

Draft Decision

Powerlink electricity transmission determination 2027 to 2032

(1 July 2027 to 30 June 2032)

Attachment 7 – Service target performance
incentive scheme

September 2026

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7 Service target performance incentive scheme

The STPIS provides incentives to transmission network service providers (TNSPs) to improve or maintain a high level of service for the benefit of participants in the National Electricity Market and end users of electricity.

Version 6 of the STPIS came into effect on 16 April 2025. Version 6 comprises of two parameters: the Service Component (SC) and the Network Capability Component (NCC). Under version 6, the Market Impact Component (MIC)¹ (present in version 5) has been suspended.

The SC 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 NCC 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.

Outcome of the review of the STPIS

Following a review which began with the release of an issues paper in December 2023², in April 2025, we published version 6 of the STPIS. Version 6 differs from Version 5 in the following ways:

- We have suspended the MIC.
- We have streamlined the application of the NCC, to:
 - Remove the Network Capability Incentive Parameter Action Plan (NCIPAP) and link the NCC to a TNSP's Transmission Annual Planning Report (TAPR)
 - Better align the incentive allowance with incentive allowance reductions.
- We have removed rounding from the loss of supply frequency parameter of the SC so that targets can be fractions of an event.

Reasons for our final positions can be found in our Explanatory Statement which accompanied our April 2025 Final Decision.³

¹ The MIC was designed to provide an incentive to TNSPs to minimise the impact of transmission outages that can affect wholesale market outcomes.

² AER, [Issues Paper – Transmission STPIS Review – MIC and NCC](#), December 2023.

³ AER, [Explanatory Statement to the Electricity Transmission Service Target Performance Incentive Scheme Version 6](#), April 2025.

7.1 Draft decision

We will apply version 6 of the STPIS to Powerlink for the 2027–32 regulatory control period, which commences on 1 July 2027. Under version 6, only the SC and NCC apply to Powerlink.

7.1.1 Service Component

Table 7.1 sets our draft decision on the floors, targets, and caps for each SC parameter that will apply to Powerlink for the 2027–32 period. Our draft decision is based on Powerlink’s most recent five years of historical performance data (2020–2024 calendar years).⁴

Powerlink is required to include the 2025 STPIS actual performance data in its revised revenue proposal.

Our draft decision differs from Powerlink’s proposal. The reasons for the differences are explained in section 7.6.1. Our final decision will be calculated based on the 2021–2025 actual performance data.

Table 7.1 Draft decision – Service Component floors, targets and caps for 2027–32

Parameter	Floor	Target	Cap	Preferred distribution
Unplanned outage circuit event rate (%)				
Lines event rate – fault	12.04	9.29	6.84	Gamma
Transformer event rate – fault	15.26	12.45	9.94	LogLogistic
Reactive plant event rate – fault	24.27	20.72	16.45	Weibull
Lines event rate – forced	17.61	12.96	9.34	Pearson5
Transformer event rate – forced	19.31	13.12	7.98	Gamma
Reactive plant event rate – forced	27.91	22.83	18.18	Gamma
Loss of supply event frequency (number of events)				
Loss of supply events > 0.05 system (x) minutes	3.0	1.4	0.0	IntUniform
Loss of supply events > 0.40 system (y) minutes	1.0	0.6	0.0	Binomial
Average outage duration (minutes)				
Average outage duration	297.35	161.14	13.19	LogLogistic
Proper operation of equipment (number of events)				
Failure of protection system	31	23	15	Poisson

⁴ STPIS cl. 3.2(f)

Material failure of SCADA	0	0	0	N/A
Incorrect operational isolation of primary or secondary equipment	18	6	0	Geometric

Source: AER analysis

7.1.2 Network Capability Component

Under version 6 of the STPIS, TNSPs are no longer required to submit a NCIPAP as part of their revenue proposal. Instead, they are required to identify the projects in their TAPR that should be subject of the NCC. This will apply to Powerlink from the beginning of the 2027–32 regulatory period.

7.2 Powerlink’s proposal

Consistent with our July 2025 Framework and Approach, Powerlink proposed to apply version 6 of the STPIS as follows:

- the SC parameter targets are set equal to average historic performance, with caps and floors set at the 5th and 95th percentiles, respectively, of average historic performance (actual data from 2020–24) using the most appropriate statistical distribution.
- the proposed performance targets for the loss of supply events sub-parameters of the SC are unrounded
- the MIC has been suspended
- it has not proposed any projects under the NCIPAP. Instead, future priority projects will be identified in the TAPR.

7.2.1 Service Component

Table 7.2 shows Powerlink’s proposed targets, floors and caps and preferred distributions.

Table 7.2 Powerlink’s proposal – Service Component Floors, Targets, Caps and Preferred Distributions for 2027–32

Parameter	Floor	Target	Cap	Preferred distribution
Unplanned outage circuit event rate (%)				
Lines event rate – fault	11.74	9.35	6.52	Weibull
Transformer event rate – fault	15.03	12.45	10.25	Pearson5
Reactive plant event rate – fault	24.27	20.72	16.45	Weibull
Lines event rate – forced	17.61	12.96	9.34	Pearson5
Transformer event rate – forced	19.31	13.12	7.98	Gamma
Reactive plant event rate – forced	27.91	22.83	18.18	Gamma
Loss of supply event frequency (number of events)				

Loss of supply events > 0.05 system (x) minutes	4	1.40	0	Poisson
Loss of supply events > 0.40 system (y) minutes	2	0.60	0	Poisson
Average outage duration (minutes)				
Average outage duration	297.24	161.16	13.20	Log-logistic
Proper operation of equipment (number of events)				
Failure of protection system	31	23	15	Poisson
Material failure of SCADA	0	0	0	N/A
Incorrect operational isolation of primary or secondary equipment	18	6	0	Geometric

Source: Powerlink's revenue proposal and follow up emails.⁵

7.2.2 Network Capability Component

Consistent with version 6 of the STPIS, Powerlink will identify priority projects in its TAPR and has therefore not identified any priority projects as part of its revenue proposal.

7.3 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.⁶ In turn, the annual building block revenue requirement must be determined using a building block 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).⁷ We have assessed Powerlink's proposal for the 2027–32 period against version 6 of the STPIS.

7.3.1 Service component

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

- unplanned outage circuit event rate, with 6 sub parameters⁸
- loss of supply event frequency, with two loss of supply event sub-parameters⁹

⁵ Powerlink did not include values for the *proper operation of equipment* parameter in its revenue proposal for the reason that there is no weighting attached. However, the STPIS requires the values to be submitted as part of a revenue proposal. Powerlink subsequently provided the values in response to our request to do so.

⁶ NER, cl. 6A.4.2(a)(2).

⁷ NER, cl. 6A.5.4(a)(5), 6A.5.4(b)(5) and 6A.7.4.

⁸ AER, Final – Service Target Performance Incentive Scheme, April 2025, Appendix A, p 25.

⁹ Ibid.

- average outage duration¹⁰
- proper operation of equipment, with 3 sub-parameters¹¹

Under clause 3.2(a) of the STPIS:

- a TNSP must submit in its revenue proposal, proposed values for the parameters applicable to it under the service component.
- the AER must accept the proposed values if they comply with the requirements of clause 3.2 and the scheme.

Under clause 3.2(b), for each parameter that applies to a TNSP, it must provide a performance target, floor and cap.

We assessed Powerlink's SC proposal against the relevant requirements of the STPIS. We also assessed the probability distributions applied by Powerlink to calculate caps and floors to determine whether a sound methodology was used.

7.3.2 Market Impact Component and Network Capability Component

Under version 6 of the STPIS, the AER is not required to assess the MIC or NCC as part of a TNSP's revenue proposal as:

- the MIC has been suspended.
- TNSPs are not required to submit priority projects in a NCIPAP as part of their revenue proposal.

7.4 Interrelationships

The STPIS takes into account any other provisions in the NER that incentivise TNSPs 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 operating expenditure efficiency benefit sharing scheme (EBSS). The STPIS allows us to adjust the performance targets of the SC 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.¹² In conjunction with the CESS and the EBSS, the STPIS will ensure that:

- any additional investments to improve service quality are based on prudent economic decisions

¹⁰ Ibid, p 29.

¹¹ Ibid, p 31.

¹² STPIS, cl. 3.2(j)(2).

- reductions in capital and operating expenditure are achieved efficiently, rather than at the expense of service levels to the network users.

7.5 Submissions

We received no stakeholder submissions on the application of the STPIS to Powerlink.

7.6 Reasons for draft decision

We will apply version 6 of the STPIS. The reasons for our draft decision are outlined below.

7.6.1 Service Component

Under the STPIS, we must accept Powerlink's proposed parameter values if they comply with the requirements of the STPIS.¹³ We may reject the proposed values if we are of the opinion that they are inconsistent with the objectives listed in clause 1.4 of the STPIS.¹⁴

The SC provides a reward/penalty of +/- 1.25 per cent of maximum allowed revenue (MAR) for the relevant calendar year to improve network reliability, by focussing on unplanned outages.

Performance targets

Performance targets must equal the TNSP's average performance history over the past five years unless they are subject to an adjustment under clause 3.2(i) or (j) of the STPIS. We have determined performance targets that are equal to the arithmetic mean of the past 5 years' performance data.

Average outage duration

Powerlink's proposed target for Average outage duration is 161.16 minutes. Our draft decision is 161.14 minutes. As the target is an input to the calculation of the caps and floors, the minor difference in the target resulted in differences between Powerlink's proposed cap and floor values and those in our draft decision for the average outage duration parameter. Staff will clarify the variance with Powerlink for the final decision.

We calculated Powerlink's SC targets using five years of compliance-reviewed actual performance data (2020 to 2024). Consistent with the requirements of the scheme, we applied the following formula to derive the targets.¹⁵

$$\frac{\text{Aggregate duration (in minutes) of all unplanned outages with a loss of supply}}{\text{No. of events}}$$

Our calculated targets differ from Powerlink's proposal due to rounding.

¹³ Ibid, cl. 3.2(a)

¹⁴ Ibid, cl. 3.2(k)

¹⁵ STPIS, Appendix A: Service Component – standard definitions, Parameter 3 Average outage duration

Caps and Floors

Proposed caps and floors must be calculated with reference to the proposed performance targets using a sound methodology.¹⁶ In arriving at our draft decision, we calculated Powerlink's cap and floor values using our @risk model. Our approach used 5 years of performance data to determine a statistical distribution that best fits that data— with the caps and floors set at 2 standard deviations either side of the mean (using a normal distribution); or at the 5th and 95th percentiles (if using a distribution other than the normal distribution). This approach is consistent with our previous transmission determinations.

Powerlink states that it applied a set of criteria to determine the most appropriate statistical distribution, including whether:¹⁷

- the distribution reflects the inherent skewness of the performance data;
- the distribution is bounded by the logical limits of the parameter type;
- a discrete distribution is used for discrete data and a continuous distribution is used for continuous data;
- distributions with fewer parameters are preferred over those with more parameters; and
- the distribution provides a good fit to the performance data.

However, our replication of the distribution-fitting analysis identified discrepancies with Powerlink's modelling results. Specifically, Powerlink does not appear to have applied its stated criterion that the selected distribution should reflect the inherent skewness of the performance data, and it has not provided an explanation for this departure.

This appears to be the primary source of differences between the distributions preferred by the AER and those proposed by Powerlink.

As a result, we do not accept Powerlink's proposed SC caps and floors for the sub-parameters set out in Table 7.2, as we do not consider the proposed distributions to be a sound methodology.

Table 7.3 below shows the AER's preferred distributions for the sub-parameters where we differ from Powerlink and the reasons why we have chosen them for the draft decision. These distributions were used to calculate the caps and floors.

Table 7.3 Draft Decision – Distribution, Floors and Caps for 2027–32

Sub-parameter	Powerlink preferred distribution	AER preferred distribution	Reason for AER preferred distribution
Lines event rate – fault *	Weibull	Gamma	The Weibull distribution produces a skewness with

¹⁶ STPIS, cl. 3.2(e)

¹⁷ Powerlink, Appendix 13.01 - Setting STPIS Values, Powerlink 2027-32 Regulatory Proposal, January 2026, p. 3.

			the opposite sign to the performance data.
Transformer event rate – fault	Pearson5	LogLogistic	The LogLogistic distribution produced the lowest KS statistic and the lowest AD statistic. However, Powerlink has reported that Pearson5 had the lowest KS statistic and the lowest AD statistic.
Number of events greater than x system minutes *	Poisson	IntUniform	The Poisson distribution produces a skewness with the opposite sign to the performance data.
Number of events greater than y system minutes *	Poisson	Binomial	The Poisson distribution produces a skewness with the opposite sign to the performance data.

* Powerlink does not appear to have applied its stated criterion that the selected distribution should have the same skewness as the actual performance data, and it has not provided justification for the departure.

7.6.2 Network Capability Component

Our draft decision is to apply the NCC to Powerlink for the 2027–32 regulatory period.

Under version 6 of the STPIS, TNSPs will no longer be required to submit a NCIPAP as part of their revenue proposal. Instead, Powerlink must identify priority projects from its TAPR and propose them annually for inclusion in the NCC, for our approval.

Approved NCC projects will receive an incentive allowance of 1.5 times the annual proposed expenditure of the priority projects. Incentives are adjusted down by up to 1.5 times of proposed expenditure, if improvement targets are not met.¹⁸

The total proposed expenditure of all priority projects in a single regulatory year must not exceed 1.5% of the maximum allowed revenue for that regulatory year.¹⁹

Annually, we will determine the eligibility for each proposed project according to the requirements specified in clause 5.2 of the STPIS.

7.6.3 Market Impact Component

Under version 6 of the STPIS the MIC has been suspended. As part of our review into the STPIS, we undertook to explore developing an alternative to the MIC by establishing a working group. To this end, the Network Market Impact Working Group, comprised of representatives from TNSPs, generators, consumers and users, as well as the Australian Energy Market Operator (AEMO), the Australian Energy Market Commission (AEMC) and

¹⁸ STPIS, cl. 5.3(a)

¹⁹ STPIS, cl. 5.3(b)

the AER, held its first meeting in October 2025. The working group has met monthly since then and the outcomes of the working group may inform the AER's replacement of the MIC of the STPIS.

On 14 May 2026, the AEMC made a rule change to enable the early application of a revised STPIS.²⁰ The rule commenced on 21 May 2026. The early application of a revised STPIS final rule, introduces the ability for the AER to apply a revised STPIS before a TNSP's next regulatory control period commences. After making a new scheme, the AER may consult on its proposed early application arrangements to allow the application of a revised STPIS before the end of a TNSP's regulatory control period.

In light of this final rule, should a replacement for the MIC be found, version 7 of the STPIS may apply to Powerlink before the end of the 2027–32 regulatory control period. The AER would consult on the early application of any revised STPIS in accordance with the Transmission Consultation Procedures.²¹

²⁰ AEMC, [Early application of a revised STPIS, Final Rule](#), May 2026.

²¹ NER, cl. 6A.20

Glossary

Term	Definition
AD statistic	Anderson–Darling statistic
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
CESS	capital expenditure sharing scheme
EBSS	efficiency benefit sharing scheme
KS statistic	Kolmogorov–Smirnov statistic
MAR	maximum allowed revenue
MIC	market impact component
NCC	network capability component
NCIPAP	Network Capability Incentive Parameter Action Plan
NER	national electricity rules
SC	service component
STPIS	service target performance incentive scheme
TAPR	transmission annual planning report
TNSP	transmission network service provider