

Guidance note: Transmission Service Target Performance Incentive Scheme

Clarification of data period and
exclusions definitions in the market
impact component

April 2023

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1 Introduction and purpose

This guidance note has been prepared in accordance with clause 6A.2.3 of the National Electricity Rules (NER) and provides information on how the Australian Energy Regulator (AER) will approach our assessment of the market impact component (MIC) parameters for applying version 5 of the Service Target Performance Incentive Scheme (STPIS) to transmission network service providers (TNSPs).

The purpose of this guidance note is to provide clarification on:

- the data period used in calculating the MIC performance target
- how MIC exclusions 1 and 6 are to be applied to include certain MIC counts in the STPIS.

Data period clarification

We published our draft decision on this matter in November 2021. Only one submission was received, which was from Powerlink and we have attended to their comments relevant to the draft guidance note. This guidance note marks our final decision on the matter and is the same as our draft decision.

This guidance note covers:

- context to the application of the STPIS to TNSPs and the framework in which it is applied (section 2)
- the requirements of the STPIS with respect to calculation of the MIC performance target (section 3)
- a worked example (section 3.4).

MIC exclusion code clarification

This guidance note covers:

- our clarification of exclusions 1 and 6 (section 4).

We expect that TNSPs should follow this guidance note in preparing their revenue proposals under section 6A.4 of the NER and in submitting performance data for annual compliance assessments.

1.1 Application of the guidance note

This guidance note applies to TNSPs that are subject to version 5 of the STPIS and are required to propose a MIC performance target in their revenue proposal.

The expectations in this guidance note are not binding on the AER. We intend to follow this guidance note in making decisions in relation to the application of the STPIS, unless we consider there are good reasons not to.

2 Context and framework

The AER is responsible for developing and publishing the STPIS.¹ The STPIS provides incentives for TNSPs to improve or maintain a high level of service for the benefit of participants in the National Electricity Market (NEM) and the end users of electricity.

The STPIS is made up of three components, including the MIC, which is designed to encourage TNSPs to minimise the impact of outages on the dispatch of generation.

The MIC parameter uses financial incentives to encourage TNSPs to minimise the effect of transmission outages on the wholesale price of electricity. The MIC counts the number of dispatch intervals when outages in the TNSP's network result in network outage constraints² with a marginal value greater than \$10/MWh. Each TNSP's annual MIC count is measured against its performance target. A measure of the TNSP's performance against its target is used to calculate the reward/penalty under the STPIS.

Targets are set through the revenue determination process for each TNSP. The AER's final revenue determination specifies, for the regulatory control period, the values that are to be attributed to each of the STPIS parameters, including the MIC.³

Version 5 of the STPIS was published on 17 September 2015.

¹ CI 6A.7.4(a) of the NER.

² A network outage constraint is the change to the physical capability of the transmission network following the outage of transmission network equipment from service as identified by and recorded in the market systems.

³ CI 6A.4.2(5) of the NER.

3 Definition of the data period

In simple terms, the data to be used for the calculation of the MIC target are the most recent seven MIC annual performance measures at the time the TNSP submits its revenue proposal or revised revenue proposal (see section 3.4, which sets out a worked example).

TNSPs must measure their performance against the parameters and values applicable to it under the STPIS on a calendar year basis. For a TNSP to be able to include the annual performance measure for that calendar year in the calculation of the MIC target, this means both that:

- the calendar year must be complete to be able to determine the annual 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.

The next section steps out the STPIS requirements underpinning this position.

3.1 Calculation of the MIC performance target under the STPIS

Section 4 of the STPIS sets out the requirements relating to the MIC. In particular, clause 4.2 of the STPIS sets out the methodology for calculating the values for the MIC parameter.

Each TNSP is required to submit, in its revenue proposal, data in accordance with the MIC definitions set out at Appendix C for the preceding seven calendar years.⁴

Each TNSP must also submit, in its revenue proposal, proposed values for the MIC parameter, including a performance target.⁵

Data used to calculate the MIC parameter must be accurate, reliable and consistently recorded based on the parameter definition in Appendix C to the STPIS.⁶

Appendix C sets out the definition of the MIC.

The MIC parameter is the number of dispatch intervals where an outage on the TNSP's prescribed transmission network results in a network outage constraint with a marginal value greater than \$10/MWh.⁷

For the purposes of calculating the financial incentive, the annual performance measure is compared with the target, which is set in the revenue determination.

The mechanism for calculating the MIC performance target depends on whether the TNSP has had version 5 of the STPIS applied to it in previous regulatory periods. All TNSPs

⁴ AER, Final – Service Target Performance Incentive Scheme, October 2015, cl. 4.2(a).

⁵ Cl 4.2(b) of the STPIS.

⁶ Cl 4.2(c) of the STPIS.

⁷ Appendix C to the STPIS.

currently operating within the NEM have been subject to version 5 of the STPIS during their current regulatory control period. Therefore, this means that the MIC performance target is to be calculated in accordance with clause 4.2(g), where the TNSP is applying version 5 of the STPIS for a second regulatory control period.⁸

Clause 4.2(g) of the STPIS sets out that the performance target will be calculated in accordance with its Appendix C and example 2 in Appendix F as follows:

1. The performance target is the TNSP's average of the median five out of the preceding seven calendar years of the annual performance measure. For clarity this is shown in example 2 in Appendix F.
2. If the performance target calculated in clause 4.2(f)(5) is less than 100 counts, the performance target will be adjusted to a minimum performance target of 100 counts.

Example 2 in Appendix F to the STPIS shows how the MIC performance target is calculated under version 5 of the STPIS, based on the annual performance measure. Example 2 sets out that the calculations for the target are performed in accordance with clause 4.2(g). Example 2 in Appendix F lists the information to be submitted by TNSPs in their revenue proposals. This includes:

- the four years of performance measure data for the current regulatory control period
- the last three years of performance measure data for the previous regulatory control period
- the performance target
- the unplanned outage event limit
- the dollar per dispatch interval.

Table 6-2 in example 2 in Appendix F to the STPIS sets out the calculation of the parameters required to be submitted by the TNSP in its proposal. The data used to calculate the target is the top seven lines of data – that is, the four years of performance measure data for the current regulatory control period and the last three years of performance measure data for the previous regulatory control period. Footnote 4 provides that the last year of the performance measure data for the current regulatory control period is not included in the calculation of the performance target.

3.2 Our expectations

When calculating the MIC performance target in accordance with Appendix C and example 2 in Appendix F of the STPIS, the AER expects that TNSPs will base their calculations on performance history data up to the year ending immediately prior to the submission of the revenue proposal. That is, the 'preceding seven calendar years' refers to the seven years of annual performance measure data completed before the financial year in which a TNSP submits its revenue proposal to the AER.

For example, this means that when a TNSP submits its revenue proposal in the financial year ended 30 June 2021 (either October 2020 or January 2021), the preceding seven years

⁸ Clause 4.2(f) does not apply, as this is for when a TNSP first transitions to version 5 of the STPIS.

of annual performance measure data will include data up to and including 2019. This is because if the TNSP is submitting its revenue proposal in October 2020, the 2020 calendar year is not complete and the AER will not have completed the Annual STPIS Review for the 2020 calendar year. If the TNSP is submitting its revenue proposal in January 2021, while the 2020 calendar year is complete, the AER will not have completed the Annual STPIS Review for the 2020 calendar year.

When the TNSP submits its revised revenue proposal in the financial year ended 30 June 2022 (either September 2021 or December 2021), the preceding seven years of annual performance measure data will include data up to and including 2020. This is because if the TNSP is submitting its revenue proposal in September 2021 or December 2021, the 2021 calendar year is not complete and the AER will not have completed the Annual STPIS Review for the 2021 calendar year.

We set out in section 3.4 below a further worked example of the way in which the AER expects TNSPs to calculate the MIC performance target.

In this respect, we note that the obligations on the TNSP under clauses 4.2(a) and 4.2(b) of the STPIS to submit MIC performance measure data for the preceding seven calendar years, and to submit a proposed value for a MIC performance target, apply at the time the TNSP submits its revenue proposal. Example 2 in Appendix F also refers to the performance measure data that the TNSP would submit in its revenue proposal for the forthcoming regulatory control period.

Version 5 of the STPIS does not contemplate the updating of performance measure data following the TNSP's submission of its revenue proposal (or revised revenue proposal). 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 clause 1.4 of the STPIS (for example, in contrast to clause 3.2(g) of the STPIS).

3.3 Reasons for this position

The STPIS requirements mirror the revenue determination process requirements, which are based on a 'propose and respond' model. This provides transparency in the decision-making process. It enables stakeholders to make submissions in response to the TNSP's proposal, which may influence the AER's decision.

Further, it provides for the AER to carry out its Annual STPIS Review in the appropriate manner and time frame, without any curtailment pressure in order to meet the final decision deadline. Currently, the TNSPs submit their completed annual STPIS compliance review templates to us at the end of January of each calendar year. By this time, AEMO has usually finalised the manual updates of binding dispatch intervals in its data system. We conduct our annual compliance checks of the STPIS MIC data and approve the STPIS performance measures throughout the year.

We note that the data period used to calculate the MIC target for some revenue determinations in the past has not been consistent with the STPIS requirements, as set out above. We do not consider that the past practice is the preferable approach and propose to adopt the approach set out above going forward.

3.4 Worked example

'TNSP A' first applied version 5 of the STPIS for the regulatory period 1 July 2015 to 30 June 2020.

Table 3-1 sets out the AER's views as to the correlation between the regulatory control period and the years for which performance data is to be used in calculating the MIC target in this worked example.

Table 3-1 Timing of regulatory period with annual STPIS review

Regulatory control period (RP) / year of regulatory control period (y)	STPIS calendar year	Timing of Annual STPIS Review	Data used in calculation of MIC performance target for regulatory control period 2015–2020	Data to be used in calculation of MIC performance target for regulatory control period 2020–2025
RP0y3 (1 July 2007 – 30 June 2008)	2007	–	2007	–
RP0y4 (1 July 2008 – 30 June 2009)	2008	–	2008	–
RP0y5 (1 July 2009 – 30 June 2010)	2009	–	2009	–
RP1y1 (1 July 2010 – 30 June 2011)	1H 2010 (from prev reg period) 2H 2010	March 2011	2010	–
RP1y2 (1 July 2011 – 30 June 2012)	2011	March 2012	2011	–
RP1y3 (1 July 2012 – 30 June 2013)	2012	March 2013	2012	2012
RP1y4 (1 July 2013 – 30 June 2014)	2013	March 2014	2013	2013
RP1y5 (1 July 2014 – 30 June 2015)	2014	March 2015	–	2014
RP2y1 (1 July 2015 – 30 June 2016)	1H 2015 (from prev reg period) 2H 2015	March 2016	–	2015
RP2y2 (1 July 2016 – 30 June 2017)	2016	March 2017	–	2016
RP2y3 (1 July 2017 – 30 June 2018)	2017	March 2018	–	2017
RP2y4 (1 July 2018 – 30 June 2019)	2018	March 2019	–	2018
RP2y5 (1 July 2019 – 30 June 2020)	2019	March 2020	–	–

For the transition to the first application of version 5 of the STPIS, its MIC target was calculated⁹ using the annual performance measure data between 2007 and 2013 (Table 3-2).

Table 3-2 First application of version 5 of STPIS

Regulatory period	Year	Year reviewed at STPIS annual review	Target set in RCP	Raw performance count			Capped unplanned count	Adjusted performance count
				Target	Planned	Unplanned		
(RP)		(RP)	(T)	(a)	(b)	(a) + (b)	(d)	(e)
RP0 FY08	1	2007	–	20	10	30	10	30
RP0 FY09	2	2008	–	120	60	180	49	169
RP0 FY10	3	2009	–	40	55	95	49	89
RP1 FY11	4	2010	–	38	77	115	49	87
RP1 FY12	5	2011	–	50	12	62	12	62
RP1 FY13	6	2012	–	1000	0	1000	0	1000
RP1 FY14	7	2013	–	700	321	1021	49	749
RP1 FY15	8	2014	–	–	–	–	–	–
RP2 Final Decision:		Min				30		30
		Max				1021		100
		Average of 5 median				290		231
		Unplanned outage event limit				49		39

The raw unplanned outage event limit is calculated as 0.17 x average of the median 5 (of 7) raw annual performance measures (180, 95, 115, 62, 1,000), yielding 49 dispatch intervals (DIs). The minimum (30) and maximum (1,021) are excluded. The raw unplanned performance count is capped by the raw unplanned outage event limit of 49 DIs.

The performance target is calculated as the average of the median 5 (of 7) annual performance measures (that is, the annual adjusted performance measures) (169, 89, 87, 62, 749), yielding 231 DIs. The minimum (30) and maximum (1,000) are excluded.

The unplanned outage event limit is calculated as 0.17 x performance target (231), yielding 39 DIs.

⁹ Proposed by the TNSP in the revised proposal and approved by the AER in the final decision.

'TNSP A' submits its initial revenue proposal the 2020–25 revenue determination (1 July 2020 to 30 June 2025) on 31 January 2019. The MIC annual performance measure data includes 2011 to 2017 as set out in Table 3-3.

Table 3-3 Application of version 5 STPIS for the second regulatory period – revenue proposal

Regulatory period	Year	Year reviewed at STPIS annual review	Target set in RCP	Raw performance count			Capped unplanned count	Adjusted performance count
				Target	Planned	Unplanned		
(RP)		(RP)	(T)	(a)	(b)	(a) + (b)	(d)	(e)
RP0 FY08	1	2007	–	–	–	–	–	–
RP0 FY09	2	2008	–	–	–	–	–	–
RP0 FY10	3	2009	–	–	–	–	–	–
RP1 FY11	4	2010	–	–	–	–	–	–
RP1 FY12	5	2011	–	50	12	62	12	62
RP1 FY13	6	2012	–	1000	0	1000	0	1000
RP1 FY14	7	2013	–	700	321	1021	49	749
RP1 FY15	8	2014	–	150	2	152	2	152
RP2 FY16	9	2015	231	900	15	915	15	915
RP2 FY17	10	2016	231	10	120	130	39	49
RP2 FY18	11	2017	231	48	10	58	10	58
RP2 FY19	12	2018	231	–	–	–	–	–
RP2 FY20	13	2019	231	–	–	–	–	–
RP3 Final Decision:		Min						49
		Max						1000
		Average of 5 median						387
		Unplanned outage event limit						66

The placeholder¹⁰ performance target is calculated as the average of the median 5 (of 7) annual performance measures (that is, the annual adjusted performance measures) (62, 749, 152, 915, 58), yielding 387 DIs. The minimum (49) and maximum (1,000) are excluded.

¹⁰ It is a placeholder metric as it will be updated for the next year's STPIS data in the revised revenue proposal.

The placeholder unplanned outage event limit is calculated as 0.17 x performance target (387), yielding 66 DIs.

The AER publishes its draft of the 2020–25 revenue determination on 29 September 2019. It sets placeholder values for the MIC target as 387 DIs and the unplanned outage event limit as 66 DIs.

'TNSP A' then submits its revised revenue proposal for the 2020–25 revenue determination on 1 December 2019. The MIC annual performance measure data includes 2012 to 2018 as set out in Table 3-4.

Table 3-4 Application of version 5 STPIS for the second regulatory period – revised revenue proposal

Regulatory period	Year	Year reviewed at STPIS annual review	Target set in RCP	Raw performance count			Capped unplanned count	Adjusted performance count
				Target	Planned	Unplanned		
(RP)		(RP)	(T)	(a)	(b)	(a) + (b)	(d)	(e)
RP0 FY08	1	2007	–	–	–	–	–	–
RP0 FY09	2	2008	–	–	–	–	–	–
RP0 FY10	3	2009	–	–	–	–	–	–
RP1 FY11	4	2010	–	–	–	–	–	–
RP1 FY12	5	2011	–	–	–	–	–	–
RP1 FY13	6	2012	–	1000	0	1000	0	1000
RP1 FY14	7	2013	–	700	321	1021	49	749
RP1 FY15	8	2014	–	150	2	152	2	152
RP2 FY16	9	2015	231	900	15	915	15	915
RP2 FY17	10	2016	231	10	120	130	39	49
RP2 FY18	11	2017	231	48	10	58	10	58
RP2 FY19	12	2018	231	830	44	874	39	869
RP2 FY20	13	2019	231	–	–	–	–	–
RP3 Final Decision:		Min						49
		Max						1000
		Average of 5 median						549
		Unplanned outage event limit						93

The performance target is calculated as the average of the median 5 (of 7) annual performance measures (that is, the annual adjusted performance measures) (749, 152, 915, 58, 869), yielding 549 DIs. The minimum (49) and maximum (1,000) are excluded.

The unplanned outage event limit is calculated as $0.17 \times$ performance target (549), yielding 93 DIs. The AER publishes its Final Decision on 28 April 2020 for the 2020–25 revenue determination. It set the MIC target as 549 DIs, using performance data from the period 2012 to 2018, and the unplanned outage event limit as 93.

4 MIC exclusion clarification

The STPIS permits certain events to be excluded from the measurement of performance data. These exclusions are intended to reflect circumstances where a TNSP is unable to control the event or mitigate the impact of the event by adopting better practices (planned or unplanned).

In its revised revenue proposal for the 2022–27 regulatory control period, AusNet Services submitted that the MIC is no longer fit-for-purpose because it does not recognise the impact of renewable energy generation penetration or the challenges in managing the change in generation mix.¹¹

In lieu of a fundamental redesign of the MIC, AusNet Services submitted that the AER should adopt a more pragmatic approach in interpreting and applying the MIC's exclusion criteria to accommodate the increase in renewable generation. It listed several MIC exclusions for AER consideration.

We dealt with the full list of exclusions proposed by AusNet Services as part of our final decision.¹² We consider it to be of value to all TNSPs to provide clarification of two specific exclusions proposed by AusNet Services. The exclusions of relevance to this guidance note are:

- Exclusion 1: Force majeure events
- Exclusion 6: Outages that are only for the purpose of assisting with operational security, for example where a lower voltage parallel circuit is taken out of service to assist with transfers across an interconnector.

Exclusion 1: Force majeure events

Exclusion 1 recognises that force majeure events are beyond the control of TNSPs. The market impacts resulting from TNSP operations in dispatch intervals impacted by force majeure events do not reflect TNSP operating decisions and should not be included in assessment of TNSP performance.

Our final determination clarified our position on exclusion 1. We step through our reasoning below.

The increase in renewable generation has resulted in higher numbers of dispatch intervals where a constraint binds and has a marginal value greater than \$10/MWh. The key driver of a high number of current exclusions is due to semi-dispatched renewable generators bidding into the NEM.

Soon after wind and solar farms first entered the market, the previous market operator the National Electricity Market Management Company Limited (now AEMO) recommended that there be a central forecasting system. The Australian Wind Energy Forecasting System and

¹¹ AusNet Transmission Group, Transmission Revenue Review 2022-2027 Revised Revenue Proposal, 1 September 2021, pp. 140-141.

¹² AusNet Transmission Group, Transmission Revenue Review 2022-2027 Revised Revenue Proposal, 1 September 2021, Table 9-2, pp. 142-145.

Australian Solar Energy Forecasting System were created for that purpose. These two systems use local solar radiance and wind speed in conjunction with the number of inverters or wind turbines that are available in conjunction with a power curve to produce an energy dispatch level. Therefore, the participant is not entirely able to control the level of output that feeds into the dispatch mechanisms.

Consequently, when there is a planned outage on the network that directly or indirectly impacts a generator, the variable renewable energy generators (wind or solar farms known as VREs) are not in control of the representation of their capacity bidding into the market systems. Most of these participants may typically offer all their capacity at the market price floor to ensure that they get dispatched.

Where VREs make offers to the NEM in excess of their nominated export level, their output levels will appear as being constrained by a planned outage. We consider that constraints arising from renewable generators not modifying their bids into the market while knowingly aware that a planned network outage is in place should not be counted, because this is outside the control of the TNSPs.

TNSPs cannot control or have influence on semi-dispatch generators offering their maximum potential capacity even though they know that a planned network outage is in place. Therefore, in such situations we consider that this event would meet the force majeure criteria and should be excluded from the MIC count.

Therefore, exclusion 1 will exclude events where a semi-dispatch generator offers its maximum potential capacity even though it knows that a planned network outage is in place. This situation can arise because AEMO imposes dispatch limits on these generators to match the network configuration at the time. As a result of AEMO's capping on output capacity of such generators, the system constraint report shows a binding constraint on the generator. This situation is uncontrollable with respect to the TNSP and so should be excluded from the MIC count.

Exclusion 6: Outages that are only for the purpose of assisting with operational security, for example where a lower voltage parallel circuit is taken out of service to assist with transfers across an interconnector

Our final determination clarified our position on exclusion 6. We step through our reasoning below.

In its revised proposal, AusNet Services proposed we should clarify that the exclusion includes outages on assets required by AEMO to manage operational security to enable a concurrent outage to proceed.

AusNet Services submitted that the deteriorating system strength issues, minimum demand and solar shake off, partly driven by the increasing penetration of VREs, result in smaller windows for TNSPs to take outages at a time which is acceptable to AEMO Operations. The increasing risk to power system security means that during outages for essential maintenance, AEMO may dictate that additional assets also be taken out, increasing the MIC count beyond its control.

We accept this position as the approach is consistent with the intention of the exclusion criteria.

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The STPIS allows us to use our discretion for this exclusion clause to cover this type of event. We consider that outages can be excluded where additional assets are taken out only for the purpose of assisting with operational security while other assets are out for essential maintenance.

TNSPs must be able to prove that the outage of concern was initiated at the direction of AEMO for operational security purposes.