61%
Commencement of regulatory period	1-Jul-09

Annual revenue adjusted for CPI	Mar-09	Mar-10	Mar-11	Mar-12	Mar-13	Mar-14
CPI	166.2	171.0	176.7	179.5	-	-
CPI	92.5	95.2	98.3	99.9	102.4	-

Nominal annual revenue	2009-10	2010-11	2011-12	2012-13	2013-14
Allowed Revenue	$678,400,000	$737,150,175	$804,454,443	$863,046,907	$934,273,244

Calendar year revenue	2009	2010	2011	2012	2013	2014
Revenue	$339,200,000	$707,775,087	$770,802,309	$833,750,675	$898,660,076	

NOTE:

This sheet will automatically update based on data on input sheets.

Grey cells show calendar year revenue

Green cells are for formula

TransGrid - Performance outcomes

Revenue calendar year	*$898,660,076*

S	*Performance parameter*	Target	Performance without exclusions			Performance with exclusions			Impact of exclusions
			Performance	S-Factor	Final Incentive	Performance	S-Factor	Final Incentive	
S1	Transmission line availability	99.26%	98.573202%	-0.200000%	-$1,797,320	98.949516%	-0.200000%	-$1,797,320	0.000000%
S2	Transformer availability	98.61%	97.491813%	-0.131038%	-$1,177,582	97.500575%	-0.130011%	-$1,168,354	0.001027%
S3	Reactive plant availability	99.12%	98.285587%	-0.100000%	-$898,660	98.285587%	-0.100000%	-$898,660	0.000000%
S4	Loss of supply event frequency >0.05 system minutes	4	5	-0.083333%	-$748,883	5	-0.083333%	-$748,883	0.000000%
S5	Loss of supply event frequency >0.25 system minutes	1	0	0.100000%	$898,660	0	0.100000%	$898,660	0.000000%
S6	Average outage duration	824	1467	-0.200000%	-$1,797,320	1495	-0.200000%	-$1,797,320	0.000000%
	TOTALS			-0.614371%	-$5,521,106		-0.613344%	-$5,511,878	0.001027%

NOTE:

This sheet will automatically update based on data in input sheets.

Grey cell shows relevant calendar year revenue

Green cells show performance measure targets

Pink cells show performance, s-factor results and financial incentive without exclusions

Orange cells show performance, s-factor results and financial incentive with exclusions

Aggregate outcome	
S-factor	-0.613344%
Financial Incentive	-$5,511,878
Financial year affected by financial incentive	2014/15

TransGrid - Defined exclusions

No.	Parameter 1- Transmission Line Availability		
	Defined exclusions	**Further description of exclusion**	**Reference**
1.1	Outages on assets that are not providing prescribed transmission services.		Service Target Performance Incentive Scheme (March 2008) p. 32
1.2	3rd party outage	Any outages shown to be caused by a fault or other event on a 'third party system' e.g. intertrip signal, generator outage, customer installation (TNSP to provide list).	Service Target Performance Incentive Scheme (March 2008) p. 32
1.3	Outages to control fault levels	Outages to control voltages within required limits, both as directed by AEMO and where AEMO does not have direct oversight of the network (in both cases only where the element is available for immediate energisation if required)	Service Target Performance Incentive Scheme (March 2008) p. 32
1.4	Force majeure events	As defined in the Force Majeure definition worksheet and Appendix E of the Service Target Performance Incentive Scheme (March 2008) p. 51	Service Target Performance Incentive Scheme (March 2008) p. 32
1.5	Transient interruptions less than one (1) minute		Service Target Performance Incentive Scheme (March 2008) p. 32
1.6	The opening of one end of a transmission circuit	The opening of only one end of a transmission circuit (eg where the transmission circuit remains energised and available to carry power with immediate manual or automatic return to service)	Service Target Performance Incentive Scheme (March 2008) p. 33
1.7	Underground cable damaged by an external party	Outages for remedial repairs to an underground power cable damaged by an external party are capped at 14 days if: - the external party did not enquire with 'dial before you dig' or - the external party enquired, received accurate information and did not follow this information.	Service Target Performance Incentive Scheme (March 2008) p. 33
	Parameter 2- Transformer Availability		
	Defined exclusions	**Further description of exclusion**	**Reference**
2.1	Outages on assets that are not providing prescribed transmission services.		Service Target Performance Incentive Scheme (March 2008) p. 32
2.2	3rd party outage	Any outages shown to be caused by a fault or other event on a 'third party system' e.g. intertrip signal, generator outage, customer installation (TNSP to provide list).	Service Target Performance Incentive Scheme (March 2008) p. 32
2.3	Outages to control fault levels	Outages to control voltages within required limits, both as directed by AEMO and where AEMO does not have direct oversight of the network (in both cases only where the element is available for immediate energisation if required)	Service Target Performance Incentive Scheme (March 2008) p. 32
2.4	Force majeure events	As defined in the Force Majeure definition worksheet and Appendix E of the Service Target Performance Incentive Scheme (March 2008) p. 51	Service Target Performance Incentive Scheme (March 2008) p. 32
2.5	Transient interruptions less than one (1) minute		Service Target Performance Incentive Scheme (March 2008) p. 32
2.6	Auxiliary transformers		
2.7	Static VAR compensator transformers (which are counted as part of the SVC)		Service Target Performance Incentive Scheme (March 2008) p. 33
2.8	The opening of one end of a transmission circuit	The opening of only one or both sides of a transformer for operational purposes, such as to control losses, fault levels, incompatibility of tap changes etc but where the transformer remains available to carry power on immediate manual or automatic return to service	Service Target Performance Incentive Scheme (March 2008) p. 33
2.9	The period where a transformer is made available for service, but not switched in, at the end of each day of a multi-day planned outage		Service Target Performance Incentive Scheme (March 2008) p. 33
	Parameter 3- Reactive Plant Availability		
	Defined exclusions	**Further description of exclusion**	**Reference**
3.1	Outages on assets that are not providing prescribed transmission services.		Service Target Performance Incentive Scheme (March 2008) p. 32
3.2	3rd party outage	Any outages shown to be caused by a fault or other event on a 'third party system' e.g. intertrip signal, generator outage, customer installation (TNSP to provide list).	Service Target Performance Incentive Scheme (March 2008) p. 32
3.3	Outages to control fault levels	Outages to control voltages within required limits, both as directed by AEMO and where AEMO does not have direct oversight of the network (in both cases only where the element is available for immediate energisation if required)	Service Target Performance Incentive Scheme (March 2008) p. 32
3.4	Force majeure events	As defined in the Force Majeure definition worksheet and Appendix E of the Service Target Performance Incentive Scheme (March 2008) p. 51	Service Target Performance Incentive Scheme (March 2008) p. 32
3.5	Transient interruptions less than one (1) minute		Service Target Performance Incentive Scheme (March 2008) p. 32
3.6	Capacitor banks and reactors operating less than 66kV		Service Target Performance Incentive Scheme (March 2008) p. 33
3.7	reactive plant switched out by System Operations, or left out after repairs that make it available for service for operational purposes		Service Target Performance Incentive Scheme (March 2008) p. 33

	Parameter 4- Loss of supply event frequency > 0.05 system minutes (No.)		
	Defined exclusions	**Further description of exclusion**	**Reference**
4.1	Outages on assets that are not providing prescribed transmission services (e.g. some connection assets)		Service Target Performance Incentive Scheme (March 2008) p. 34
4.2	Successful reclose events (less than one minute duration)		Service Target Performance Incentive Scheme (March 2008) p. 34
4.3	Any outages shown to be caused by a fault or other event on a 'third party system'-e.g. intertrip signal, generator outage, customer installation		Service Target Performance Incentive Scheme (March 2008) p. 34
4.4	Planned outages		Service Target Performance Incentive Scheme (March 2008) p. 34
4.5	Force majeure events	As defined in the Force Majeure definition worksheet and Appendix E of the Service Target Performance Incentive Scheme (March 2008) p. 51	Service Target Performance Incentive Scheme (March 2008) p. 34
4.6	Where TransGrid protection operates correctly due to a fault on a customer's or a third party system		Service Target Performance Incentive Scheme (March 2008) p. 34
4.7	Pumping station supply interruption		Service Target Performance Incentive Scheme (March 2008) p. 34
4.8	Outage caused by customer's own control system during a transient voltage fluctuation		Service Target Performance Incentive Scheme (March 2008) p. 34
	Parameter 5 - Loss of supply event frequency > 0.25 system minutes (No.)		
	Defined exclusions	**Further description of exclusion**	**Reference**
5.1	Outages on assets that are not providing prescribed transmission services (e.g. some connection assets)		Service Target Performance Incentive Scheme (March 2008) p. 34
5.2	Successful reclose events (less than one minute duration)		Service Target Performance Incentive Scheme (March 2008) p. 34
5.3	Any outages shown to be caused by a fault or other event on a 'third party system'-e.g. intertrip signal, generator outage, customer installation		Service Target Performance Incentive Scheme (March 2008) p. 34
5.4	Planned outages		Service Target Performance Incentive Scheme (March 2008) p. 34
5.5	Force majeure events	As defined in the Force Majeure definition worksheet and Appendix E of the Service Target Performance Incentive Scheme (March 2008) p. 51	Service Target Performance Incentive Scheme (March 2008) p. 34
5.6	Where TransGrid protection operates correctly due to a fault on a customer's or a third party system		Service Target Performance Incentive Scheme (March 2008) p. 34
5.7	Pumping station supply interruption		Service Target Performance Incentive Scheme (March 2008) p. 34
5.8	Outage caused by customer's own control system during a transient voltage fluctuation		Service Target Performance Incentive Scheme (March 2008) p. 34

	Parameter 6 - Average Outage Duration		
	Defined exclusions	**Further description of exclusion**	**Reference**
6.1	Planned outages		Service Target Performance Incentive Scheme (March 2008) p. 35
6.2	Momentary interruptions (less than one minute)		Service Target Performance Incentive Scheme (March 2008) p. 35
6.3	Force majeure	As defined in the Force Majeure definition worksheet and Appendix E of the Service Target Performance Incentive Scheme (March 2008) p. 51	Service Target Performance Incentive Scheme (March 2008) p. 35
6.4	Any outages shown to be caused by a fault or other event on a '3rd party system' e.g. intertrip signal, generator outage, customer installation, customer request or AEMO direction		Service Target Performance Incentive Scheme (March 2008) p. 35
6.5	Outages for capacitor banks and reactors operating at less than 66kV		Service Target Performance Incentive Scheme (March 2008) p. 35

Service Target Perfomance Incentive Scheme - Definition of Forece Majeure

Definition of Force Majeure	Reference
For the purpose of applying the *service target performance incentive scheme* , force majeure events means any event, act or circumstance or combination of events, acts and circumstances which (despite the observance of good electricity industry practice) is beyond the reasonable control of the part affected by any such event, which may include, without limitation, the following: - fire, lightning, explosion, flood, earthquake, storm, cyclone, action of the elements, riots, civil commotion, malicious damage, natural disaster, sabotage, act of a public enemy, act of God, war (declared or undeclared), blockage, revolution, radioactive contamination, toxic or dangerous chemical contamination or fore of nature. - action or inaction by a court, government agency (including denial, refusal or failure to grant any authorisation, despite timely best endeavour to obtain same) - strikes, lockouts, industrial and/or labour disputes and/or difficulties, work bans, blockades, picketing - acts or omissions (other than failure to pay money) of a party other than the TNSP, which party either is connected to or uses the high voltage grid or is directly connected to or uses a system for the supply of electricity that in turn is connected to the high voltage grid - where those acts or omissions affect the ability of the TNSP to perform its obligation under the service standard by virtue of that direct or indirect connection to or use of the high voltage grid In determining what force majeure events should be excluded the AER will consider the following: - was the event unforeseeable and its impact extraordinary, uncontrollable and not manageable? - does the event occur frequently? If so, how did the impact of the particular event differ? - could the TNSP, in practice, have prevented the impact (not necessarily the event itself)? - could the TNSP have effectively reduced the impact of the event by adopting better practices?	Service Target Performance Incentive Scheme (January 2007) p. 31