DRAFT DECISION
Powerlink Queensland
Transmission Determination

2022 to 2027

Attachment 10
Service target performance incentive scheme

September 2021

AUSTRALIAN ENERGY REGULATOR

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Note

This attachment forms part of the AER's draft decision on Powerlink Queensland's transmission network revenue determination for the 2022–27 regulatory control period. It should be read with all other parts of the draft decision.

The draft decision includes the following documents:

Overview

Attachment 1 – Maximum allowed revenue

Attachment 2 – Regulatory asset base

Attachment 3 – Rate of return

Attachment 4 – Regulatory depreciation

Attachment 5 – Capital expenditure

Attachment 6 – Operating expenditure

Attachment 7 – Corporate income tax

Attachment 8 – Efficiency benefit sharing scheme

Attachment 9 – Capital expenditure sharing scheme

Attachment 10 – Service target performance incentive scheme

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Attachment 13 – Demand management innovation allowance mechanism

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10 Service target performance incentive scheme

The service target performance incentive scheme (STPIS) provides a financial incentive to transmission network services providers (TNSP) to maintain and improve service performance. We will apply current version 5 of the STPIS to Powerlink for the 2022–27 regulatory control period. Three components are applicable: the service component (SC), market impact component (MIC), and network capability component (NCC).[1]

The SC provides a reward or penalty of +/- 1.25 per cent of the maximum allowed revenue (MAR) to improve network reliability by focussing on unplanned outages. 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 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[2] with a marginal value greater than $10/MWh (MIC count).[3]

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 of annual performance measure data.[4] 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 the MAR for the relevant calendar year. Under clause 4.2(a), a TNSP must submit seven calendar years of annual performance measure data to calculate the target as noted above.[5]

The NCC 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.[6] This component encourages TNSPs to examine their networks to identify suitable one-off operational and capital expenditure (capex) projects. These projects are expected

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

2 Network outage constraints are constraint sets that are applied in AEMO's market systems to manage power flows during outages so that the power system remains secure during an outage.

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

4 The target will be calculated from the average of the five values remaining from the last seven years of annual performance measure data, excluding the largest and smallest annual values.

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

6 Ibid, cl. 5.2.

to have a high net benefit and a short payback period and deliver improvements in the capability of the transmission network at times when it is most needed.

10.1 Draft decision

We will apply all components of version 5 of the STPIS to Powerlink for the 2022–27 regulatory control period. We propose to apply the STPIS to Powerlink in accordance with the details set out below.[7]

The draft decision components are outlined in the tables below. Our draft decision is based on the relevant data for 2013–19 and therefore is indicative only. We require Powerlink to submit its 2020 data with its revised revenue proposal for the final decision. The final decision components will be calculated using 2014–20 data.

Table 10.1 Draft decision — Indicative values for service component caps, floors and targets for the 2022–27 regulatory control period

Parameter	Distribution	Cap	Target	Floor
Unplanned outage circuit event rate				
Lines outage rate - fault	Pearson	14.85%	18.92%	23.85%
Transformers outage rate - fault	Weibull	10.44%	18.07%	25.09%
Reactive plant outage rate - fault	Log Normal	22.34%	25.60%	29.16%
Lines outage rate - forced	Weibull	11.85%	16.83%	21.00%
Transformer outage rate - forced	Gamma	9.78%	14.10%	19.07%
Reactive plant outage rate - forced	Weibull	18.92%	21.18%	22.80%
Loss of Supply Event Frequency				
No. of events > 0.05 system minutes	Geometric	0	2	7
No. of events > 0.40 system minutes	Poisson	0	0	2
Average Outage Duration				
Average outage duration (minutes)	Log Logistic	8	69	147
Proper operation of equipment (number of events)				
Failure of protection system	IntUniform	16	27	37
Material failure of SCADA	Poisson	0	1	3
Incorrect operational isolation of primary or secondary equipment	Poisson	1	4	8

Source: AER analysis.

[7] Ibid, cl. 2.2.

Table 10.2 Draft decision – Market impact component parameter values for the 2022–27 regulatory control period

MIC parameter values	
Performance target	874
Unplanned outage event limit	149
Dollar per dispatch interval ($/DI)	$8083.4

Source: AER analysis.

Table 10.3 Draft decision — Network capability component for the 2022–27 regulatory control period ($2020–21)

Project	Proposed cost
No projects proposed	Nil

Source: AER analysis.

10.2 Powerlink's proposal

Powerlink proposed to apply version 5 of the STPIS as per the requirements that:[8]

- The SC parameter targets were calculated as the 5-year annual average of the performance history over 2015-19, except for the large Loss of Supply sub-parameter. The SC caps and floors were set at the 5th and 95th percentiles of historic performance.
- The MIC annual performance measure data from 2013–19 were used to calculate the annual performance target, the unplanned outage event limit and the dollar per dispatch interval.
- No network capability incentive parameter action plan (NCIPAP) project proposal was submitted. Powerlink indicated that it may propose projects if it identifies any in its revised revenue proposal.

With respect to the SC, for the large Loss of Supply sub-parameter, Powerlink proposed an alternative methodology for calculating the target.[9] Powerlink's alternative methodology consists of calculating the five-year average performance over the relevant period and rounding the result to the nearest non-zero integer.[10]

8 Powerlink, *2023–27 Revenue proposal,* January 2021, Table 15.3, p. 151; Powerlink, *2023–27 Revenue proposal, Appendix 15.01 – Setting STPIS Values*, January 2021, p.1.

9 Powerlink, *2023–27 Revenue proposal,* January 2021, Table 15.3, p. 151, pp.152-155.

10 Powerlink, *2023–27 Revenue proposal, Appendix 15.01 – Setting STPIS Values*, January 2021, p.13.

Powerlink's reasons for proposing an alternative methodology were that:[11]

- it is not in the interests of consumers to bear the greater cost of trying to achieve a zero target rather than a target of 1
- it undermines the incentive to improve, given a penalty-only incentive
- it creates an asymmetric scheme, undermining the intent of the STPIS to incentivise TNSPs to maintain or improve performance.

With respect to the MIC, Powerlink proposed a target based on the 2015–19 data period, submitting that this was consistent with the methodology in Appendices C and F of the AER's 2015 STPIS.[12] Notwithstanding this, Powerlink stated in its 2022–27 revenue proposal that it remains concerned that the future MIC target does not include 2021 data. It submitted that even if its actual/forecast performance for the MIC between 2015 and 2021 is used to set the target for the 202[2]–27 regulatory period[13], it is likely to exceed the maximum penalty for that period. It attributes this to an increased number of dispatch interval (DI) counts since 2019. It urged the AER to include the 2021 year in the calculation of the MIC target.[14]

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.[15] 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 incentive schemes).[16] We have assessed Powerlink's revenue proposal against the requirements of version 5 of the STPIS.

10.3.1 Service component

We assessed whether Powerlink's proposed performance targets, caps and floors comply with the STPIS requirements for the:[17]

- unplanned outage circuit event rate, with six sub-parameters[18]
- loss of supply event frequency, with two loss of supply event sub-parameters[19]

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11 Powerlink, *2023–27 Revenue proposal,* January 2021, pp.152–155.
12 Powerlink, *2023–27 Revenue proposal,* January 2021, p. 156.
13 Powerlink refers to the '2023–27 regulatory period' while the AER refers to the 2022–27 regulatory control period, being 1 July 2022 to 30 June 2027.
14 Powerlink, *2023–27 Revenue proposal,* January 2021, p. 156.
15 NER, cl. 6A.4.2(a)(2).
16 NER, cll. 6A.5.4(a)(5), 6A.5.4(b)(5) and 6A.7.4.
17 AER, *Final – Service Target Performance Incentive Scheme*, October 2015, cl. 3.2.
18 Six parameters include Line event rate–fault, Transformer event rate – fault, Reactive plant event rate – fault, Lines event rate – forced, Transformer event rate –forced and Reactive plant event rate – forced.
19 They are the number of events greater than 0.05 system minutes per annum and the number of events greater than 0.40 system minutes per annum.

- average outage duration
- proper operation of equipment, with three sub-parameters[20].

Under the STPIS, we must accept Powerlink's proposed parameter values if they comply with the requirements of the STPIS. We may reject them if they are inconsistent with the objectives of the STPIS.[21] We measure actual performance for the 'unplanned outage circuit event rate' and 'average outage duration' parameters on a two calendar year rolling average in accordance with Appendix E of the STPIS.

We assessed Powerlink's SC proposal against the requirements of the STPIS–that is, whether:

- Powerlink's data recording systems and processes produce accurate and reliable data and whether the data is recorded consistently based on the parameter definitions under the STPIS[22]
- the proposed performance targets were equal to the average of the most recent five years of performance data[23]
- any adjustments to the proposed targets are warranted and reasonable[24]
- Powerlink applied a sound methodology, with reference to the performance targets, to calculate the proposed caps and floors[25]
- any adjustment to a performance target was applied to the cap and floor of that parameter.[26]

We assessed the probability distributions applied by Powerlink to calculate caps and floors to determine whether a sound methodology was used.

10.3.2 Market impact component

We assessed Powerlink's MIC 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 C[27]
- the proposed performance target was calculated in accordance with the requirements of clause 4.2(g) in version 5 of the STPIS

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

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

22 Ibid, cl. 3.2(d).

23 Ibid, cl. 3.2(g).

24 Ibid, cl. 3.2(j).

25 Ibid, cl. 3.2(e).

26 Ibid.

27 Ibid, cl. 4.2(c).

- 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 Powerlink's 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,[28] we will reject the proposed values and provide substitute values which comply with the STPIS.

10.3.3 Network capability component

We are required to assess the NCC against the requirements of clause 5.2 of version 5 of the STPIS.

A TNSP is able to propose projects with an average total expenditure in each regulatory year of not greater than 1 per cent of the TNSP's average annual maximum allowed revenue proposed in its revenue proposal for the regulatory control period.[29]

For Powerlink this amount is $6.9 million (real $2021–22) per year or $34.2 million (real $2021–22) in total.

The projects included in the NCC must not have been included in the proposed opex and capex revenue allowance.[30]

The projects are expected to be high benefit/low cost projects with short payback periods. They are expected to be directed towards directly addressing transmission constraints.[31]

10.4 Interrelationships

The STPIS takes into account any other provisions in the National Electricity Rules (NER) that incentivise TNSPs to minimise capital or operating expenditure.[32] 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.[33]

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 SC for the expected effects on the TNSP's performance

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28 Ibid, cl. 4.2(d).
29 Ibid, cl. 5.2(b)(2)(vi).
30 Ibid, cl. 5.2(r).
31 Ibid, cl. 5.2(a).
32 NER, cl. 6A.7.4(b)(5).
33 AER, *Final – Service Target Performance Incentive Scheme*, October 2015, cl. 1.4.

from any increases or decreases in the volume of capital works planned during the regulatory control period.[34] 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
- reductions in capex and opex are achieved efficiently, rather than at the expense of service levels to the network users.

10.5 Submissions

With respect to Powerlink's proposed alternative methodology for calculating the large Loss of Supply sub-parameter, the Consumer Challenge Panel (CCP23) stated:[35]

> "We concur with the view of the AER that one of the key features of the STPIS is that a TNSP can only keep its reward under the STPIS if the service level improvement is retained in subsequent regulatory periods. If the improvement is not maintained, the TNSP will need to return the earlier reward to network users. Given consumers have paid for the performance improvement by Powerlink to achieve the current level, the proposal to increase the performance target to above the historical average would result in consumers paying for the improvement twice.
>
> On that basis, we agree with the AER that consumers should not pay for the same improvement twice, and therefore the target should not be adjusted."

With respect to Powerlink's proposed use of 2015-21 data for calculating the MIC target, the CCP23 stated:[36]

> "We understand that the AER must comply with the Scheme requirements, and if the Scheme requirements are such that the Scheme requirements do not allow the AER to approve or require a MIC performance target to be based on a different time period then that must be respected."

The CCP23 stated that it agreed with Powerlink's approach with respect to not proposing any NCIPAP projects.[37]

10.6 Reasons for draft decision

We will apply version 5 of the STPIS to Powerlink. The reasons for our draft decision are outlined below.

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34 Ibid, cl. 3.2(j)

35 CCP23, *Advice to the AER on the Powerlink Transmission Regulatory Proposal for the Regulatory Determination 1 July 2022 to 30 June 2027*, 24 May 2021, p.72.

36 Ibid, p.73.

37 Ibid.

Our draft decision is based on the 2013–19 audited data as provided in Powerlink's Revenue Proposal. However, for the final decision we will use the 2014–20 data which we expect will be available in Powerlink's revised revenue proposal.

10.6.1 Service component

10.6.1.1 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.[38] We have determined performance targets that are equal to the arithmetic mean of the 2015–19 performance data. Powerlink followed this approach for its proposed performance targets, except for the large Loss of Supply sub-parameter.[39] Our placeholder performance targets are shown in Table 10.1 above.

10.6.1.2 Caps and floors

Proposed caps and floors must be calculated with reference to the proposed performance targets using a sound methodology.[40] In the past, we have generally accepted approaches that use five years of performance data to determine a statistical distribution that best fits the 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).

The distribution selected to calculate the caps and floors for a particular parameter must be conceptually sound. We have established the following principles for selecting a distribution to calculate caps and floors:[41]

- the chosen distribution should reflect any inherent skewness of the performance data
- the distribution should not imply that impossible values are reasonably likely. For example, the distribution for an unplanned outage circuit event rate sub-parameter should not imply that values below zero per cent are reasonably likely
- discrete distributions should be used to represent discrete data. For example, a discrete distribution such as the Poisson distribution should be used when calculating caps and floors for loss of supply sub-parameters. Continuous distributions should not be used.

Using standard deviations to set caps and floors is appropriate when a normal distribution is selected. However, when a normal distribution is not selected, the better measure to use is the percentiles.

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38 AER, *Final – Service Target Performance Incentive Scheme,* October 2015, cl. 3.2.
39 Powerlink, *2023–27 Revenue proposal,* January 2021, pp. 151–155.
40 AER, *Final – Service Target Performance Incentive Scheme,* October 2015, cl. 3.2(e).
41 AER, *Draft decision, SP AusNet Transmission determination 2014–15 to 2016–17*, August 2013, pp. 184–185.

Powerlink set out its methodology for choosing the distribution and target, cap and floor result for the SC sub-parameters.[42]

Applying the five-year average over the 2015–19 period as per cl. 3.2(f) of the STPIS yields a zero target for the large Loss of Supply sub-parameter. Powerlink submitted that a zero target for this sub-parameter does not support the intent and design principles of the STPIS as:[43]

- it is not in the interests of consumers to bear the greater cost of trying to achieve a zero target rather than a target of 1
- it undermines the incentive to improve, given a penalty-only incentive
- it creates an asymmetric scheme, undermining the intent of the STPIS to incentivise TNSPs to maintain or improve performance.

Powerlink proposed an alternative calculation method, whereby a five-year average is applied and the result is rounded to the nearest non-zero integer.[44] This yields a target of 1.

Under cl. 3.2(i) the AER may approve an alternative methodology for calculating the performance target as submitted by a TNSP provided that the AER is satisfied that the five requirements specified in the Scheme at cl.3.2(i) are met.

Powerlink submitted that its proposed alternative calculation method meets all the requirements of cl. 3.2(i) of the STPIS.[45]

We consider that Powerlink's proposed alternative methodology does not meet the fifth requirement specified in the STPIS at cl. 3.2(i), that is, that the TNSP's proposed methodology is consistent with the objectives in cl. 1.4 of the STPIS.[46]

The first of these objectives is that the STPIS contributes to the achievement of the National Electricity Objective (NEO).[47]

The NEO is to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to—

(a) price, quality, safety, reliability and security of supply of electricity; and

(b) the reliability, safety and security of the national electricity system.[48]

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42 Powerlink, *2023–27 Revenue proposal,* January 2021, Table 15.3, p. 151-155; Powerlink, *2023–27 Revenue proposal, Appendix 15.01 – Setting STPIS Values*, January 2021, pp.4–13.
43 Powerlink, *2023–27 Revenue proposal,* January 2021, p. 143.
44 Ibid, p. 153.
45 Ibid, Table 15.6, p. 155.
46 AER, *Final – Service Target Performance Incentive Scheme,* October 2015, cl 3.2(i)(5).
47 Ibid, cl. 1.4(1).
48 NEL, cl.7

Powerlink submitted that its proposed methodology is consistent with the objectives in cl. 1.4 of the STPIS, including because its proposed methodology ensures there is a cost-neutral position over the long term to allow for natural variation around the average, hence promoting prudent and efficient expenditure decisions and consistency with cll.1.4(a)(1) and 1.4(b)(3) of the STPIS.[49]

We do not consider that Powerlink's methodology meets the NEO as required under cl. 1.4(a)(1). We assess that Powerlink's methodology does not promote efficient investment in, or operation of, the network, which is in the long term interest of consumers.

This is because Powerlink's proposed alternative methodology does not achieve cost neutrality, nor preserve the variation around the average. By requiring rounding up of the historical five-year average, there is an upwards translation of the average. This reflects a risk transfer from the TNSP to the consumer as the target is now easier to achieve. In turn this means that a financial reward is easier and a financial penalty is harder to achieve, so cost neutrality is not preserved. With the upward translation of the average, the variation around the average is also skewed, with a greater probability of exceeding the target than if the average were calculated using the method set out in the STPIS. This also translates into a higher probability of achieving a financial reward and a lesser probability of achieving a financial penalty. Hence, again, cost neutrality is not preserved.

Additionally, the design of the STPIS is that a reward for service level improvement can only be kept by a TNSP if the service level improvement is retained in subsequent regulatory periods. If the improvement is not maintained, the TNSP is required to return the earlier reward to network users via a financial penalty. Therefore, a TNSP can only earn a reward for service improvement results once. Given consumers have paid for the performance improvement by Powerlink to achieve the current level, the proposal to increase the performance target to above the historical average would result in consumers paying for the improvement twice.

Furthermore, the STPIS is designed to maintain service standards and incentivise improvements where they can be made. The large Loss of Supply sub-parameter performance for Powerlink is very low, suggesting that the system is so reliable it cannot be efficiently improved as it is arguably at the efficiency frontier. Given the current high level of reliability, we consider that Powerlink's methodology would result in an inefficient signal to over-invest in order to further increase network reliability. We assess that this would not meet the requirement of efficient investment under the NEO.

For these reasons, we do not consider that Powerlink's proposed methodology meets the requirements of the NEO and so does not meet the requirements of cl. 3.2(i)(5) of the STPIS. We therefore assess that Powerlink's alternative methodology should not be used instead of the methodology of the STPIS. We have therefore applied the

[49] Powerlink, *2023–27 Revenue proposal,* Table 15.6, p. 155.

STPIS methodology to calculate the large Loss of Supply sub-parameter target. We have replaced Powerlink's proposed target, applying the methodology for distribution choice as described above.

Table 10.4 Powerlink proposed — Distributions, targets, caps and floors for the 2022–27 regulatory control period

Parameter	Distribution	Cap	Target	Floor
Unplanned outage circuit event rate				
Lines outage rate - fault	Pearson	14.85%	18.92%	23.85%
Transformers outage rate - fault	Weibull	10.44%	18.07%	25.09%
Reactive plant outage rate - fault	Log Normal	22.34%	25.60%	29.16%
Lines outage rate - forced	Weibull	11.85%	16.83%	21.00%
Transformer outage rate - forced	Gamma	9.78%	14.10%	19.07%
Reactive plant outage rate - forced	Weibull	18.92%	21.18%	22.80%
Loss of Supply Event Frequency				
No. of events > 0.05 system minutes	Geometric	0	2	7
No. of events > 0.40 system minutes	N/A	0	1	2
Average Outage Duration				
Average outage duration (minutes)	Log Logistic	7.91	69.00	147.17
Proper operation of equipment (number of events):				
Failure of protection system	Values not proposed			
Material failure of SCADA	Values not proposed			
Incorrect operational isolation of primary or secondary equipment	Values not proposed			

Source: Powerlink, *Revenue Proposal 2022–27*, 29 January 2021, Table 15.3, pp. 151.

Applying our reasoning described above, we used our @risk model to estimate Powerlink's distributions, caps and floors.[50]

Our approved distribution, target, cap and floor values for Powerlink are set out in Table 10.5.

[50] Our @risk model has been used to set the cap and floor range in most of our recent determinations.

Table 10.5 Draft decision — Distributions, targets, caps and floors for the 2022–27 regulatory control period

Parameter	Distribution	Cap (5th percentile)	Target	Floor (95th percentile)
Unplanned outage circuit event rate				
Lines outage rate - fault	Pearson	14.85%	18.92%	23.85%
Transformers outage rate - fault	Weibull	10.44%	18.07%	25.09%
Reactive plant outage rate - fault	Log Normal	22.34%	25.60%	29.16%
Lines outage rate - forced	Weibull	11.85%	16.83%	21.00%
Transformer outage rate - forced	Gamma	9.78%	14.10%	19.07%
Reactive plant outage rate - forced	Weibull	18.92%	21.18%	22.80%
Loss of Supply Event Frequency				
No. of events > 0.05 system minutes	Geometric	0	2	7
No. of events > 0.40 system minutes	Poisson	0	0	2
Average Outage Duration				
Average outage duration (minutes)	Log Logistic	8	69	147
Proper operation of equipment (number of events):				
Failure of protection system	IntUniform	16	27	37
Material failure of SCADA	Poisson	0	1	3
Incorrect operational isolation of primary or secondary equipment	Poisson	1	4	8

Source: AER analysis.

10.6.2 Market impact component

For reasons explained below, we do not accept Powerlink's proposed performance target for the market impact parameter. Instead, our draft decision is to substitute the proposed value of 879 dispatch intervals with 874 dispatch intervals for the performance target. This is a placeholder value using 2013–19 data. The final performance target will be calculated using 2014–20 data.

As version 5 of the STPIS is being applied to Powerlink for the second time, the performance target is to be calculated in accordance with clause 4.2(g) of version 5 of the STPIS.

Under this methodology:

- the performance target for the 2022–27 regulatory control period is calculated as the average of the annual performance measures using the median five out of seven preceding calendar year values of the performance measure. The performance measure is the raw annual performance adjusted for the unplanned

outage event limit.[51] The annual performance measure is the result reported at each annual STPIS review. The annual MIC financial incentive is calculated using this result.

- the unplanned outage event limit to be applied for the 2022–27 regulatory control period is calculated as 17 per cent of the performance target calculated for the 2022–27 period, in the step above.

Powerlink submitted a performance target of 879 dispatch intervals based on its 2013–19 data.[52]

However, our assessment of Powerlink's 2013–19 performance history data submission found that a number of the performance history counts were not consistent with the requirements of the STPIS.

Powerlink submitted a 2015 adjusted performance count value of 65 dispatch intervals, consisting of 64 dispatch intervals for planned outages and 1 dispatch interval for unplanned outages.[53] This is different to the adjusted performance count of 27, consisting of 26 dispatch intervals for planned outages and 1 dispatch interval for unplanned outages that was agreed with Powerlink for the purposes of the AER's final decision in the 2017–22 revenue determination.

For 2019, Powerlink submitted raw performance counts of 13,095 dispatch intervals for planned outages and 838 dispatch intervals for unplanned outages. For a number of dispatch intervals, Powerlink counted the same binding constraint twice. We have made adjustments for these double counts and substituted raw performance counts of 12,492 dispatch intervals for planned outages and 786 dispatch intervals for unplanned outages for 2019.[54]

Based on these adjustments, we calculated the MIC target as 874 dispatch intervals and the unplanned outage event limit as 149 dispatch intervals as set out in Table 10.6. We calculated the incentive rate per DI as $8083.41/DI.

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51 AER, *Final – Service Target Performance Incentive Scheme,* October 2015*,* cl. 4.2(h).
52 Powerlink, *2023–27 Revenue proposal,* January 2021, Table 15.3, p. 151.
53 Powerlink, *2023–27 Revenue proposal,* January 2021*, Appendix 15.01 – Setting STPIS Values*, Table 3.29, p. 14.
54 Powerlink also included double counts in its 2020 MIC data. This will be addressed in the final decision when the 2020 data is included in the data for calculating the MIC target.

Table 10.6 Draft decision — Market impact component parameter values for the 2022–27 regulatory control period

Regulatory period (RP)	Raw performance count			Capped unplanned count	Adjusted performance count
	Planned	Unplanned	Total (Planned + Unplanned)	**Min of** Raw Unplanned **or 0.17x(M)**	planned + capped unplanned
(RP)	**(a)**	**(b)**	(a)+(b)	**(d)**	(e)
2013	81	16	97	16	97
2014	3936	5	3941	5	3941
2015	26	1	27	1	27
2016	7	35	42	35	42
2017	62	11	73	11	73
2018	160	286	446	57	217
2019	12492	786	13278	57	12549
2020					
Max					12549
Min					27
Average of 5 median					874
Unplanned outage event limit (2013-16)					58
Unplanned outage event limit (2017-21)					57
Unplanned outage event limit (2022-27)					149

Source: AER analysis.

Notwithstanding that Powerlink proposed its MIC performance target by applying the method set out in version 5 of the STPIS and using the 2013–19 data period for the draft decision, Powerlink stated that it remains concerned that the future MIC target does not include 2021 data. It submitted that if its actual/forecast performance for the MIC between 2015 and 2021 is used to set the target for the 2022–27 regulatory control period, it is likely to exceed the maximum penalty for that period. It attributes this to an increased number of DI counts since 2019.[55]

The STPIS provides that the MIC performance target is the TNSP's average of the median five out of seven of the preceding seven calendar years of the annual performance measure.[56] Example 2 in Appendix F is referenced as guidance.

The TNSP's MIC performance target is based on performance measure data for the 'preceding seven calendar years' up to the calendar year immediately prior to the TNSP's submission of its revenue proposal. This is because the obligations on TNSPs under cll. 4.2(a) and 4.2(b) of the STPIS to submit MIC performance measure data and

55 Powerlink, *2023–27 Revenue proposal,* January 2021, p. 156.
56 AER, *Final – Service Target Performance Incentive Scheme,* October 2015, cl. 4.2(g).

to submit a proposed value for a MIC performance target, apply at the time the TNSP submits its revenue proposal. TNSPs must measure their performance against the parameters and values applicable to it under the STPIS on a calendar year basis.[57] For a TNSP to be able to include the annual performance measure for that calendar year in the calculation of the MIC target, this necessarily means that:

- the calendar year must be complete in order to be able to determine the actual performance measure
- the AER must have carried out its annual compliance review in accordance with cl. 6.4 of the STPIS (Annual STPIS Review) for that year and approved the annual performance measure.

Importantly, the AER does not have the discretion to use later data for the purposes of its revenue determinations. The AER is required by clause 6A.14.3(d)(1) of the NER to approve the values that are to be attributed to the performance incentive scheme parameters for the STPIS that is to apply to a TNSP in respect of a regulatory control period as set out in the current revenue proposal. Further, we are to be satisfied that those values comply with the requirements set out in the STPIS.

Applying that provision to the present scenario, the AER must approve the values that are attributed to the MIC performance target as set out in Powerlink's revenue proposal. We are to be satisfied that those values comply with the requirements in clause 4.2(g) of the STPIS version 5 and Example 2 in Appendix F. To comply with these requirements Powerlink's MIC performance target for the 2022–27 regulatory control period must be based on performance measure data for the 'preceding seven calendar years' up to the calendar year immediately prior to the TNSP's submission of its revised revenue proposal. That is, calendar years 2014–20. This means that, for its final revenue determination for Powerlink, the AER must use the 2014–20 performance measure data as set out in Powerlink's revised revenue proposal.

Unlike for the SC (as discussed at section 10.6.1), the STPIS does not provide for the TNSP to propose an alternative method for calculating the MIC target. Nor does it allow the AER to approve or require a MIC performance target to be based on a different time period if it is satisfied that the use of a different period is consistent with the objectives in cl. 1.4 of the STPIS.

We acknowledge that the data period used to calculate the MIC target for some revenue determinations in the past has not been consistent with the requirements in the STPIS set out above. We have since undertaken further review of our practice so that future decisions are made consistent with the scheme instrument.

We also note that the requirements of the STPIS have been correctly applied to Powerlink in previous determination decisions. For Powerlink's 2017–22 revenue determination, the 2009–15 data period was used to calculate the MIC target in the

[57] Ibid, cl. 2.4(a).

final decision. The revenue proposal was submitted in January 2016 and the revised revenue proposal was submitted on 1 December 2016.

It should also be noted that the STPIS has a self-correcting property with respect to the impacts of short-term events. While the effect of a short-term event will have immediate impact on the financial result under the scheme, either up or down; the performance targets in the ensuring period will be reflective of the impact of the initial short-term event to reverse the initial financial penalty or reward if the performance remains unchanged.

Table 10.7 Example 2 of Appendix F applied to Powerlink

Regulatory Period (RP)/ Year of regulatory period (y)	STPIS calendar year	Timing of Annual STPIS Review	Data used in MIC target setting for 2017–22 (RP2)	Proposed data to be used in MIC target setting for 2022–27 (RP3)
RP0y3 (2009-2010)	2009		2009	
RP0y4 (2010-2011)	2010		2010	
RP0y5 (2011-2012)	2011		2011	
RP1y1 (2012-2013)	1H 2012 (from previous reg period) 2H 2012	March 2013	2012	
RP1y2 (2013-2014)	2013	March 2014	2013	
RP1y3 (2014-2015)	2014	March 2015	2014	2014
RP1y4 (2015-2016)	2015	March 2016	2015	2015
RP1y5 (2016-2017)	2016	March 2017		2016
RP2y1 (2017-2018)	1H 2017 (from previous reg period) 2H 2017	March 2018		2017
RP2y2 (2018-2019)	2018	March 2019		2018
RP2y3 (2019-2020)	2019	March 2020		2019
RP2y4 (2020-2021)	2020	March 2021		2020
RP2y5 (2021-2022)	2021	March 2022		

Shortened forms

Shortened form	Extended form
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
Capex	Capital expenditure
CCP23	Consumer Challenge Panel, sub-panel 23
CESS	Capital expenditure sharing scheme
DI	Dispatch interval
EBSS	Efficiency benefit sharing scheme
MAR	Maximum allowed revenue
MIC	Market impact component
NCC	Network capability component
NCIPAP	Network capability incentive parameter action plan
NEL	National Electricity Law
NEM	National Electricity Market
NEO	National Electricity Objective
NER	National Electricity Rules
Opex	Operating expenditure
RIN	Regulatory information notice
SC	Service component
STPIS	Service target performance incentive scheme
TNSP	Transmission network service provider