

## TEMPLATE EXPLANATION



This template must be used by TransGrid to report service performance information for the 2008 calendar year.

Yellow worksheets (**'Inputs - Performance'** and **'Inputs - Exclusions'**) are for inputs, including performance and exclusion information. TransGrid 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 TransGrid's performance in 'Inputs-Performance' and 'Revenue Calculation' worksheets.

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

## TRANSGRID - SERVICE STANDARDS PERFORMANCE

<b>PERFORMANCE PARAMETERS</b>	<b>S</b>	<i>Performance (Without exclusions)</i>	<i>Performance (With exclusions)</i>
<b>Transmission line availability</b>	S1	98.276396%	98.536189%
<b>Transformer availability</b>	S2	98.392889%	98.530035%
<b>Reactive plant availability</b>	S3	99.008576%	99.008576%
<b>Reliability (Events &gt; 0.05 and &lt;=0.4 system minutes)</b>	S4	2	2
<b>Reliability (Events &gt; 0.4 system minutes)</b>	S5	1	0
<b>Average outage restoration time</b>	S6	835	869

<b>Date prepared:</b>	30 January 2009
<b>Revision date:</b>	

**NOTES:**

Pink cells - Input performance without exclusions from performance data

Orange cells - Input performance with exclusions from performance data

Green cells - Input date that template data was entered and date of any revisions from original version.

Performance should be measured on a calendar year basis

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	Circuits affected	Reactive plant or transformer	Quantitative impact	Reasons for exclusion request	Further references	
Name of any circuit availability parameters applying to TransGrid	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	Start time	End date and time of event	End time	Name of circuits affected	Name of any reactive plant or transformer affected	Number of hours, mins etc interrupted	Full details of the reasons 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	Transmission line availability	3-2008-P0014	Isolate and earth for Snowy Hydro.	Request from Snowy Hydro.	21/01/08	13:13	22/01/08	15:32	M3		26.19	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0082	Isolate and earth for Snowy Hydro.	Request from Snowy Hydro.	14/02/08	7:53	14/02/08	17:21	M13		9.28	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0054	Isolate and earth for Snowy Hydro.	Request from Snowy Hydro.	6/02/08	6:45	7/02/08	15:51	M13		33.06	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0056	Busbar Balance of CT's associated with SHL No.1 Transformer at Guthega substation.	Request from Snowy Hydro.	7/02/08	10:39	7/02/08	14:58	979		4.19	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0064	Busbar Balance of CT's associated with SHL No.1 Transformer at Guthega substation.	Request from Snowy Hydro.	8/02/08	7:21	8/02/08	14:32	979		7.11	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		2-2008-F0052	The 250 Sydney North to Berowra 132 kV Feeder (part TransGrid and EnergyAustralia) tripped. Load interrupted was 104MW. (Berowra, Hornsby and Pennant Hills). Load was restored via EnergyAustralia system.	Line tripped while EnergyAustralia were re-arranging their system for a planned outage of 251 Sydney North to Pennant Hills 132kV Feeder.	3/03/08	17:11	4/03/08	17:17	250		24.06	Exclusion 1.2 - 3rd Party Outage Intertrip received from EnergyAustralia.	TransGrid Forced and Emergency Outage Report
		2-2008-F0062	The 250 Sydney North to Berowra 132 kV Feeder (part TransGrid and EnergyAustralia) tripped. Line returned to service on load at Berowra only.	Found fault in pilot cables UPC 202 & 203 between Pennant Hills & Hornsby.	26/03/08	14:23	26/03/08	22:51	250		8.28	Exclusion 1.2 - 3rd Party Outage Intertrip received from EnergyAustralia.	TransGrid Forced and Emergency Outage Report
		3-2008-P0163	EnergyAustralia request for pilot wire balances and tree cleared from easement.	Request from EnergyAustralia.	4/03/08	19:22	5/03/08	12:28	250		17.06	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		1-2008-P0062	Line isolated for One Steel. The line is directly connected to OneSteel's transformer at the customer end.	Request from One Steel.	18/03/08	6:43	18/03/08	10:51	96X		4.08	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		1-2008-P0058	Line isolated for One Steel. The line is directly connected to OneSteel's transformer at the customer end.	Request from One Steel.	18/03/08	10:55	18/03/08	14:29	96Y		3.34	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0226	Open on CB97L2 for SHL	Request from Snowy Hydro.	11/03/08	6:00	12/03/08	18:18	97L		36.18	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0279	Isolate and earth for Snowy Hydro.	Request from Snowy Hydro.	4/04/08	6:58	4/04/08	13:35	M3		6.37	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0363	Isolate and earth for Snowy Hydro.	Request from Snowy Hydro.	22/04/08	8:23	22/04/08	12:58	M3		4.35	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0343	Isolate and earth for SPI Austnet work, Transgrid linework and isolator maintenance also at Jindera	Request from SP AusNet.	18/04/08	8:20	18/04/08	19:35	O60		11.15	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0386	Isolate and earth for SPI Austnet work	Request from SP AusNet.	30/04/08	7:49	30/04/08	18:53	O60		11.04	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0333	Isolate and earth for Snowy Hydro.	Request from Snowy Hydro.	15/04/08	5:52	16/04/08	17:28	U3		35.36	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0383	Isolate and earth for Snowy Hydro.	Request from Snowy Hydro.	26/04/08	7:34	27/04/08	16:15	L1		32.40	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0437	Isolate and earth for Snowy Hydro.	Request from Snowy Hydro.	27/03/08	9:05	8/05/08	13:41	M1		1012.36	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		1-2008-P0236	Line isolated for One Steel. The line is directly connected to OneSteel's transformer at the customer end.	Request from One Steel.	15/05/08	8:47	15/05/08	15:23	96Y		6.36	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0395	Isolate and earth for Snowy Hydro.	Request from Snowy Hydro.	2/05/08	7:20	2/05/08	12:35	L1		5.15	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0508	Isolate and earth for SPI Austnet work	Request from SP AusNet.	30/05/08	7:00	30/05/08	15:12	O60		8.12	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0504	Isolate and earth for SPI Austnet work	Request from SP AusNet.	29/05/08	7:04	29/05/08	18:28	O60		11.24	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0497	Isolate and earth for SPI Austnet work	Request from SP AusNet.	28/05/08	7:38	28/05/08	18:04	O60		10.26	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0494	Isolate and earth for SPI Austnet work	Request from SP AusNet.	27/05/08	7:54	27/05/08	18:26	O60		10.32	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0402	Isolate and earth for SPI Austnet work	Request from SP AusNet.	5/05/08	7:55	5/05/08	17:20	O60		9.25	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0392	Isolate and earth for SPI Austnet work	Request from SP AusNet.	2/05/08	7:19	2/05/08	18:41	O60		11.22	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0390	Isolate and earth for SPI Austnet work	Request from SP AusNet.	1/05/08	7:33	1/05/08	15:07	O60		7.34	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0308	Isolate and earth for Snowy Hydro.	Request from Snowy Hydro.	4/04/08	10:16	20/05/08	16:04	M13		1109.48	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0608	Black Start Test to meet NEMMCO rules.	Black start tests as required of TransGrid by NEMMCO.	30/06/08	11:21	30/06/08	12:52	18		1.31	Exclusion 1.2 - 3rd Party Outage Black start tests required by NEMMCO.	
		1-2008-P0373	Country Energy requested outage	Request from Country Energy.	21/06/08	7:00	21/06/08	11:30	9W3		4.30	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0560	Isolate and earth for Snowy Hydro work at Blowering PS	Request from Snowy Hydro.	11/06/08	7:46	16/06/08	11:15	O97B		123.29	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0630	Isolate and earth for Snowy Hydro.	Request from Snowy Hydro.	5/07/08	10:19	6/07/08	10:53	M13		24.34	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0690	Isolate and earth for Snowy Hydro.	Request from Snowy Hydro.	29/07/08	8:13	29/07/08	17:12	M13		8.59	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0672	Isolate and earth for Snowy Hydro.	Request from Snowy Hydro.	17/07/08	7:52	17/07/08	14:44	M5		6.52	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-F0064	Faulty AVR relay at Snowy Hydro M2 Power Station caused intertrip.	Intertrip received from Snowy Hydro.	9/07/08	8:47	9/07/08	9:05	M13		0.18	Exclusion 1.2 - 3rd Party Outage Intertrip received from EnergyAustralia.	TransGrid Forced and Emergency Outage Report
		3-2008-F0067	Storm in vicinity, Snowy Hydro Unit 3 in service as synchronous condenser at time of intertrip.	Intertrip received from Snowy Hydro.	14/07/08	6:31	14/07/08	7:09	U3		0.38	Exclusion 1.2 - 3rd Party Outage Intertrip received from Snowy Hydro.	TransGrid Forced and Emergency Outage Report
		3-2008-F0078	Intertrip received fom SHL	Intertrip received from Snowy Hydro.	26/08/08	11:47	26/08/08	18:19	M5		6.32	Exclusion 1.2 - 3rd Party Outage Intertrip received from Snowy Hydro.	TransGrid Forced and Emergency Outage Report
		1-2008-P0503	Line isolated for One Steel. The line is directly connected to OneSteel's transformer at the customer end.	Request from One Steel.	7/08/08	7:32	7/08/08	14:47	96X		7.15	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0712	Isolate and earth for Snowy Hydro.	Request from Snowy Hydro.	6/08/08	8:14	7/08/08	15:41	M7		31.27	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0738	Isolate and earth for Snowy Hydro at Murray power station	Request from Snowy Hydro.	20/08/08	7:42	20/08/08	16:09	M7		8.27	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0744	Isolate and earth for Snowy Hydro.	Request from Snowy Hydro.	18/08/08	7:02	22/08/08	18:42	U3		107.40	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0804	De-energised to allow Snowy Hydro to isolate A transformer at Jindabyne	Request from Snowy Hydro.	15/09/08	10:52	15/09/08	12:11	97L		1.19	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-S0010	Isolate and earth for Snowy Hydro.	Request from Snowy Hydro.	16/09/08	11:30	17/09/08	16:54	97L		29.24	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0844	Isolate and earth for Snowy Hydro.	Request from Snowy Hydro.	25/09/08	11:00	25/09/08	12:00	97L		1.00	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
		3-2008-P0781	Isolate and earth for Snowy Hydro.	Request from Snowy Hydro.	4/09/08	8:19	21/09/08	14:08	L1		413.49	Exclusion 1.2 - 3rd Party Outage Requested by customer.	
3-2008-P0836	Isolate and earth for Snowy Hydro.	Request from Snowy Hydro.	22/09/08	7:31	24/09/08	18:00	L5		58.29	Exclusion 1.2 - 3rd Party Outage Requested by customer.			
3-2008-P0842	Isolate and earth for Snowy Hydro.	Request from Snowy Hydro.	25/09/08	7:55	25/09/08	16:12	L5		8.17	Exclusion 1.2 - 3rd Party Outage Requested by customer.			
3-2008-P0817	Isolate and earth for Snowy Hydro.	Request from Snowy Hydro.	17/09/08	7:22	19/09/08	10:39	M1		51.17	Exclusion 1.2 - 3rd Party Outage Requested by customer.			
1-2008-P0595	Isolate and earth for EnergyAustralia	Request from EnergyAustralia.	5/09/08	5:58	5/09/08	12:29	962		6.31	Exclusion 1.2 - 3rd Party Outage Requested by customer.			
1-2008-P0638	Isolate and earth for EnergyAustralia	Request from EnergyAustralia.	17/09/08	7:11	17/09/08	18:00	962		10.49	Exclusion 1.2 - 3rd Party Outage Requested by customer.			
1-2008-P0649	Isolate and earth for EnergyAustralia	Request from EnergyAustralia.	20/09/08	7:26	20/09/08	16:10	96F		8.44	Exclusion 1.2 - 3rd Party Outage Requested by customer.			
3-2008-P0852	Isolated off system for Snowy Hydro black start test required to meet NEMMCO Rules.	Black start tests as required of TransGrid by NEMMCO.	27/09/08	8:21	27/09/08	12:29	64		4.08	Exclusion 1.2 - 3rd Party Outage Black start tests required by NEMMCO of SHL.			
1-2008-P0669	Isolate and earth for EnergyAustralia	Request from EnergyAustralia.	27/09/08	6:12	27/09/08	15:24	962		9.12	Exclusion 1.2 - 3rd Party Outage Requested by customer.			
1-2008-P0667	Isolate and earth for EnergyAustralia	Request from EnergyAustralia.	26/09/08	6:23	26/09/08	15:47	962		9.24	Exclusion 1.2 - 3rd Party Outage Requested by customer.			
3-2008-P0862	Isolated off system for Snowy Hydro black start test required to meet NEMMCO Rules.	Black start tests as required of TransGrid by NEMMCO.	28/09/08	10:16	28/09/08	14:14	97G		3.58	Exclusion 1.2 - 3rd Party Outage Black start tests required by NEMMCO of SHL.			



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	Quantitative impact	Demand shed and time	Reasons for exclusion request	Further references
Name of any loss of supply parameters applying to TransGrid	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	Number of hours, mins etc interrupted	The (MW) demand shed and the duration it was shed for.	Full details of the reasons for excluding this event. Should include a reference to the defined exclusions and explain how it meets the 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 Reliability (events > 0.05 and <=0.4 system minutes)													
S5 Reliability (events > 0.4 system minutes)	1-2008-F0088 1-2008-F0089 1-2008-F0090	DirectLink malfunctioned moving over a 3 minute period from 92MW import to 110MW export, causing the Armidale line over-load scheme to operate resulting in a trip of Lismore 132 via CB 9W12, 9U82, & 9U92. 9W1, 9U8 and 9U9	DirectLink control system failure forced TransGrid's over-load scheme to operate as a back-up to prevent TransGrid asset damage.	18/08/08	19:58	18/08/08	22:10	Fdr 9W1 Fdr 9U8 Fdr 9U9	14,289 MW	0.498 system minutes	130MW, progressively restored during time between start and end time	Exclusion 5.6 - Where TransGrid protection operates correctly due to a fault on a customer's or a third party system. (Added for clarification purposes.)	Forced outage  NEMMCO Incident Report

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 applying to TransGrid	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	Number of hours, mins etc interrupted	Impact following any applicable cap	Full details of the reasons for excluding this event. Should include a reference to the defined exclusions and explain how it meets the 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 restoration time	2-2008-F0052	The 250 Sydney North to Berowra 132 kV Feeder (part TransGrid and EnergyAustralia) tripped. Load interrupted was 104MW. (Berowra, Hornsby and Pennant Hills). Load was restored via EnergyAustralia system.	Line tripped while EnergyAustralia were re-arranging their system for a planned outage of 251 Sydney North to Pennant Hills 132kV Feeder.	3/03/08	17:11	4/03/08	17:17	250	24.06	24.06	Exclusion 6.6 - 3rd Party Outage Intertrip received from EnergyAustralia.	TransGrid Forced and Emergency Outage Report
	2-2008-F0062	The 250 Sydney North to Berowra 132 kV Feeder (part TransGrid and EnergyAustralia) tripped. Line returned to service on load at Berowra only.	Found fault in pilot cables UPC 202 & 203 between Pennant Hills & Hornsby.	26/03/08	14:23	26/03/08	22:51	250	8.28	8.28	Exclusion 6.6 - 3rd Party Outage Intertrip received from EnergyAustralia.	TransGrid Forced and Emergency Outage Report
	3-2008-F0064	Faulty AVR relay at Snowy Hydro M2 Power Station caused intertrip.	Intertrip received from Snowy Hydro.	9/07/08	8:47	9/07/08	9:05	M13	0.18	0.18	Exclusion 6.6 - 3rd Party Outage Intertrip received from EnergyAustralia.	TransGrid Forced and Emergency Outage Report
	3-2008-F0067	Storm in vicinity, Snowy Hydro Unit 3 in service as synchronous condenser at time of intertrip.	Intertrip received from Snowy Hydro.	14/07/08	6:31	14/07/08	7:09	U3	0.38	0.38	Exclusion 6.6 - 3rd Party Outage Intertrip received from Snowy Hydro.	TransGrid Forced and Emergency Outage Report
	3-2008-F0078	Intertrip received fom SHL.	Intertrip received from Snowy Hydro.	26/08/08	11:47	26/08/08	18:19	M5	6.32	6.32	Exclusion 6.6 - 3rd Party Outage Intertrip received from Snowy Hydro.	TransGrid Forced and Emergency Outage Report
	3-2008-F0080	Fault in VISY System. HV motor supply point failure. Received a trip from Visy. Earth/Fault relay operated.	Intertrip received from Visy.	20/06/08	18:54	20/06/08	21:20	Tx1 Gadara	2.26	2.26	Exclusion 6.6 - 3rd Party Outage Intertrip received from Visy.	TransGrid Forced and Emergency Outage Report
	2-2008-F0154	Power Station Staff advised the No.2 Station Transformer protection sent an intertrip on "inrush current" when they closed the 11kV CB on the Station Switchboard.	Operation of Delta Electricity Station Transformer No.2 Buchholz protection and intertrip to TransGrid's No.2 Tx protection.	13/10/08	22:53	14/10/08	1:46	Tx2 Wallerawang330	2.53	2.53	Exclusion 6.6 - 3rd Party Outage Intertrip received from Delta Electricity protection system.	TransGrid Forced and Emergency Outage Report
	2-2008-F0181	Kemps Creek SVC had control system fault.	Control system fault.	21/11/08	8:54	11/12/08	16:26	SVC1 Kemps Creek	487.32	168.00	Exclusion 6.3 - Outage Duration Longer Than 7 Days	TransGrid Forced and Emergency Outage Report
	2-2007-F0200	Transformer tripped due to water ingress to 16kV auxiliary transformer bushing chamber and remains out of service until replacement in early 2008.	Water ingress to 16kV auxiliary transformer bushing chamber.	8/11/07	12:04	18/10/08	12:15	Tx3 Sydney South	8280.10	0.00	Exclusion 6.3 - Outage Duration Longer Than 7 Days (note: outage commenced in 2007 and 7 days was counted in 2007 results)	TransGrid Forced and Emergency Outage Report
	1-2008-F0087	Aircraft contacted line severing 2 phases over gully.	Aircraft damage to line.	13/08/08	10:35	23/08/08	12:07	87	241.55	168.00	Exclusion 6.3 - Outage Duration Longer Than 7 Days	TransGrid Forced and Emergency Outage Report

**NOTES:**

This worksheet should include a list all events that are proposed for exclusion.

Each proposed exclusion should include a description of the event, a description of the impact and quantification of the impact on the network and performance. The descriptive elements should also include reasons for the exclusion request making reference to the "Exclusion Definitions" worksheet.

Each exclusion should be entered onto one row for each parameter. Where one exclusion event applies to more than one parameter, the relevant details of the event should be entered under each of the parameter headings.

The TNSP must provide details for all events requested for exclusion in this template. In the event that the TNSP wishes to provide further details of an exclusion, this should be provided with the TNSP's performance report. The source of information should be referenced in this template.

Green cells - input description impact

Orange cells - input reasons for the exclusion request

TRANSGRID - S1 - Transmission line availability

Performance Targets	Graph start	Collar	Target	Cap	Graph end
Transmission line availability	98.00%	99.00%	99.50%	99.70%	99.90%
Weighting	-0.20%	-0.20%	0.00%	0.20%	0.20%

Performance Formulae	Formulae					Conditions	S- Calc 1	S- Calc 2
Performance	=	-0.002000				Where: Availability < 99.00%	-0.002000	-0.002000
	=	0.400000	x	Availability	+	-0.398000 99.00% ≤ Availability ≤ 99.50%	-0.004894	-0.003855
	=	1.000000	x	Availability	+	-0.995000 99.50% ≤ Availability ≤ 99.70%	-0.012236	-0.009638
	=	0.002000				99.70% < Availability	0.002000	0.002000

Performance Outcomes		Performance (Without Exclusions)	Performance (Exclusions)
Transmission line availability	=	98.276396%	98.536189%
S-Factor	=	-0.200000%	-0.200000%

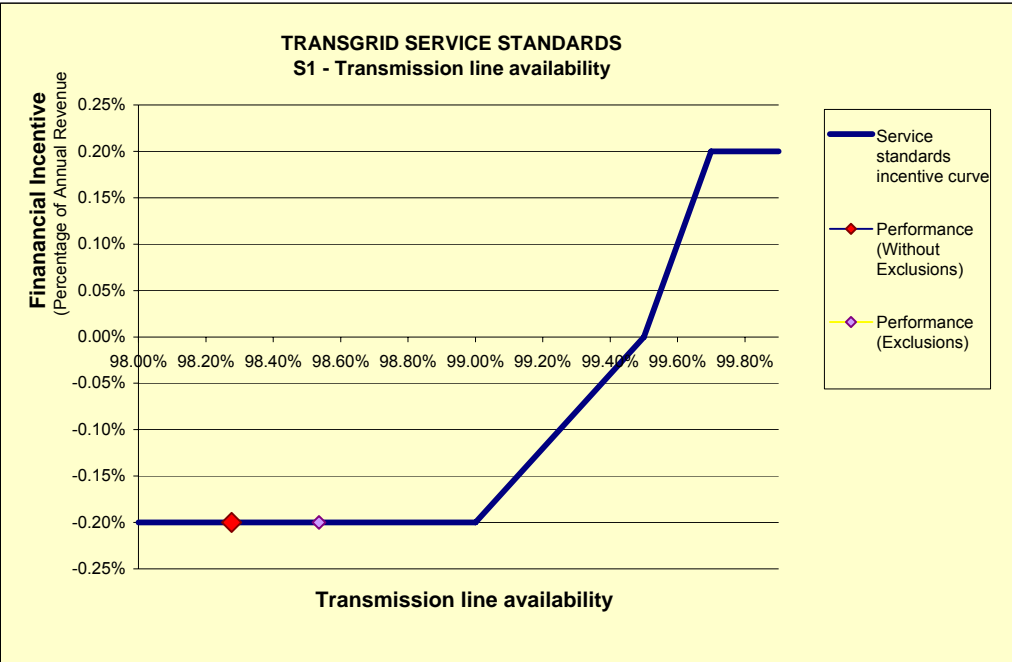
**NOTE: This sheet will automatically update based on data in input sheets.**

Blue cells show TNSP's performance targets and weightings.

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

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

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



TRANSGRID - S2 - Tranformer availability

Performance Targets	Graph start	Collar	Target	Cap	Graph end
Transformer availability	98.00%	98.20%	99.00%	99.50%	100.00%
Weighting	-0.15%	-0.15%	0.00%	0.15%	0.15%

Performance Formulae	Formulae					Conditions	S- Calc 1	S- Calc 2
Performance	=	-0.001500				Where: Availability < 98.20%	-0.001500	-0.001500
	=	0.187500	x	Availability	+ -0.185625	98.20% ≤ Availability ≤ 99.00%	-0.001138	-0.000881
	=	0.300000	x	Availability	+ -0.297000	99.00% ≤ Availability ≤ 99.50%	-0.001821	-0.001410
	=	0.001500				99.50% < Availability	0.001500	0.001500

Performance Outcomes		Performance (Without Exclusions)	Performance (Exclusions)
Transformer availability	=	98.392889%	98.530035%
S-Factor	=	-0.113833%	-0.088119%

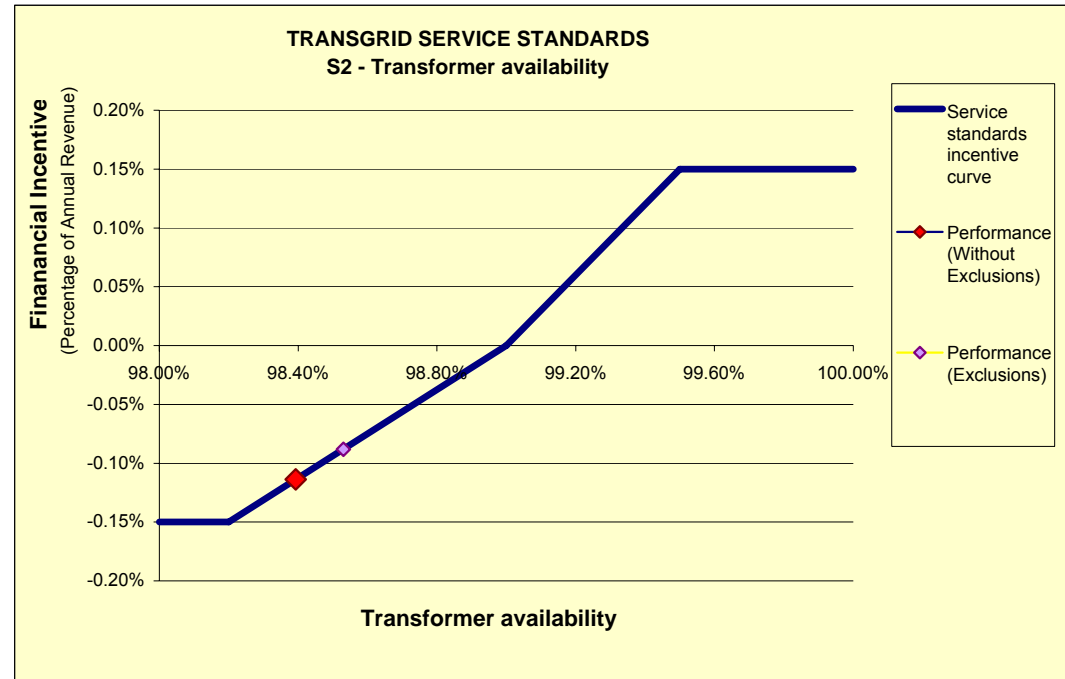
**NOTE: This sheet will automatically update based on data in input sheets.**

Blue cells show TNSP's performance targets and weightings.

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

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

Orange cells show 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	96.50%	97.00%	98.60%	99.30%	100.00%
Weighting	-0.10%	-0.10%	0.00%	0.10%	0.10%

Performance Formulae	Formulae				Conditions	S- Calc 1	S- Calc 2
Performance	=	-0.001000			Where: Availability < 97.00%	-0.001000	-0.001000
	=	0.062500	x	Availability +	97.00% ≤ Availability ≤ 98.60%	0.000255	0.000255
	=	0.142857	x	Availability +	98.60% ≤ Availability ≤ 99.30%	0.000584	0.000584
	=	0.001000			99.30% < Availability	0.001000	0.001000

Performance Outcomes		Performance (Without Exclusions)	Performance (Exclusions)
Reactive plant availability	=	99.008576%	99.008576%
S-Factor	=	0.058368%	0.058368%

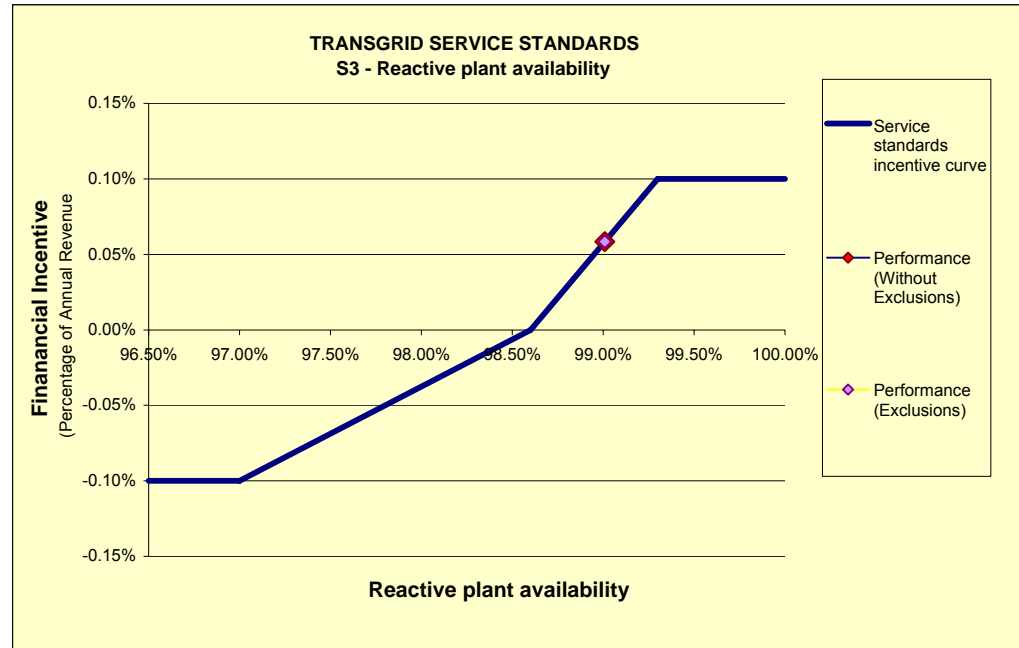
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TRANSGRID - S4 - Reliability (Events > 0.05 and <=0.4 system minutes)

Performance Targets	Graph start	Collar	Target	Cap	Graph end
Reliability (Events > 0.05 and <=0.4 system minutes)	10	8	5	3	0
Weighting	-0.25%	-0.25%	0.00%	0.25%	0.25%

Performance Formulae	Formulae					Conditions			S- Calc 1	S- Calc 2	
Performance	=	-0.002500				8	<	Reliability		-0.002500	-0.002500
	=	-0.000833	x	Reliability	+	0.004167	5	≤	Reliability ≤ 8	0.002500	0.002500
	=	-0.001250	x	Reliability	+	0.006250	3	≤	Reliability ≤ 5	0.003750	0.003750
	=	0.002500							Reliability < 3	0.002500	0.002500

Performance Outcomes		Performance (Without Exclusions)	Performance (Exclusions)
Reliability (Events > 0.05 and <=0.4 system minutes)	=	2	2
S-Factor	=	0.250000%	0.250000%

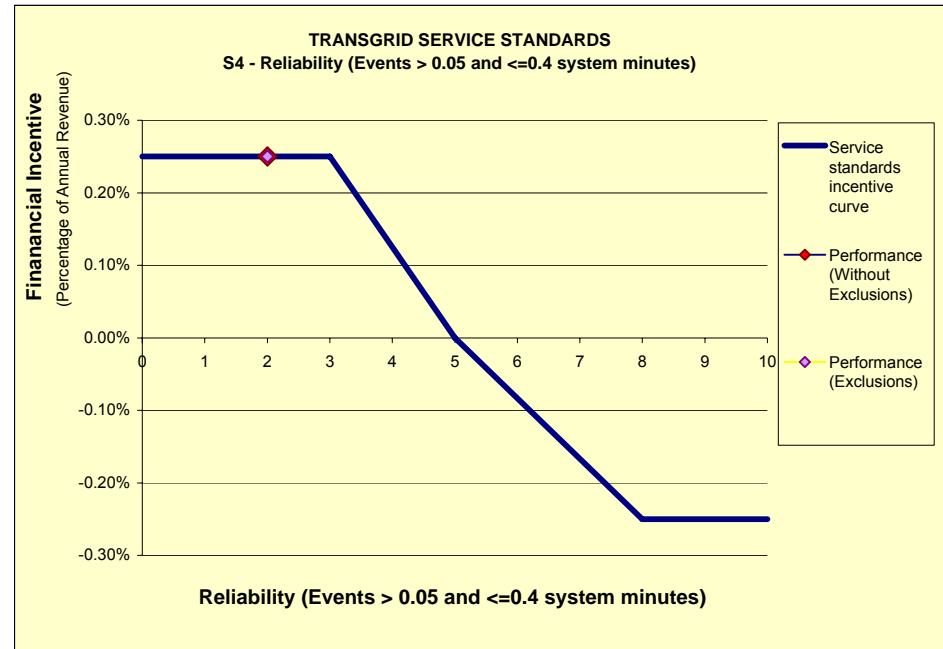
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TRANSGRID - S5 - Reliability (Events > 0.4 system minutes)

Performance Targets	Graph start	Collar	Target	Cap	Graph end
Reliability (Events > 0.4 system minutes)	3	2	1	0	0
Weighting	-0.20%	-0.20%	0.00%	0.20%	0.20%

Performance Formulae	Formulae				Conditions			S- Calc 1	S- Calc 2				
Performance	=	-0.002000			Where:	Reliability	>	2	-0.002000	-0.002000			
	=	-0.002000	x	Reliability	+	0.002000	1	≤	Reliability	≤	2	0.000000	0.002000
	=	-0.002000	x	Reliability	+	0.002000	0	≤	Reliability	≤	1	0.000000	0.002000
	=	0.002000							Reliability	<	0	0.002000	0.002000

Performance Outcomes		Performance (Without Exclusions)	Performance (Exclusions)
Reliability (Events > 0.4 system minutes)	=	1	0
S-Factor	=	0.000000%	0.200000%

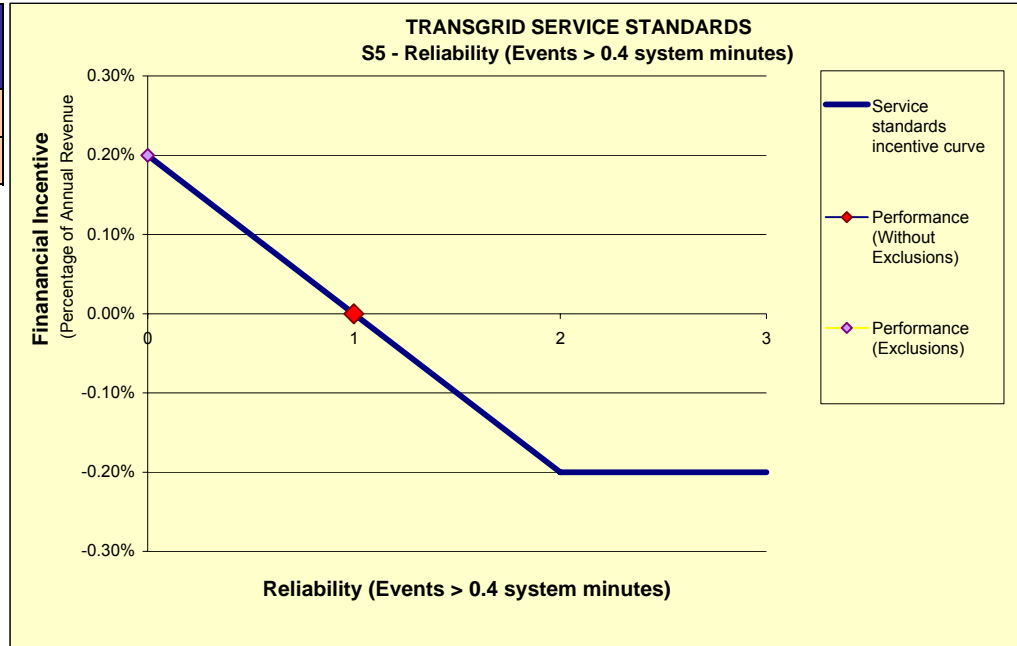
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Orange cells show TNSP's performance outcomes with events excluded from performance data



TRANSGRID - S6 - Average outage restoration time

Performance Targets	Graph start	Collar	Knee Bend	Target	Knee Bend	Cap	Graph end
Average outage restoration time	1900	1800	1600	1500	1400	800	700
Weighting	0.10%	-0.10%	-0.05%	0.00%	0.05%	0.10%	0.10%

Performance Formulae	Formulae					Conditions	S- Calc 1	S- Calc 2	
Performance	=	-0.001000				Where: Average time > 1800	-0.001000	-0.001000	
	=	-0.000003	x	Average Time	+	0.003500	1600 ≤ Average time ≤ 1800	0.001412	0.001327
	=	-0.000005	x	Average Time	+	0.007500	1400 ≤ Average time ≤ 1600	0.003324	0.003154
	=	-0.000001	x	Average Time	+	0.001667	800 ≤ Average time ≤ 1400	0.000971	0.000942
	=	0.001000					Average time < 800	0.001000	0.001000

Performance Outcomes		Performance (Without Exclusions)	Performance (Exclusions)
Average outage restoration time	=	835	869
S-Factor	=	0.097067%	0.094235%

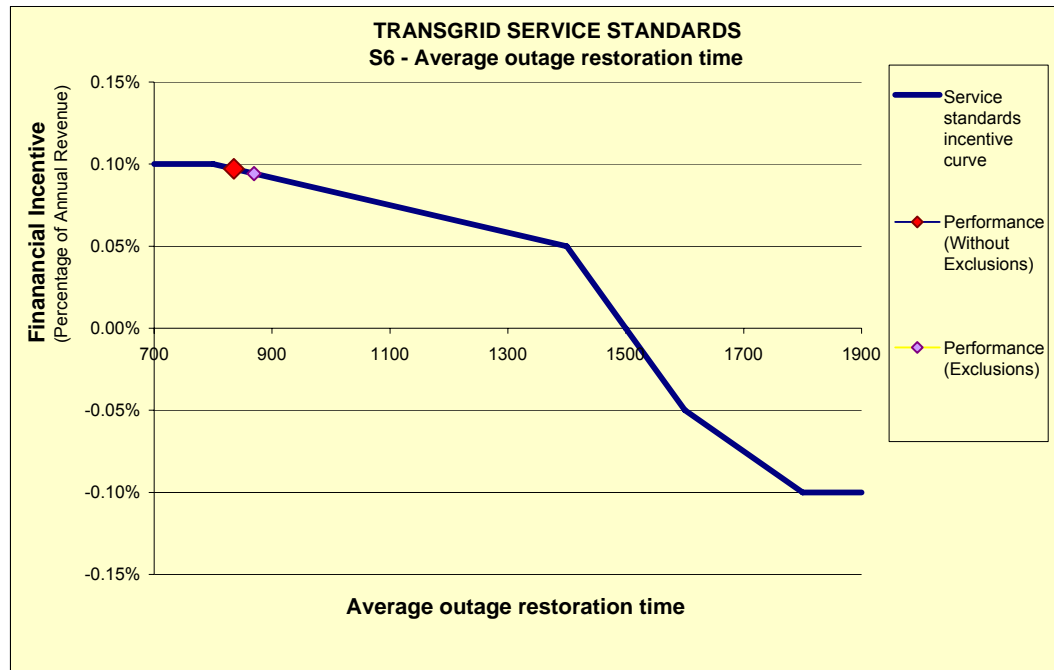
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Pink cells show TNSP performance outcomes without any events excluded from performance data

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



## TRANSGRID - Revenue calculation

<b>Revenue cap information</b>	
Base revenue	\$432,750,000
Base year	2004-05
X-factor	-2.93%
Revised X-factor	-4.99%
Decision CPI	2.49%

<b>Annual revenue adjusted for CPI</b>	<b>Mar-04</b>	<b>Mar-05</b>	<b>Mar-06</b>	<b>Mar-07</b>	<b>Mar-08</b>
CPI	144.1	147.5	151.9	155.6	162.2
	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
AR	\$432,750,000	\$455,939,364	\$483,297,797	\$519,774,022	\$568,857,859

<b>Calendar year revenue</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
Revenue	\$216,375,000	\$444,344,682	\$469,618,580	\$501,535,909	<b>\$544,315,940</b>

### NOTES:

Grey cells show calendar year revenue

Green cells are for formula

Note: As a result of the revocation and substitution of TransGrid's revenue cap, the revised X-factor of -4.99% applies for the last two years.

TRANSGRID- Performance outcomes

Revenue calendar year **\$544,315,940**

Performance parameter	S	Target	Performance without exclusions			Performance with exclusions			Impact of exclusions
			Performance	S-Factor	Final Incentive	Performance	S-Factor	Final Incentive	
Transmission line availability	S1	99.500000%	98.276396%	-0.200000%	-\$1,088,632	98.536189%	-0.200000%	-\$1,088,632	0.000000%
Transformer availability	S2	99.000000%	98.392889%	-0.113833%	-\$619,613	98.530035%	-0.088119%	-\$479,643	0.025715%
Reactive plant availability	S3	98.600000%	99.008576%	0.058368%	\$317,706	99.008576%	0.058368%	\$317,706	0.000000%
Reliability (Events > 0.05 and <=0.4 system minutes)	S4	5	2	0.250000%	\$1,360,790	2	0.250000%	\$1,360,790	0.000000%
Reliability (Events > 0.4 system minutes)	S5	1	1	0.000000%	\$0	0	0.200000%	\$1,088,632	0.200000%
Average outage restoration time	S6	1500	835	0.097067%	\$528,349	869	0.094235%	\$512,937	-0.002832%
<b>TOTALS</b>				0.091601%	\$498,601		0.314485%	\$1,711,790	0.222883%

**NOTE:**

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

Grey cell shows relevant calendar year revenue

Green cells show performance 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

Blue cells show the impact of exclusions on revenue

Aggregate outcome	
S-factor	0.314485%
Bonus (penalty)	\$1,711,790
Financial year to affect revenue	2009-10

TRANSGRID - Defined exclusions

Parameter 1- Transmission Circuit Availability		
Defined exclusions	Further description of exclusion	Reference
1.1 Unregulated transmission assets		Service standards guidelines p.4
1.2 3rd party outage	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 (TNSP to provide list)	Service standards guidelines p.4
1.3 Force majeure		Service standards guidelines p.4
1.4 Transient interruptions less than one (1) minute		Historical exclusion applied by TransGrid
1.5 Switching to control voltages and fault levels	Switching to control voltages and fault levels within required limits, both as directed by NEMMCO and where NEMMCO does not have direct oversight of the network (in both cases only where the element is available for immediate energisation if required)	Historical exclusion applied by TransGrid
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).	Historical exclusion applied by TransGrid
Parameter 2- Transformer Availability		
Defined exclusions	Further description of exclusion	Reference
2.1 Unregulated transmission assets		Service standards guidelines p.4
2.2 3rd party outage	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 (TNSP to provide list)	Service standards guidelines p.4
2.3 Force majeure		Service standards guidelines p.4
2.4 Transient interruptions less than one (1) minute		Historical exclusion applied by TransGrid
2.5 Auxiliary transformers		Historical exclusion applied by TransGrid
2.6 Static Var Compensator transformers	Static Var Compensator Transformers (which are counted as part of the SVC)	Historical exclusion applied by TransGrid
2.7 Switching to control voltages and fault levels	Switching to control voltages and fault levels within required limits, both as directed by NEMMCO and where NEMMCO does not have direct oversight of the network (in both cases only where the element is available for immediate energisation if required)	Historical exclusion applied by TransGrid
2.8 The opening of only one or both sides of a transformer for operational purposes	The opening of only one or both sides of a transformer for operational purposes, such as to control losses, fault levels, incompatibility of tap charges etc but where the transformer remains available to carry power on immediate manual or automatic return to service.	Historical exclusion applied by TransGrid
2.9 Transformer not switched in but available for service	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.	Historical exclusion applied by TransGrid
Parameter 3- Reactive Plant Availability		
Defined exclusions	Further description of exclusion	Reference
3.1 Unregulated transmission assets		Service standards guidelines p.4
3.2 3rd party outage	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 (TNSP to provide list)	Service standards guidelines p.4
3.3 Force majeure		Service standards guidelines p.4
3.4 Transient interruptions less than one (1) minute		Historical exclusion applied by TransGrid
3.5 Capacitor banks and reactors operating less than 66 kV		Historical exclusion applied by TransGrid
3.6 Reactive plant switched out by System Operations	Reactive plant switched out by System Operations, or left out after repairs that make it available for service for operational purposes	Historical exclusion applied by TransGrid
Parameter 4- Events > 0.05 system mins (No.)		
Defined exclusions	Further description of exclusion	Reference
4.1 Unregulated transmission assets		Service standards guidelines p.5
4.2 3rd party outage	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 (TNSP to provide list)	Service standards guidelines p.5
4.3 Planned outages		Service standards guidelines p.5
4.4 Force majeure		Service standards guidelines p.6
4.5 Transient interruptions less than one (1) minute		Historical exclusion applied by TransGrid
4.6 Where TransGrid protection operates correctly due to a fault on a customer's or a third party system		Historical exclusion applied by TransGrid
4.7 Pumping station supply interruption	Pumping station supply interruptions (such as Barnard River, Burrawang, Bendeela, Kangaroo Valley and Jindabyne). These interruptions were excluded from historical data used for target setting as there being no effective loss of supply due to their ability to obtain the pumping load at a later time after restoration of supply	Historical exclusion applied by TransGrid
4.8 Outage caused by customer's own control system during a transient voltage fluctuation	Where a customer's own control/protection system trips their plant during a transient voltage fluctuation or other quality of supply event, whether caused by TransGrid or otherwise	Historical exclusion applied by TransGrid
Parameter 5 - Events > 0.40 system mins (No.)		
Defined exclusions	Further description of exclusion	Reference
5.1 Unregulated transmission assets		Service standards guidelines p.5
5.2 3rd party outage	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 (TNSP to provide list)	Service standards guidelines p.5
5.3 Planned outages		Service standards guidelines p.5
5.4 Force majeure		Service standards guidelines p.5
5.5 Transient interruptions less than one (1) minute		Historical exclusion applied by TransGrid
5.6 Where TransGrid protection operates correctly due to a fault on a customer's or a third party system		Historical exclusion applied by TransGrid
5.7 Pumping station supply interruption	Pumping station supply interruptions (such as Barnard River, Burrawang, Bendeela, Kangaroo Valley and Jindabyne). These interruptions were excluded from historical data used for target setting as there being no effective loss of supply due to their ability to obtain the pumping load at a later time after restoration of supply	Historical exclusion applied by TransGrid
5.8 Outage caused by customer's own control system during a transient voltage fluctuation	Where a customer's own control/protection system trips their plant during a transient voltage fluctuation or other quality of supply event, whether caused by TransGrid or otherwise	Historical exclusion applied by TransGrid
Parameter 6 - Average Outage Restoration Time		
Defined exclusions	Further description of exclusion	Reference
6.1 Transient interruptions less than one (1) minute		Service standards guidelines p.6
6.2 Planned outages		Service standards guidelines p.6
6.3 Outage duration longer than 7 days	The portion of outage duration longer than 7 days (168 hours.) That is, each individual outage is capped at 7 days.	TransGrid revenue cap p.173
6.4 Force majeure		Service standards guidelines p.6
6.5 Unregulated transmission assets		Historical exclusion applied by TransGrid
6.6 3rd party outage	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 NEMMCO direction	Historical exclusion applied by TransGrid
6.7 Outages for capacitor banks and reactors operating at <66kV		Historical exclusion applied by TransGrid