



FINAL DECISION

TasNetworks Transmission Determination 2019 to 2024

Attachment 10 Service target performance incentive scheme

April 2019

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Inquiries about this publication should be addressed to:

Australian Energy Regulator
GPO Box 520
Melbourne Vic 3001

Tel: 1300 585 165

Email: AERInquiry@aer.gov.au

AER reference 60153

Note

This attachment forms part of the AER's final decision on TasNetworks' 2019–24 transmission determination. It should be read with all other parts of the final decision.

The final decision includes the following attachment:

Overview

TasNetworks transmission determination 2019–24

Attachment 1 – Maximum allowed revenue

Attachment 2 – Regulatory asset base

Attachment 4 – Regulatory depreciation

Attachment 5 – Capital expenditure

Attachment 7 – Corporate income tax

Attachment 9 – Capital expenditure sharing scheme

Attachment 10 – Service target performance incentive scheme

Attachment A – Pricing methodology

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Shortened forms

Shortened form	Extended form
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
capex	capital expenditure
CCP	Consumer Challenge Panel
CCP 13	Consumer Challenge Panel, sub panel 13
CESS	capital expenditure sharing scheme
CPI	consumer price index
DMIAM	demand management innovation allowance (mechanism)
DMIS	demand management incentive scheme
EBSS	efficiency benefit sharing scheme
ERP	equity risk premium
F&A	framework and approach
MAR	maximum allowed revenue
NEL	national electricity law
NEM	national electricity market
NEO	national electricity objective
NER	national electricity rules
opex	operating expenditure
RBA	Reserve Bank of Australia
RIN	regulatory information notice
STPIS	service target performance incentive scheme
TNSP	transmission network service provider
TUoS	transmission use of system

10 Service target performance incentive scheme

The service target performance incentive scheme (STPIS) provides a financial incentive to transmission network services providers (TNSPs) to maintain and improve service performance. The current version of the STPIS, version 5, includes three components: a service component, market impact component and network capability component.¹

The service component provides a reward/penalty of +/- 1.25 per cent of Maximum Allowable Revenue (MAR) to improve network reliability, by focussing on unplanned outages. The service component is designed to encourage TNSPs to seek to reduce the number of unplanned network outages and to promptly restore the network in the event of unplanned outages that result in supply interruptions. This component is also designed to indicate potential reliability issues.

The market impact component (MIC) provides an incentive to TNSPs to minimise the impact of transmission outages that can affect wholesale market outcomes. The MIC measures performance against the market impact parameter which is the number of dispatch intervals where an outage on the TNSP's network results in a network outage constraint with a marginal value greater than \$10/MWh (MIC count).²

Each TNSP's annual MIC count is measured against its target, where the target is calculated by averaging the median five of the last seven years' performance.³ Further, the dollars per dispatch interval (\$/DI) associated with the reward/penalty for each count can be directly calculated for the regulatory control period from the MIC target, and the MAR. Both the target and the \$/DI are fixed for the regulatory control period.

TNSPs receive a reward or penalty of up to 1 per cent of MAR for the relevant calendar year. Under clause 4.2(a) of the STPIS, a TNSP must submit, in its revenue proposal, data for the preceding seven calendar years to calculate the target as noted above.

The network capability component is designed to encourage TNSPs to develop projects (up to a total of one per cent of the proposed MAR per year) in return for a pro-rata incentive payment of up to 1.5 per cent of MAR depending on the successful completion of proposed projects. This component encourages TNSPs to examine their networks to identify suitable low cost one-off operational and capital expenditure projects that improve the capability of the transmission network at times when it is most needed.

¹ AER, *Final – Service Target Performance Incentive Scheme*, October 2015, cl. 2.2(a)(1–3).

² AER, *Final – Service Target Performance Incentive Scheme*, October 2015, Appendix C.

³ The target is to be calculated from the average of the five values remaining from the last seven years of data excluding the largest and smallest annual values. Clause 4.2(f)(1) of the STPIS.

10.1 Final decision

Our final decision is to apply version 5 of the transmission STPIS to TasNetworks in the 2019–24 regulatory control period and this outcome is outlined in Table 10-1 to Table 10-3.⁴

Table 10-1 Final decision — transmission service component caps, floors and targets for 2018/19 – 2022/23

Average circuit outage rate	Distribution	Cap	Floor	Target
Average circuit outage rate				
Lines event rate – fault	Weibull	7.5%	26.5%	16.9%
Transformer event rate – fault	Weibull	6.3%	10.1%	8.4%
Reactive plant outage rate - fault	Uniform (1st on AIC)	2.1%	39.5%	17.9%
Lines outage rate - forced	Triangular	3.0%	17.7%	10.7%
Transformer outage rate - forced	Pearson	7.4%	19.8%	12.3%
Reactive plant outage rate - forced	Exponential	1.7%	99.1%	33.1%
Loss of supply events				
> (x) system minutes	Poisson	0	6	3
> (y) system minutes	Poisson	0	2	1
Average outage duration (minutes)	Lognorm	12.7	559.2	149.0
Proper operation of equipment				
Failure of protection system	Poisson	0	4	2
Material failure of SCADA	Poisson	1	6	3
Incorrect operational isolation of primary or secondary equipment	IntUniform	4	6	5

Source: AER analysis

⁴ AER, *Final – Service Target Performance Incentive Scheme*, October 2015.

Table 10-2 Final decision — transmission MIC parameter values for 2018/19 – 2022/23

Calendar year	adjusted performance count
Target (draft decision, place holder)	1969
Cap for unplanned outages	343
Dollar per dispatch interval (\$2018-19)	\$710

Source: AER analysis

Table 10-3 Final decision — transmission network capability priority projects for 2018/19 – 2022/23 (\$2018-19)

Priority projects ranking assigned by TasNetworks	Project	Description	Improvement target	Capex \$	Opex \$	Total \$
1	Weather Station for Burnie-Smithton 110 kV transmission corridor	Install a new weather station near Smithton to enable dynamic rating of Burnie Smithton and Burnie-Port Latta-Smithton 110 kV transmission circuits	Dynamic thermal ratings to the Burnie-Smithton and Burnie-Port Latta-Smithton 110 kV transmission circuits, resulting in an expected average 26 MVA increase to line thermal capacity.	371,438	1,858	373,294
2	Lightning Withstand Capability Improvement on Norwood-Scottsdale-Derby 100 kV Transmission Corridor	Improve footing resistance to the earth at selected towers on the Norwood-Scottsdale-Derby 110 kV transmission circuits to improve power transfer capacity and circuit availability.	With improved footing resistance, Norwood-Scottsdale 110 kV circuits will be able to withstand 98% of lightning strikes.	814,273	-	814,273
3	Port Latta 110 kV double tee connection	1) Rearrange the 110 kV network connection at Port Latta Substation to double tee from Burnie-Smithton circuits instead of existing loop in and loop out arrangement from one of these circuits.	The proposed works to rearrange 110 kV network at Port Latta would allow increased transfer capability enabling the transmission line to operate at dynamic line ratings.	860,076	43,004	903,080

(2) Revise the protection and communication according to the proposed network arrangement.

4	Transmission Line Ground Clearances Improvement Program	This project aims to improve ground clearances at identified sites on the 110 kV and 220 kV transmission lines by ground profiling, conductor tensioning, waist extension and raising tower heights.	Improved ground clearances to re-establish transmission circuit operation to its design temperature; thereby increasing transmission capacity, decreasing safety and environmental risks and meeting transmission circuit clearance compliance.	3,053,524	-	3,053,524
Total				5,099,310	44,861	5,144,171

10.2 TasNetworks' revised proposal

TasNetworks accepted our draft decision on applying version 5 of the transmission STPIS.⁵ For the final decision, we updated the performance targets for the service and market impact component to include 2018 actual performance outcomes data.⁶

We received no submissions from stakeholders on the application of the transmission STPIS to TasNetworks.

10.3 Assessment approach

A revenue determination for a TNSP is to specify, amongst other things, the annual building block revenue requirement for each regulatory year of the regulatory control period.⁷ In turn, the annual building block revenue requirement must be determined using a building blocks approach, under which one of the building blocks is the revenue increments or decrements (if any) for that year arising from the application of any STPIS (and other schemes).⁸ We have assessed TasNetworks' revised revenue proposal against the requirements of version 5 of the STPIS.

10.3.1 Service component

We assessed whether TasNetworks' proposed performance targets, caps and floors comply with the STPIS requirements for:⁹

- average circuit outage rate, with six sub parameters¹⁰
- loss of supply event frequency, with two loss of supply event sub-parameters¹¹
- average outage duration
- proper operation of equipment, with three sub-parameters.¹²

Under the STPIS, we must accept TasNetworks' proposed parameter values if they comply with the requirements of the STPIS. We may reject them if they are

⁵ TasNetworks, *Tasmanian Transmission Revenue and Distribution Revised Regulatory Proposal, Regulatory 2019–2024*, 29 November, pp. 94–95.

⁶ TasNetworks, *TasNetworks response to AER Information request #50 – Transmission STPIS service component - 05032019*; 8 March 2019.

⁷ NER, cl. 6A.4.2(a)(2).

⁸ NER, cll. 6A.5.4(a)(5), 6A.5.4(b)(5) and 6A.7.4.

⁹ AER, *Final – Service Target Performance Incentive Scheme*, October 2015, clause 3.2.

¹⁰ Six parameters include Line event rate–fault, Reactive plant event rate – fault, Lines event rate – forced, Transformer event rate –forced and Reactive plant event rate – forced.

¹¹ They are the number of events greater than 0.01 system minutes per annum and the number of events greater than 1.00 system minutes per annum.

¹² They are failure of protection system, material failure of SCADA system and incorrect operational isolation of primary or secondary equipment.

inconsistent with the objectives of the STPIS.¹³ We measure actual performance for the 'average circuit outage rate' and 'average outage duration' parameters on a two calendar year rolling average in accordance with appendix E of the STPIS.

We assessed TasNetworks' service component proposal against the requirements of the STPIS — that is, whether:

- TasNetworks' data recording systems and processes produce accurate and reliable data and whether the data is recorded consistently based on the parameter definitions under the STPIS¹⁴
- the proposed performance targets were equal to the average of the most recent five years of performance data¹⁵
- any adjustments to the proposed targets are warranted and reasonable¹⁶
- TasNetworks' applied a sound methodology, with reference to the performance targets, to calculate the proposed caps and floors¹⁷
- any adjustment to a performance target was applied to the cap and floor of that parameter.¹⁸

10.3.2 Market impact component

We assessed TasNetworks' market impact component proposal against the requirements of the STPIS — that is, whether:

- data used to calculate the market impact parameter is accurate and reliable, and consistently recorded based on the parameter definition in Appendix C¹⁹
- the proposed performance target was calculated in accordance with the requirements of clause 4.2(f) in version 5 of the STPIS
- the proposed unplanned outage event limit has been calculated in accordance with the requirements of clause 4.2(h) in version 5 of the STPIS
- the proposed dollar per dispatch interval has been calculated in accordance with clause 4.2(j) in version 5 of the STPIS.

Where TasNetworks' proposed values for the market impact parameter do not comply with the requirements of the STPIS or is otherwise inconsistent with the objectives of the scheme,²⁰ we will reject the proposed values and provide substitute values which comply with the STPIS.

¹³ AER, *Final – Service Target Performance Incentive Scheme*, October 2015, cl. 3.2.

¹⁴ AER, *Final – Service Target Performance Incentive Scheme*, October 2015, cl. 3.2(d).

¹⁵ AER, *Final – Service Target Performance Incentive Scheme*, October 2015, cl. 3.2(g).

¹⁶ AER, *Final – Service Target Performance Incentive Scheme*, October 2015, cl. 3.2(j).

¹⁷ AER, *Final – Service Target Performance Incentive Scheme*, October 2015, cl. 3.2(e).

¹⁸ AER, *Final – Service Target Performance Incentive Scheme*, October 2015, cl. 3.2(e).

¹⁹ AER, *Final – Service Target Performance Incentive Scheme*, October 2015, cl. 4.2(c).

²⁰ AER, *Final – Service Target Performance Incentive Scheme*, October 2015, cl 4.2(d).

10.3.3 Network capability component

We assessed TasNetworks' network capability component against the STPIS requirements to take into account:²¹

- the likely effect of the priority project improvement on wholesale market outcomes, including inter-regional outcomes
- the likely effect of the priority project improvement in ensuring that the transmission network can meet demand at an injection point without major network augmentation or replacement
- whether the priority project improvement is appropriate, taking into account the forecast changes in demand at a relevant injection point
- the benefits to consumers resulting from the priority project improvement
- the extent to which a TNSP would be incentivised or required to undertake such a project under the NER or any other applicable regulatory obligations
- the time taken for a project to have a net positive benefit
- any relevant information contained in the TNSP's most recent annual planning report.

10.4 Interrelationships

The STPIS takes into account any other incentives provided for in the NER that TNSPs have to minimise capital or operating expenditure. One of the objectives of the STPIS is to assist in the setting of efficient capital and operating expenditure allowances by balancing the incentive to reduce actual expenditure with the need to maintain and improve reliability for customers and reduce the market impact of transmission congestion.

The STPIS will interact with the Capital Expenditure Sharing Scheme (CESS) and the opex Efficiency Benefit Sharing Scheme (EBSS). The STPIS allows us to adjust the performance targets of the service component for the expected effects on the TNSP's performance from any increases or decreases in the volume of capital works planned during the regulatory control period. In conjunction with CESS and EBSS, the STPIS will ensure that:

- any additional investments to improve service quality are based on prudent economic decisions
- reductions in capex and opex are achieved efficiently, rather than at the expense of service levels to the network users.

²¹ AER, *Final – Service Target Performance Incentive Scheme*, October 2015, cl. 5.2(l) and 5.2(m).

10.5 Reasons for final decision

We will apply version 5 of the transmission STPIS to TasNetworks and the reasons for our decision are outlined below.

Our final decision is based on the relevant data for the 2012–2018 years.

10.5.1 Service component

Performance targets must equal the TNSP's average performance history over the past five years unless they are subject to adjustment under clause 3.2(i) or (j) of the STPIS.²² We generally approve performance targets that are the arithmetic mean of the past five years' performance data.

Caps and floors

Proposed caps and floors must be calculated with reference to the proposed performance targets using a sound methodology. We have generally accepted approaches that use five years of performance data to determine a statistical distribution that best fits that data—with the caps and floors set at two standard deviations either side of the mean (if using a normal distribution); or at the 5th and 95th percentiles (if using a distribution other than the normal distribution).

We tested TasNetworks' data using our @risk software to calculate the caps and floors. TasNetworks' revised revenue proposal accepted our draft decision on the methodology to calculate the caps and floors. For the final decision we included TasNetworks' 2018 data to determine its service component performance targets caps and floors and the results are at Table 10-1.²³

10.5.2 Market impact component

We reviewed the data provided by TasNetworks for the calculation of its MIC target, Cap for unplanned outages, and Dollar per Dispatch Interval for the next regulatory control period. We found that the information and calculation methods are consistent with the scheme's requirements.

For this final determination, we have included TasNetworks' 2018 performance market impact performance to determine its targets for the next regulatory control period. Our final decision on the market impact component is at Table 10-2.²⁴

²² AER, *Final – Service Target Performance Incentive Scheme*, October 2015, cl. 3.2.

²³ TasNetworks, *Tasmanian Transmission Revenue and Distribution Revised Regulatory Proposal 2019–2024*, pp. 94–95.

²⁴ TasNetworks, *TasNetworks response to AER Information request #50 – Transmission STPIS service component - 05032019*; 8 March 2019.

10.5.3 Network capability component

TasNetworks' revised revenue proposal accepted our draft decision on NCIPAP.²⁵ Table 10-3 above, outlined the values of these projects.

²⁵ TasNetworks, *Tasmanian Transmission Revenue and Distribution Revised Regulatory Proposal 2019–2024*, 29 November, pp. 94–95.