	Average circuit outage rate (%)	Collar	Target	Cap	Weighting	Unit	Performance without exclusions	Performance with exclusions		Number of events pa - 2016 without exclusions	with exclusions	exclusions	No. of defined circuits	Number of events pa - 2015 without exclusions	with exclusions	exclusions	No. of defined circuits	Average (2015, 2016) without exclusions	with exclusions	exclusions	No. of defined circuits
s1	line outage - fault	42.0	25.9	14.8	0.2	average circuit outage rate (%)	20.7	16.9		26	18	8	121	24	23	1	121	25	21	5	121
s2	transformer outage - fault	31.7	16.1	7.4	0.2	average circuit outage rate (%)	13.5	12.4		15	13	2	125	19	18	1	126	17	16	2	126
s3	reactive plant - fault	46.4	35.1	2.5	0.1	average circuit outage rate (%)	20.9	18.7		13	13	0	69	16	13	3	70	15	13	2	70
s4	line outage - forced	17.7	14.9	12.3	0.0	average circuit outage rate (%)	16.9	16.5		21	21	0	121	20	19	1	121	21	20	1	121
s5	transformer outage - forced	17.6	12.0	6.2	0.0	average circuit outage rate (%)	12.4	12.0		16	16	0	125	15	14	1	126	16	15	1	126
s6	reactive plant - forced	32.7	15.4	6.2	0.0	average circuit outage rate (%)	32.4	32.4		21	21	0	69	24	24	0	70	23	23	0	70

	Loss of supply event frequency	Collar	Target	Cap	Weighting	Unit	without exclusions	with exclusions	exclusions
s7	>0.05 system minutes	6.0	2.0	0.0	0.150	number of events per annum	3	3	0
s8	>0.3 system minutes	2.0	1.0	0.0	0.150	number of events per annum	1	1	0

	Average outage duration	Collar	Target	Cap	Weighting	Unit	without exclusions	with exclusions	exclusions	2016 without	with	exclusions	2015 without	with	exclusions	Avg without	with	exclusions
s9	Average outage duration	293.5	98.0	5.0	0.2	number of LOS events	5	4	1	6	6	0	3	2	1	5	4	1
						Aggregate LOS minutes	268	217	51	239	239		296	195	101	268	217	51
						Average outage duration	69	69	#DIV/0!	40	40	#DIV/0!	99	98	101	69	69	#DIV/0!

	Proper operation of equipment	Collar	Target	Cap	Weighting	Unit	without exclusions
s10	failure of protection system	N/A	N/A	N/A	0.0	number of events per annum	23
s11	Material failure of SCADA	2.0	1.0	0.0	0.0	number of events per annum	2
s12	Incorrect operational isolation of	N/A	N/A	N/A	0.0	number of events per annum	6

TNSP	AusNet
STPIS version	December, 2012
Regulatory Determination	2014/15 - 2016/17
Base Year Allowed Revenue	538,100,000
Base Year	2014-15
Commencement of regulatory year	1 Apr 2014
X factor	3.24%

	2014–15	2015–16	2016–17			Sep-13	Sep-14	Sep-15	Sep-16
Annual revenue ($2014-15)	538,100,000				CPI	104.0	106.4	108	
Annual revenue adjusted for CPI	538,100,000	532,695,310	523,201,033						

Calendar year revene	Q2-Q4 2014	2015	2016	2017
Revenue	403,575,000	534,046,482	525,574,603	

Other inputs

Assessment Period	2016
Financial year to affect revenue:	2017/18
Date prepared:	31-Jan-17
Revision date:	1-Feb-17

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
S	Name of any average circuit outage rate parameters applying to AusNet services	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.
S1	Lines outage rate - Fault (1S1)	SIR 101544924: JLTS 220kV No2 Bus tripped via protection operation on 22/03/2016.	For description and details of this event, please see the attached SIR document: 1S1 SIR 101544924: JLTS 220kV No2 Bus tripped via protection operation on 22/03/2016.	A faulty Blue phase Surge Diverter associated with the JLGS A2 Unit transformer. This asset is owned by a Third party.	1	JLTS-HWPS No2 220kV line	**Exclusion 1.2 Third party Event.** The line outage (for the JLTS-HWPS No2 220kV Line) which is requested for exclusion is found to be due to a failed asset owned by a third party.	Please see the attached two further documents: 1S1 Trip of Jeeralang No2 220kV Busbar.pdf which is a AEMO published report and a copy of legible alarm list: 1S1 JLTS Bus trip on 22 Mar 16 Station Alarm list (legible).pdf
S1	Lines outage rate - Fault (2S1)	SIR101569954: JLTS 220kV No1 Bus tripped on 07/04/2016 when inter trip signal was received from JLGS B.	For description and details of this event, please see the attached SIR document: 2S1 SIR 101569954 JLTS No1 220kV Bus trip on 07 Apr 16 (sent to AEMO)	JLGS B2 Gen CB failed to open. JLGS B2 Generator CB is owned by a Third party.	2	JLTS-HWPS No1 220kV line and JLTS-MWTS No2 220kV line	**Exclusion 1.2 Third party Event.** The line outages (for the JLTS-HWPS No1 220kV Line and JLTS-MWTS No2 220kV line) which are requested for exclusion are found to be due to a failed asset owned by a third party.	Please see the attached further document: 2S1 JLTS No1 220kV Bus trip on 07 Apr 16 SIR (legible)
S1	Lines outage rate - Fault (3S1)	SIR 101572289: JLTS 220kV No1 Bus tripped on 10/04/2016 when inter trip signal was received from JLGS B.	For description and details of this event, please see the attached document: 3S1 SIR 101572289 JLTS 220kV No1 Bus tripped on 10042016 when inter trip signal was received from JLGS B	JLGS B2 Gen CB failed to open. JLGS B2 Generator CB is owned by a Third party.	1	JLTS-HWPS No1 220kV line	**Exclusion 1.2 Third party Event.** The line outage (for the JLTS-HWPS No1 220kV Line) which is requested for exclusion is found to be due to a failed asset owned by a third party.	Please see the attached further document: 3S1 JLTS No1 220kV Bus trip on 10 Apr 16 SIR (legible)
S1	Lines outage rate - Fault (4S1)	SIR 101626638 HWPS-JLTS No1 220kV line tripped via "remote trip" signal on 01/05/2016	For description and details of this event, please see the attached document 4S1 SIR 101626638 HWPS-JLTS No1 220kV line tripped via "remote trip" signal on 01/05/2016	A bushing failure on Aux Trans B at HWPS. This asset is owned by a third party	1	HWPS-JLTS No1 Line	**Exclusion 1.2 Third party Event.** The line outage (for the HWPS-JLTS No1 220kV Line) which is requested for exclusion is found to be due to a failed asset owned by a third party.	
S1	Lines outage rate - Fault (5S1)	SIR 101666995 MBTS: BOPS/MKPS 220kV Line tripped via remote trip on 15/05/2016	For description and details of this event, please see the attached document 5S1 SIR 101666995 MBTS-BOPS/MKPS 220kV Line tripped via remote trip on 15052016 AEMO report	A remote trip was sent out from the MKPS end resulting in receiving remote trip signal and tripping the MBTS-BOPS/MKPS 220kV line.	1	MBTS-BOPS/MKPS 220kV Line	**Exclusion 1.2 Third party Event.** The line outage (for the MBTS-BOPS/MKPS 220kV Line) which is requested for exclusion is found to be due to a remote trip received from a third party.	
S1	Lines outage rate - Fault (6S1)	SIR 000101736959 JLTS: No2 220kV Bus Tripped on 30 05 16 when inter trip signal was received	For description and details of this event, please see the attached document 6S1 SIR 101736959 JLTS No2 220kV Bus Tripped when inter trip signal was received on 30 05 16 AEMO report	A fault on the JLGS Unit A1 Transformer. This asset is owned by a Third party.	1	JLTS-HWPS No2 220kV line	**Exclusion 1.2 Third party Event.** The line outage (for the JLTS-HWPS No2 220kV Line) which is requested for exclusion is found to be due to a failed asset owned by a third party.	
S1	Lines outage rate - Fault (7S1)	SIR 000101815372 TBTS JLA No1 220kV Line tripped when remote trip was received on 28 06 2016	For description and details of this event, please see the attachment: 7S1 SIR 000101815372 TBTS JLA No1 220kV Line tripped when remote trip was received on 28 06 2016	The trip event was caused from the JLA end when a SEL relay at their end initiated a remote trip. A remote trip was received from a third party.	1	TBTS-JLA No1 220 kV line	**Exclusion 1.2 Third party Event.** The line outage (for the TBTS-JLA No1 220 kV line) which is requested for exclusion is found to be due to a remote trip received from a third party.	
S1								
S2	Transformers outage rate - Fault (1S2)	SIR101569954: JLTS 220kV No1 Bus tripped on 07/04/2016 when inter trip signal was received from JLGS B.	For description and details of this event, please see the attached SIR document: 2S1 SIR 101569954 JLTS No1 220kV Bus trip on 07 Apr 16 (sent to AEMO)	JLGS B2 Gen CB failed to open. JLGS B2 Generator CB is owned by a Third party.	1	B2 Transformer at MWTS	**Exclusion 1.2 Third party Event.** The transformer outage (for the MWTS No2 220/66kV transformer) which is requested for exclusion is found to be due to a failed asset owned by a third party.	Please see the attached further document: 2S1 JLTS No1 220kV Bus trip on 07 Apr 16 SIR (legible)

| S2	Transformers outage rate - Fault (2S2)	SIR 000101623781 ROTS 500kV: A1 Trans Tripped via protection on 28/04/2016	For description and details of this event, please see the attached document: 2S2 AEMO report Power System Operations Incident Report	The ROTS A1 transformer which is an unregulated asset owned by a third party tripped due to incorrect default protection setting		1	A1 Transformer at ROTS	**Exclusion 1.1 Asset not providing prescribed transmission service.** The transformer outage (for the ROTS A1 500/220kV transformer) which is requested for exclusion is found to be not providing prescibed transmission service. This asset is owned by a third party.	
S3									
S4									
S5									
S6									

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	Hours+Minutes unavailable (min)	Quantitative impact	Demand shed and time	Circuits affected	Maximum system demand	Reasons for exclusion request	Further references
S	Name of any LOS event parameters applying to AusNet Services	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		Impact of exclusion event on LOS parameter	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	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.	A TNSP may provide further details of an exclusion event. Please provide reference to any attachments submitted.
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	Hours+Minutes unavailable (min)	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		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.
S9								0:00		0:00			

AusNet - s1 - line outage - fault

Performance Targets	Graph start	Collar	Target	Cap	Graph end	Performance Outcomes			without exclusions	with exclusions
line outage - fault	62.0%	42.0%	25.9%	14.8%	0.0%	line outage - fault	=		21%	17%
Weighting	-0.2000%	-0.2000%	0.0000%	0.2000%	0.2000%	S-Factor	=		0.09%	0.16%

Performance Formulae			Formulae			Conditions			S- Calc 1	S- Calc 2
Performance	=	-0.0020				42.0% < line outage			-0.0020	-0.0020
	=	-0.0124	x	line outage	+	0.0032	25.9% ≤ line outage	≤	42.0%	0.0007	0.0011
	=	-0.0180	x	line outage	+	0.0047	14.8% ≤ line outage	≤	25.9%	0.0009	0.0016
	=	0.0020				line outage	<	14.8%	0.0020	0.0020

AusNet S1 - Line outage - fault
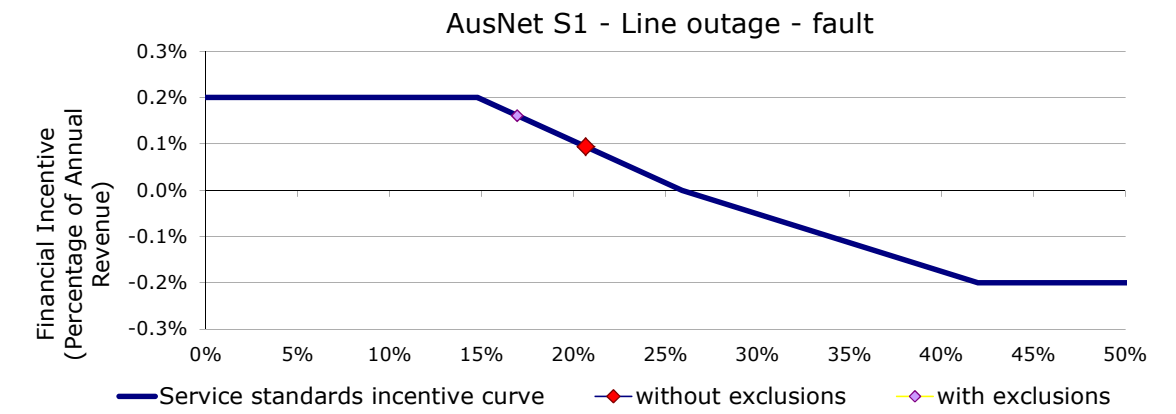
AusNet - s2 - transformer outage - fault

Performance Targets	Graph start	Collar	Target	Cap	Graph end	Performance Outcomes			without exclusions	with exclusions
transformer outage - fault	51.70%	31.70%	16.10%	7.40%	-12.60%	transformer outage - fault	=		14%	12%
Weighting	-0.2000%	-0.2000%	0.0000%	0.2000%	0.2000%	S-Factor	=		0.06%	0.09%

Performance Formulae			Formulae			Conditions			S- Calc 1	S- Calc 2
Performance	=	-0.0020				31.70% < transformers outage			-0.0020	-0.0020
	=	-0.0128	x	transformers ou	+	0.0021	16.1% ≤ transformers outage	≤	31.7%	0.0003	0.0005
	=	-0.0230	x	transformers ou	+	0.0037	7.4% ≤ transformers outage	≤	16.1%	0.0006	0.0009
	=	0.0020				transformers outage	<	7.4%	0.0020	0.0020

AusNet S2 - Transformer outage - fault
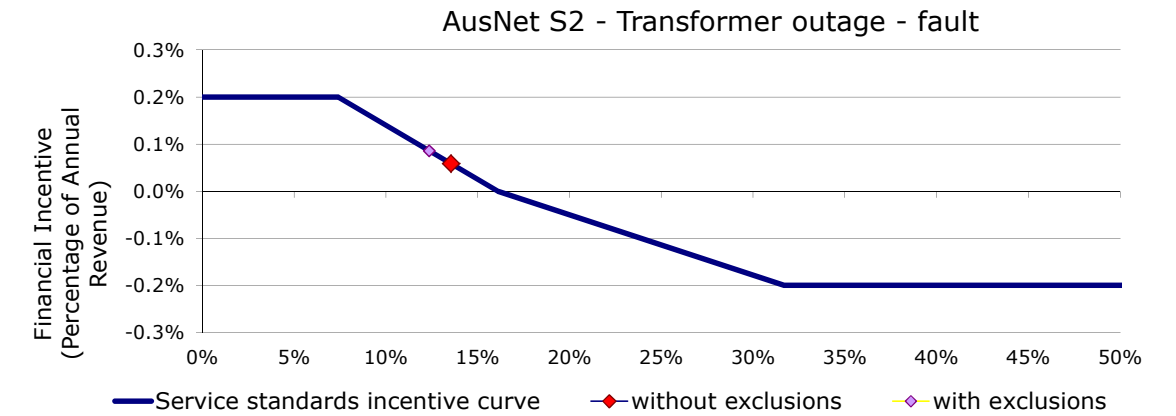
AusNet - s3 - reactive plant - fault

Performance Targets	Graph start	Collar	Target	Cap	Graph end	Performance Outcomes			without exclusions	with exclusions
reactive plant - fault	66.40%	46.40%	35.10%	2.50%	0.00%	reactive plant - fault	=		21%	19%
Weighting	-0.10%	-0.10%	0.00%	0.10%	0.10%	S-Factor	=		0.04%	0.05%

Performance Formulae			Formulae			Conditions			S- Calc 1	S- Calc 2
Performance	=	-0.0010				46.40% ≤ reactive plant outage			-0.0010	-0.0010
	=	-0.0088	x	reactive plant	+	0.0031	35.1% ≤ reactive plant outage	≤	46.4%	0.0013	0.0015
	=	-0.0031	x	reactive plant	+	0.0011	2.5% ≤ reactive plant outage	≤	35.1%	0.0004	0.0005
	=	0.0010				reactive plant outage	<	2.5%	0.0010	0.0010

AusNet S3 - Reactive plant - fault
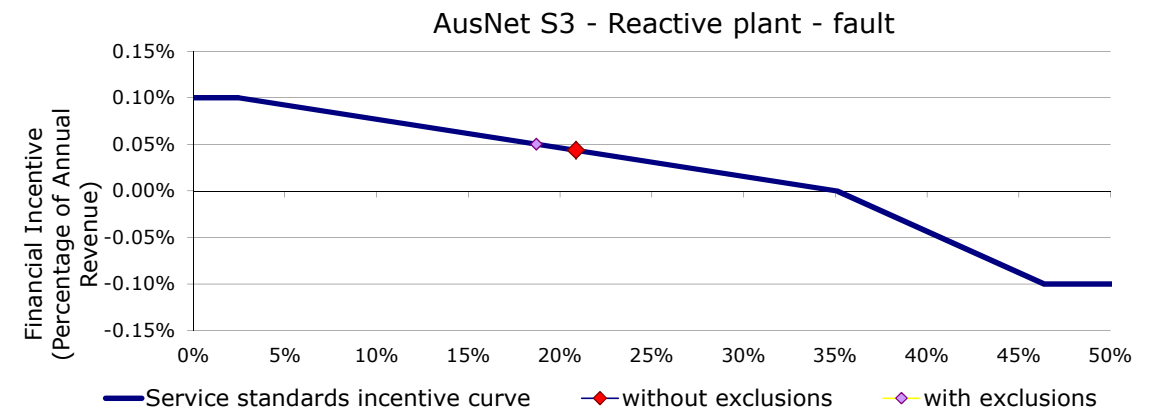
AusNet - s4 - line outage - forced

Performance Targets	Graph start	Collar	Target	Cap	Graph end	Performance Outcomes			without exclusions	with exclusions
line outage - forced	17.50%	17.70%	14.90%	12.30%	12.50%	line outage - forced	=		17%	17%
Weighting	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				17.70% ≤ line outage (force)			0.0000	0.0000
	=	0.0000	x	line outage (fo	+	0.0000	14.9% ≤ line outage (force)	≤	17.7%	0.0000	0.0000
	=	0.0000	x	line outage (fo	+	0.0000	12.3% ≤ line outage (force)	≤	14.9%	0.0000	0.0000
	=	0.0000				line outage (force)	<	12.3%	0.0000	0.0000

AusNet - s5 - transformer outage - forced

Performance Targets	Graph start	Collar	Target	Cap	Graph end	Performance Outcomes		without exclusions	with exclusions
transformer outage - force	17.40%	17.60%	12.00%	6.20%	6.40%	transformer outage - forced	=	**12%**	**12%**
Weighting	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				17.60% ≤ transformers outage (force)		**0.0000**	**0.0000**
	=	0.0000	x	transformers ou	+	0.0000	12.0% ≤ transformers outage (force ≤ 17.6%	**0.0000**	**0.0000**
	=	0.0000	x	transformers ou	+	0.0000	6.2% ≤ transformers outage (force ≤ 12.0%	**0.0000**	**0.0000**
	=	0.0000				transformers outage (force < 6.2%	**0.0000**	**0.0000**

AusNet - s6 - reactive plant - forced

Performance Targets	Graph start	Collar	Target	Cap	Graph end	Performance Outcomes		without exclusions	with exclusions
reactive plant - forced	32.50%	32.70%	15.40%	6.20%	6.40%	reactive plant - forced	=	**32%**	**32%**
Weighting	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				32.70% ≤ reactive plant outage (force)		**0.0000**	**0.0000**
	=	0.0000	x	reactive plant	+	0.0000	15.4% ≤ reactive plant outage (for ≤ 32.7%	**0.0000**	**0.0000**
	=	0.0000	x	reactive plant	+	0.0000	6.2% ≤ reactive plant outage (for ≤ 15.4%	**0.0000**	**0.0000**
	=	0.0000				reactive plant outage (for < 6.2%	**0.0000**	**0.0000**

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

Performance Targets	Graph start	Collar	Target	Cap	Graph end		Performance Outcomes		without exclusions	with exclusions
>0.05 system minutes	8	6.0	2.0	0.0	0		>0.05 system minutes	=	3	3
Weighting	-0.00150	-0.00150	0.00000	0.00150	0.00150		S-Factor	=	-0.04%	-0.04%

Performance Formulae		Formulae			Conditions			S- Calc 1	S- Calc 2
			When:						
Performance			6.0	<	No. of events			-0.0015	-0.0015
					No. of events	=	5	-0.0011	-0.0011
					No. of events	=	4	-0.0008	-0.0008
					No. of events	=	3	-0.0004	-0.0004
					No. of events	=	2	0.0000	0.0000
					No. of events	=	1	0.0008	0.0008
					No. of events	=	0	0.0015	0.0015

AusNet - S7 - Loss of supply event frequency: >0.05 system minutes
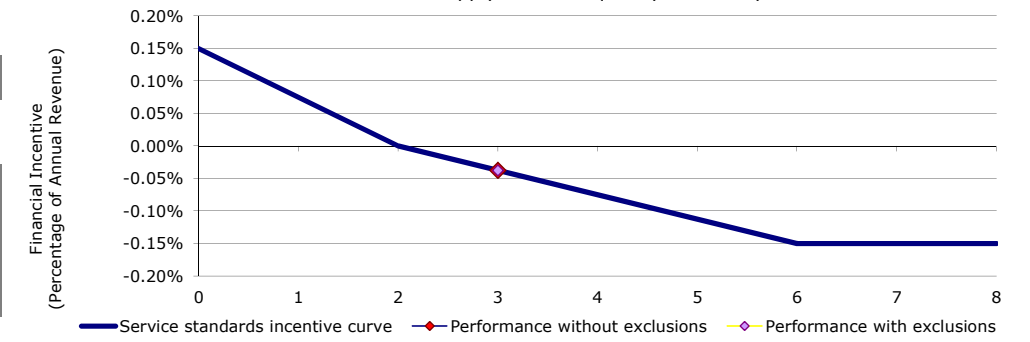
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AusNet - s8 - Loss of supply event frequency: >0.3 system minutes

Performance Targets	Graph start	Collar	Target	Cap	Graph end		Performance Outcomes		without exclusions	with exclusions
>0.3 system minutes	4	2.0	1.0	0.0	0		>0.3 system minutes	=	1	1
Weighting	-0.0015	-0.0015	0.0000	0.0015	0.0015		S-Factor	=	0.00%	0.00%

Performance Formulae		Formulae			Conditions			S- Calc 1	S- Calc 2
			When:						
Performance			2.0	<	No. of events			-0.0015	-0.0015
					No. of events	=	1	0.0000	0.0000
					No. of events	=	0	0.0015	0.0015

AusNet - S8 - Loss of supply event frequency: >0.3 system minutes
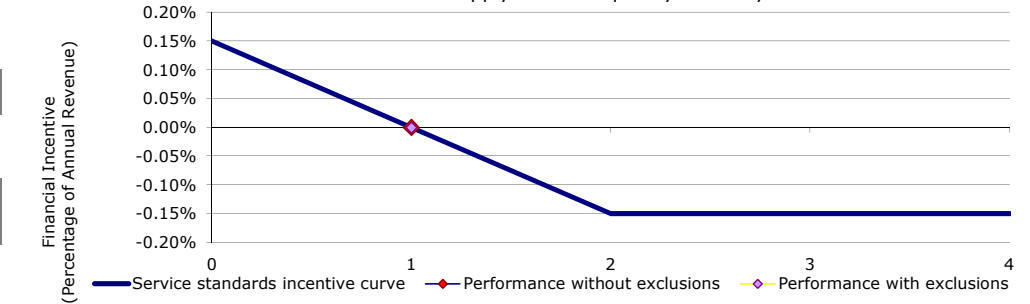
AusNet - s9 - Average outage duration

Performance Targets	Graph start	Collar	Target	Cap	Graph end		Performance Outcomes		without exclusions	with exclusions
Average outage duration	594	294	98	5	0		Average outage duration	=	69	69
Weighting	-0.00200	-0.00200	0.00000	0.00200	0.00200		S-Factor	=	0.06%	0.06%

Performance Formulae		Formulae					When:		Conditions			S- Calc 1	S- Calc 2
Performance	=	-0.0020					294	<	No. of events			-0.0020	-0.0020
	=	0.0000	x	No. of events	+	0.0010	98	≤	No. of events	≤	294	0.0003	0.0003
	=	0.0000	x	No. of events	+	0.0021	5	≤	No. of events	≤	98	0.0006	0.0006
	=	0.0020							No. of events	=	5	0.0020	0.0020

AusNet - S9 - Average outage duration

Financial Incentive (Percentage of Annual Revenue)

— Service standards incentive curve —◆— Performance without exclusions —◇— Performance with exclusions
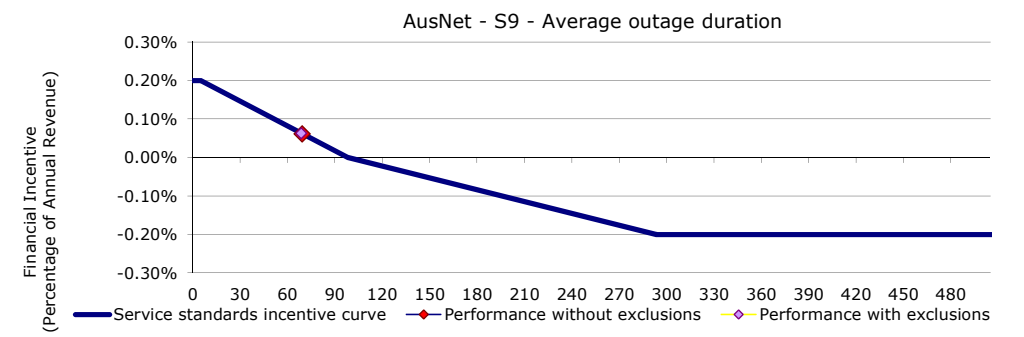
AusNet - Performance outcomes

Aggregate outcome

S-factor	0.323%
Financial Incentive	$1,700,074
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	25.90%	20.66%	0.09%	$496,109	16.94%	0.16%	$848,292	0.07%
s2	transformer outage - fault	16.10%	13.55%	0.06%	$308,601	12.35%	0.09%	$453,009	0.03%
s3	reactive plant - fault	35.10%	20.86%	0.04%	$229,523	18.71%	0.05%	$264,318	0.01%
s4	line outage - forced	14.90%	16.94%	0.00%	$0	16.53%	0.00%	$0	0.00%
s5	transformer outage - forced	12.00%	12.35%	0.00%	$0	11.95%	0.00%	$0	0.00%
s6	reactive plant - forced	15.40%	32.37%	0.00%	$0	32.37%	0.00%	$0	0.00%
s7	LOS >0.05 system minutes	2	3	-0.04%	-$197,090	3	-0.04%	-$197,090	0.00%
s8	LOS >0.3 system minutes	1	1	0.00%	$0	1	0.00%	$0	0.00%
s9	Average outage duration	98	69	0.06%	$324,952	69	0.06%	$331,545	0.00%
	TOTALS			**0.22%**	**$1,162,094**		**0.32%**	**$1,700,074**	**0.10%**

Revenue calendar year: $525,574,603