

Instructions

This template must be used by **TransGrid** to report service performance information for **2H 2015** (1 Jul - 31 Dec 2015)

Inputs

- Blue, yellow and green worksheets are for inputs, including performance and exclusion information. The TNSP only needs to enter data on these worksheets.
 - To add more rows in the Inputs-exclusions tabs please insert rows after row 4.
- Cells where TNSP input is required are shaded orange:
- Cells where the input is sourced from the revenue proposal are shaded green:

TNSP input required
revenue proposal

Calculations

- Purple worksheets are the s-factor results based on the performance inputs entered by the TNSP. These are automatically calculated.
- cells where a calculation occurs are shaded grey with orange text:

calculation cell

Outcomes

- The red worksheet shows the total performance, s-factor and financial incentive results based on the TNSP's performance inputs.

	Collar	Target	Cap	Weighting
s1	22.26	17.86	12.38	0.2
s2	19.01	14.92	10.26	0.2
s3	22.73	15.54	9.54	0.1
s4	25.49	14.98	1.34	0.0
s5	24.15	20.25	15.56	0.0
s6	28.55	20.39	6.55	0.0

Loss of supply event frequency					
s7	>0.05 system minutes	3	2	1	0.15
s8	>0.25 system minutes	2	1	0	0.15

Average outage duration					
s9	Average outage duration	266.53	144.49	67.97	0.2

Proper operation of equipment					
s10	failure of protection system	N/A	N/A	N/A	0.0
s11	Material failure of SCADA	N/A	N/A	N/A	0.0
s12	Incorrect operational isolation of	N/A	N/A	N/A	0.0

TransGrid				
TNSP	December, 2012			
STPIS version	2014/15 - 2017/18			
Regulatory Determination	845,390,768			
Base Year Allowed Revenue	2014-15			
Base Year	1 Jul 2014			
Commencement of regulatory year	15.03%			
X factor				

	2014-15	2015-16	2016-17	2017-18
Annual revenue (\$2014-15)	845,390,768			
Annual revenue adjusted for CPI	845,390,768	730,649,994		
Calendar year revenue	2H 2015	2016	2017	1H 2018
Revenue	365,324,597			
Revenue(2015)	788,020,381			

Other inputs	
Assessment Period	2H 2015
Financial year to affect revenue:	2016/17
Date prepared:	19-Jan-15
Revision date:	

Unit	Performance		exclusions
	without exclusions	with exclusions	
average circuit outage rate (%)	12.3	10.8	0
average circuit outage rate (%)	12.3	12.0	0
average circuit outage rate (%)	12.5	12.5	0
average circuit outage rate (%)	20.9	20.0	0
average circuit outage rate (%)	35.9	35.1	0
average circuit outage rate (%)	24.7	24.7	0
number of events per annum	4	4	0
number of events per annum	3	3	0
number of LOS events	10	10	0
Aggregate LOS minutes	641	641	0
Average outage duration	64	64	#DIV/0!
number of events per annum	21		
number of events per annum	3		
number of events per annum	9		

	Dec-13	Dec-14	Dec-15	Dec-16
CPI 104.8		106.6		

Number of events pa - 2015			
without exclusions	with exclusions	exclusions	No. or defined circuits
27	24	3	210,333
24	24	0	183,75
13	13	0	137,25
51	48	3	210
57	57	0	184
37	37	0	137

Number of events pa - 2014			
without exclusions	with exclusions	exclusions	No. or defined circuits
24	21	3	205,33
21	20	1	183,5
21	21	0	134,17
36	35	1	205
75	72	3	184
30	30	0	134

Average (2014, 2015)			
without exclusions	with exclusions	exclusions	No. or defined circuits
26	23	3	208
23	22	1	184
17	17	0	134
44	42	2	208
66	65	2	184
34	34	0	134

9	9	0
582,12	582	0
65	65	#DIV/0!

10	10	0
641	641	0
64	64	#DIV/0!

Parameter	Average circuit outage rate	Event proposed for exclusion	Description of the event and its impact on the network and performance	Cause of the event	Count of circuit events	Circuits affected	Reasons for exclusion request	Further references
	Name of any average circuit outage rate 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	Identify the events that are to be excluded from the performance measure	Name of circuits affected	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. Please provide reference to any attachments submitted.
S								
S1	Line Outage - Fault	181253	330kV Transmission Line M1 fault outage due to line trip caused by a fault within Snowy Hydro's low voltage system cabling.	Fault on Snowy Hydro's assets	1	M1 Murray - 330kV TL	Exclusion 1.2 Third party event	Excluded Outage 181253 - 330kV TL M1 - 08_01_2015.pdf
S1	Line Outage - Fault	188199	330kV Transmission Line 77 fault outage due to line trip caused by a trip signal from the Wallerawang Power Station.	Fault on Energy Australia's assets	1	77 Wallerawang - Ingleburn 330kV TL	Exclusion 1.2 Third party event	Excluded Outage 188199 - 330kV TL 77 - 04_05_2015.msg
S1	Line Outage - Fault	207305	132kV Transmission Line 97L fault outage due to line trip caused by Snowy Hydro's staff error	Snowy Hydro staff error	1	97L Guthega - Jindabyne Pumps 132kV TL	Exclusion 1.2 Third party event	Excluded Outage 207305 - 132kV TL 97L - 19_10_2015.pdf
S4	Line Outage - Forced	187695	330kV Transmission Line 14 forced outage due to short notice customer request from Endeavour Energy for the purpose of work being undertaken on their 11kV line beneath Line 14.	Request from Endeavour Energy	1	14 Kemps Creek - Sydney North 330kV TL	Exclusion 1.2 Third party event	Excluded Outage 187695 - 330kV TL 14 - 27_04_2015.pdf
S4	Line Outage - Forced	190372	330kV Transmission Line L1 forced outage due to short notice customer request from Snowy Hydro for the purpose of undertaking repairs on their duressca busbar.	Request from Snowy Hydro	1	L1 Lower Tumut - Tumut 3 330kV TL	Exclusion 1.2 Third party event	Excluded Outage 190372 - 330kV TL L1 - 29_05_2015.msg
S4	Line Outage - Forced	208137	132kV Transmission Line 96F forced outage due to short notice customer request from Essential Energy for the purpose of fault maintenance.	Request from Essential Energy	1	96F Tomago - Stroud 132kV TL	Exclusion 1.2 Third party event	Excluded Outage 208137 - 132kV TL 96F - 27_10_2015.msg

Parameter	LOS 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	Quantitative impact	Demand shed and time	Circuits affected	Maximum system demand	Reasons for exclusion request	Further references
	Name of any LOS event 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	dd/mm/yy	hh:mm:ss	dd/mm/yy	hh:mm:ss	Hours+Minutes unavailable (min)	The (MW) demand shed and the duration it was shed for.	Name of circuits or plant affected	The max system demand that occurred up until the time of the event	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. Please provide reference to any attachments submitted.
S									0:00					
S7									0:00					
S8									0:00					

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	Quantitative impact	Capped impact	Circuits affected	Reasons for exclusion request	Further references	
	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	dd/mm/yy	hh:mm:ss	dd/mm/yy	hh:mm:ss	Hours+Minutes unavailable (min) Parameter	Impact of exclusion event on AOD	Impact of capped exclusion event on AOD	Name of circuits or plant affected	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. Please provide reference to any attachments submitted.
								0:00		0:00			

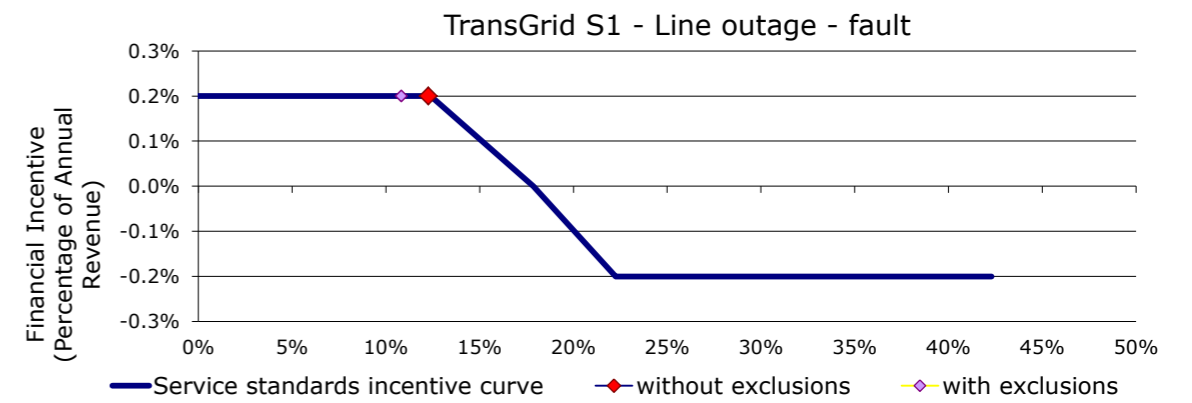
Parameter	Average circuit outage rate	Event proposed for exclusion	Description of the event and its impact on the network and performance	Cause of the event	Count of circuit events	Circuits affected	Reasons for exclusion request	Further references
	Name of any average circuit outage rate parameters applying 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	Identify the events that are to be excluded from the performance measure	Name of circuits affected	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. Please provide reference to any attachments submitted.
S								
S1	Line Outage - Fault	157148	132kV Transmission Line 963 fault outage due to line trip caused by a pole failure within Ausgrid's network	Fault on Ausgrid's assets	1	963 Tomago - Taree tee Hawks Nest 132kV TL	Exclusion 1.2 Third party event	Excluded Outage 157148 - 132kV TL 963 -01_02_2014.pdf & Excluded Outage 157148 - 132kV TL 963 -01_02_2014.png
S1	Line Outage - Fault	162216	132kV Transmission Line 97L fault outage due to line trip caused by trip signal received from Snowy Hydro's system. Snowy Hydro staff working on Jindabyne pumps at the time of trip.	Snowy Hydro staff error	1	97L Guthega - Jindabyne Pumps 132kV TL	Exclusion 1.2 Third party event	Excluded Outage 162216 - 132kV TL 97L - 15_04_2014.pdf
S1	Line Outage - Fault	170598	330kV Transmission Line M13 fault outage due to line trip caused by a trip signal from Snowy Hydro's system.	Fault on Snowy Hydro's assets	1	M13 Murray - Murray 2 330kV TL	Exclusion 1.2 Third party event	Excluded Outages 170598 - 330kV TL M13 - 25_08_2014.pdf & Excluded Outages 170598 - 330kV TL M13 - 25_08_2014.png
S2	Transformer Outage - Fault	171214	330/132kV Transformer No.2 at Vales Point Power Station fault outage due to intertrip protection alarm initiated from 6.6kV Station Services Board. Delta Electricity staff undertaking work on the 6.6kV Station Services Board at the time.	Delta Electricity staff error	1	Vales Point No.2 Transformer 330/132/11kV	Exclusion 1.2 Third party event	Excluded Outages 171214 - Vales Point 330kV TX No.2 - 01_09_2014.pdf & Excluded Outages 171214 - Vales Point 330kV TX No.2 - 01_09_2014.png & Excluded Outages 171214 - Vales Point 330kV TX No.2 - 01_09_2014.msg
S4	Line Outage - Forced	176118	Line Outage due to short notice customer request because of arcing along the line in the tee section towards Dorrigo	Fault on Essential Energy's assets	1	Coffs Harbour Tee Dorrigo 132kV TL	Exclusion 1.2 Third party event	Excluded Outage 176118 - 132kV TL 96C - 05_11_2014.png & Excluded Outage 176118 - 132kV TL 96C - 05_11_2014.pdf
S5	Transformer Outage - Forced	159921	Munyang Station forced outage due to short notice customer request because of repairs required in Essential Energy's network	Fault on Essential Energy's assets	1	Munyang No.2 Transformer 132/33/11kV	Exclusion 1.2 Third party event	Excluded Outages 159921 - MNY No.2 Tx - 16_03_2014.png
S5	Transformer Outage - Forced	168835	Munyang Station forced outage due to short notice customer request because of repairs required in Essential Energy's network	Fault on Essential Energy's assets	1	Munyang No.2 Transformer 132/33/11kV	Exclusion 1.2 Third party event	Excluded Outages 168835 - MNY No.2 Tx - 28_07_2014.pdf & Excluded Outages 168835 - MNY No.2 Tx - 28_07_2014.png
S5	Transformer Outage - Forced	168957	Munyang Station forced outage due to short notice customer request because of repairs required in Essential Energy's network	Fault on Essential Energy's assets	1	Munyang No.2 Transformer 132/33/11kV	Exclusion 1.2 Third party event	Excluded Outages 168957 - MNY No.2 Tx - 29_07_2014.png

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	Quantitative impact	Capped impact	Circuits affected	Reasons for exclusion request	Further references	
	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	dd/mm/yy	hh:mm:ss	dd/mm/yy	hh:mm:ss	Hours+Minutes unavailable (min)	Impact of exclusion event on AOD Parameter	Impact of capped exclusion event on AOD	Name of circuits or plant affected	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. Please provide reference to any attachments submitted.
								0:00		0			

TransGrid - s1 - line outage - fault

Performance Targets		Graph start	Collar	Target	Cap	Graph end	Performance Outcomes		without exclusions	with exclusions
line outage - fault	Weighting	42.3%	22.3%	17.9%	12.4%	-2.4%	line outage - fault	=	12%	11%
		-0.2000%	-0.2000%	0.0000%	0.2000%	0.2000%	S-Factor	=	0.20%	0.20%

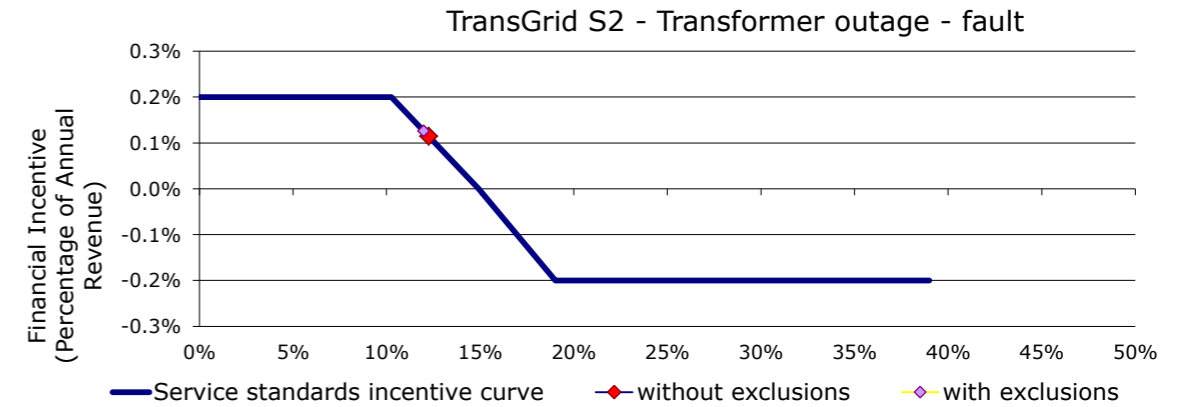
Performance Formulae		Formulae		Conditions		S- Calc 1	S- Calc 2
Performance	=	-0.0020		22.3% < line outage		-0.0020	-0.0020
	=	-0.0455	x	17.9% ≤ line outage	≤	0.0025	0.0032
	=	-0.0365	x	12.4% ≤ line outage	≤	0.0020	0.0026
	=	0.0020		line outage	<	0.0020	0.0020



TransGrid - s2 - transformer outage - fault

Performance Targets		Graph start	Collar	Target	Cap	Graph end	Performance Outcomes		without exclusions	with exclusions
transformer outage - fault	Weighting	39.00%	19.01%	14.92%	10.26%	-9.70%	transformer outage - fault	=	12%	12%
		-0.2000%	-0.2000%	0.0000%	0.2000%	0.2000%	S-Factor	=	0.11%	0.13%

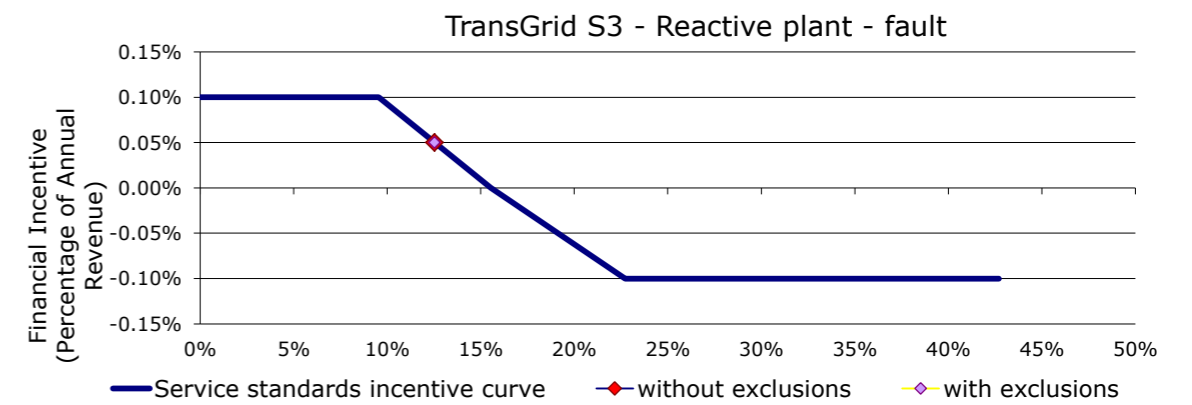
Performance Formulae		Formulae		Conditions		S- Calc 1	S- Calc 2
Performance	=	-0.0020		19.01% < transformers outage		-0.0020	-0.0020
	=	-0.0489	x	14.9% ≤ transformers outage	≤	0.0013	0.0014
	=	-0.0429	x	10.3% ≤ transformers outage	≤	0.0011	0.0013
	=	0.0020		transformers outage	<	0.0020	0.0020



TransGrid - s3 - reactive plant - fault

Performance Targets		Graph start	Collar	Target	Cap	Graph end	Performance Outcomes		without exclusions	with exclusions
reactive plant - fault	Weighting	42.70%	22.73%	15.54%	9.54%	0.00%	reactive plant - fault	=	13%	13%
		-0.10%	-0.10%	0.00%	0.10%	0.10%	S-Factor	=	0.05%	0.05%

Performance Formulae		Formulae		Conditions		S- Calc 1	S- Calc 2
Performance	=	-0.0010		22.73% ≤ reactive plant outage		-0.0010	-0.0010
	=	-0.0139	x	15.5% ≤ reactive plant outage	≤	0.0004	0.0004
	=	-0.0167	x	9.5% ≤ reactive plant outage	≤	0.0005	0.0005
	=	0.0010		reactive plant outage	<	0.0010	0.0010



TransGrid - s4 - line outage - forced

Performance Targets		Graph start	Collar	Target	Cap	Graph end	Performance Outcomes		without exclusions	with exclusions
line outage - forced	Weighting	25.30%	25.49%	14.98%	1.34%	1.50%	line outage - forced	=	21%	20%
		0.00%	0.00%	0.00%	0.00%	0.00%	S-Factor	=	0.00%	0.00%

Performance Formulae		Formulae		Conditions		S- Calc 1	S- Calc 2
Performance	=	0.0000		25.49% ≤ line outage (force)		0.0000	0.0000
	=	0.0000	x	15.0% ≤ line outage (force)	≤	0.0000	0.0000
	=	0.0000	x	1.3% ≤ line outage (force)	≤	0.0000	0.0000
	=	0.0000		line outage (force)	<	0.0000	0.0000



TransGrid - s5 - transformer outage - forced

Performance Targets						Performance Outcomes		without	with
	Graph start	Collar	Target	Cap	Graph end			exclusions	exclusions
transformer outage - forced	24.00%	24.15%	20.25%	15.56%	15.80%			36%	35%
Weighting	0.00%	0.00%	0.00%	0.00%	0.00%			0.00%	0.00%

Performance Formulae						Conditions		S- Calc 1	S- Calc 2
	Formulae								
Performance	=	0.0000				24.15% ≤ transformers outage (force		0.0000	0.0000
	=	0.0000	x	transformers out	+ 0.0000	20.3% ≤ transformers outage (force ≤	24.2%	0.0000	0.0000
	=	0.0000	x	transformers out	+ 0.0000	15.6% ≤ transformers outage (force ≤	20.3%	0.0000	0.0000
	=	0.0000				transformers outage (force <	15.6%	0.0000	0.0000

TransGrid - s6 - reactive plant - forced

Performance Targets						Performance Outcomes		without	with
	Graph start	Collar	Target	Cap	Graph end			exclusions	exclusions
reactive plant - forced	28.40%	28.55%	20.39%	6.55%	6.80%			25%	25%
Weighting	0.00%	0.00%	0.00%	0.00%	0.00%			0.00%	0.00%

Performance Formulae						Conditions		S- Calc 1	S- Calc 2
	Formulae								
Performance	=	0.0000				28.55% ≤ reactive plant outage (force		0.0000	0.0000
	=	0.0000	x	reactive plant	+ 0.0000	20.4% ≤ reactive plant outage (for ≤	28.6%	0.0000	0.0000
	=	0.0000	x	reactive plant	+ 0.0000	6.6% ≤ reactive plant outage (for ≤	20.4%	0.0000	0.0000
	=	0.0000				reactive plant outage (for <	6.6%	0.0000	0.0000

TransGrid - s8 - Loss of supply event frequency: >0.25 system minutes

Performance Targets
>0.25 system minutes
Weighting

Graph start	Collar	Target	Cap	Graph end
4	2.0	1.0	0.0	0
-0.0015	-0.0015	0.0000	0.0015	0.0015

Performance Formulae

Performance

Formulae

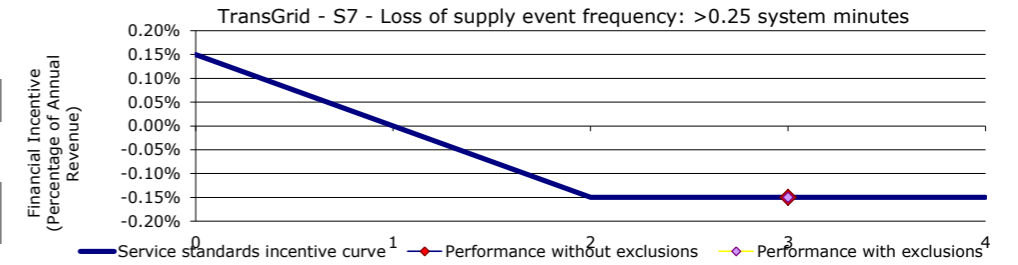
When:
2.0 <

Performance Outcomes
>0.25 system minutes
S-Factor

Conditions

No. of events = 1
No. of events = 0

	without exclusions	with exclusions
S- Calc 1	-0.0015	-0.0015
S- Calc 2	0.0000	0.0000
	0.0015	0.0015



TransGrid - s7 - Loss of supply event frequency: >0.05 system minutes

Performance Targets
>0.05 system minutes
Weighting

Graph start	Collar	Target	Cap	Graph end
8	3.0	2.0	1.0	0
-0.0015	-0.0015	0.0000	0.0015	0.0015

Performance Formulae

Performance

Formulae

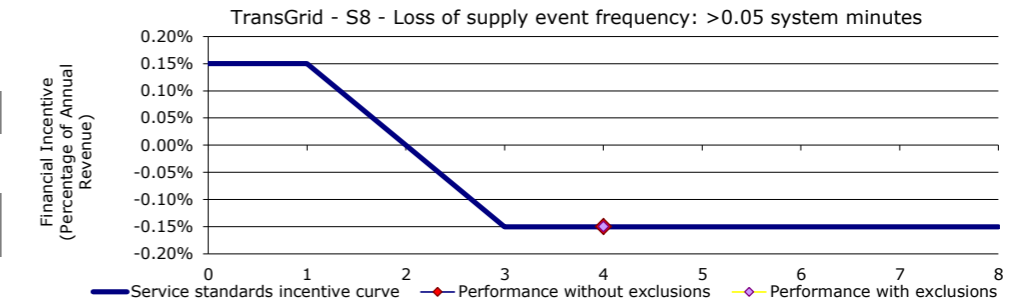
When:
4.0 <

Performance Outcomes
>0.05 system minutes
S-Factor

Conditions

No. of events = 3
No. of events = 2

	without exclusions	with exclusions
S- Calc 1	-0.0015	-0.0015
S- Calc 2	0.0000	0.0000
	0.0015	0.0015



TransGrid - s9 - Average outage duration

Performance Targets
Average outage duration
Weighting

Graph start	Collar	Target	Cap	Graph end
567	267	144	68	63
-0.00200	-0.00200	0.00000	0.00200	0.00200

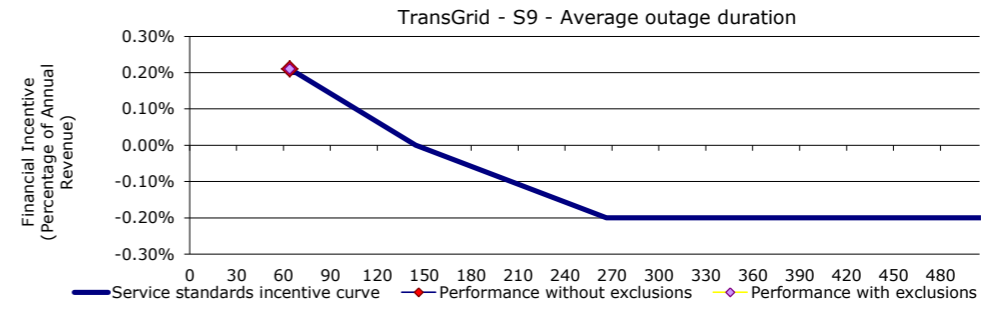
Performance Formulae

Performance	Formulae
=	-0.0020
=	0.0000 x No. of events + 0.0024
=	0.0000 x No. of events + 0.0038
=	0.0020

Performance Outcomes
Average outage duration
S-Factor

When:	Conditions
267	< No. of events
144.49	≤ No. of events
67.97	≤ No. of events
	= No. of events

	without exclusions	with exclusions
Average outage duration	64	64
S-Factor	0.21%	0.21%
S- Calc 1	-0.0020	-0.0020
S- Calc 2	0.0013	0.0013
	0.0021	0.0021
	0.0020	0.0020



TransGrid - Performance outcomes

Aggregate outcome

S-factor	0.286%
Financial Incentive	\$1,046,448
Financial year affected by financial incentive	2015-16

S	Performance parameter	Target	Performance without exclusions			Performance with exclusions			Impact of exclusions
			Performance	S-Factor	Final Incentive	Performance	S-Factor	Final Incentive	
s1	line outage - fault	17.86%	12.27%	0.20%	\$730,650	10.83%	0.20%	\$730,650	0.00%
s2	transformer outage - fault	14.92%	12.25%	0.11%	\$418,127	11.98%	0.13%	\$460,821	0.01%
s3	reactive plant - fault	15.54%	12.53%	0.05%	\$183,472	12.53%	0.05%	\$183,472	0.00%
s4	line outage - forced	14.98%	20.93%	0.00%	\$0	19.97%	0.00%	\$0	0.00%
s5	transformer outage - forced	20.25%	35.94%	0.00%	\$0	35.13%	0.00%	\$0	0.00%
s6	reactive plant - forced	20.39%	24.68%	0.00%	\$0	24.68%	0.00%	\$0	0.00%
s7	LOS >0.05 system minutes	2	4	-0.15%	-\$547,987	4	-0.15%	-\$547,987	0.00%
s8	LOS >0.25 system minutes	1	3	-0.15%	-\$547,987	3	-0.15%	-\$547,987	0.00%
s9	Average outage duration	144.49	64	0.21%	\$767,481	64	0.21%	\$767,481	0.00%
TOTALS				0.27%	\$1,003,755		0.29%	\$1,046,448	0.01%

Revenue 2H 2015: \$365,324,997