

5 April 2024

Mr Scott Hall
Director Network Pricing Branch
Australian Energy Regulator
GPO Box 3131
Canberra, ACT, 2601

Email - TransmissionSTPISReview@aer.gov.au

Dear Scott,

AER Issues Paper – Transmission Service Target Performance Incentive Scheme (STPIS) Review

Energy Networks Australia (ENA) welcomes the opportunity to make this submission in response to the Australian Energy Regulator's (AER) Issues Paper on the Transmission Service Target Performance Incentive Scheme (STPIS) Review: Market Impact Component (MIC) and Network Capability Component (NCC).

ENA represents Australia's electricity transmission and distribution and gas distribution networks. Our members provide more than 16 million electricity and gas connections to almost every home and business across Australia. Our electricity transmission members, the Transmission Network Service Providers (TNSPs), are focused on delivering Integrated System Plan (ISP) projects, Renewable Energy Zone (REZ) projects and other major transmission upgrades, which are urgently needed to facilitate the energy transformation that is central to Australia's carbon reduction commitments.

ENA welcomes the AER's review of the STPIS and the consideration of whether the scheme components remain fit for purpose in a rapidly changing National Electricity Market (NEM).

The transition brings with it many new constraints that were not there only a few years ago as the generation mix and their locations on the transmission network alter. Existing constraints are also binding more frequently. This makes setting an effective incentive framework for elements like the MIC extremely difficult.

In summary,

- » The MIC's objective is to give TNSPs an incentive to avoid taking network outages when this will cause the wholesale price of electricity to increase. ENA agrees with the AER that this is a worthy objective. However, as shown at our recent presentation to the public forum on this review, the MIC in its current form is not contributing to this objective. Nor is it clear that any of the changes proposed would improve the MIC's ability to contribute to the objective.
- » ENA considers that the MIC should be suspended until a fit for purpose scheme for the transition can be developed. ENA members would welcome the

opportunity to then work with the AER to seek to overcome the flaws with the current MIC design.

- » ENA agrees with the AER that the NCC is administratively burdensome. To improve the scheme, ENA considers that the penalties should be tied to the value of the project, rather than the relevant NSPs Maximum Allowable Revenue (MAR) and that the scheme should be made an optional scheme.
- » ENA recommends that the Service Component (SC) also be considered in this review. The scheme needs to be symmetrical and incentivise good performance. ENA suggests that the X and Y system minutes thresholds are removed from the scheme, Appendix A and determined through the Revenue Determination process.

ENA provides further detail on each of these points in the Attachment.

ENA looks forward to working with the AER as it continues its STPIS review. In the meantime, if you would like to discuss this submission, please contact [REDACTED] in the first instance.

Yours sincerely



Dominic Adams
Acting Chief Executive Officer

Attachment

Market Impact Component

- » The MIC's objective is to limit the impact that network outages have on wholesale electricity prices. This is a worthy objective in principle.
- » In its current form the MIC is not able to contribute to this objective.
- » ENA considers that the MIC should be suspended until a fit for purpose scheme for the transition can be developed.
- » ENA members would welcome the opportunity to work with the AER to improve the MIC. In particular to identify a suitable measure of the impact outages have on wholesale prices and an appropriate way to set targets.

The original intent of the MIC, as described in the MIC Issues paper¹, is to manage the cost to consumers of transmission congestion. In particular, the cost of congestion caused when TNSPs take outages on their networks for maintenance or other reasons. The MIC was introduced as a means of encouraging TNSPs to take outages when this would have little impact on the wholesale price of electricity.

While this remains a worthy objective, the MIC is not currently capable of achieving it. There are four key flaws with the MIC, which are outlined below.

Flaw #1 - The MIC is not focussed on price impacts

When the MIC was developed, the AER considered various measures of the cost of transmission congestion as the basis of the MIC. Of the three that were considered the AER concluded that the Marginal Cost of Congestion (MCC) was best. In making this choice, the AER noted that the MCC is a "relatively high quality indicator of the cost of inter-regional constraints."² However, the AER also noted, that "[i]n the case of intra-regional constraints the [MCC] may have little or no meaning."³

ENA has not sought to replicate the AER's analysis of the MCC, but notes the changing nature of the wholesale electricity market, with generators far more numerous now than when the MIC was designed in 2006. It follows that there will be far more intra-regional congestion now than before, and thus that the MCC is an

¹ AER, Service Target Performance Incentive Scheme, Developing incentives based on Market Impact of Transmission Congestion, Issues paper, June 2007

² AER, Indicators of the market impact of transmission congestion - Decision, 9 June 2006, p.38, available from <https://www.aer.gov.au/system/files/ac02206-Final%20Decision.pdf>

³ Ibid, p.38

increasingly poor measure. This proposition should be tested before the MIC is renewed based on the same, potentially flawed, metric.

Flaw #2 - TNSPs cannot respond meaningfully to MIC incentives

If the MIC is to be able to achieve its objective it must also encourage TNSPs to take actions that they are capable of taking.

While TNSPs had significant control over outage timing in 2006 when the MIC was designed, the window of time that outages can be taken with minimum impact to the market has reduced considerably. TNSPs can plan outages ahead of time and provide notification. However, as discussed at the public forum, the modern reality is that outages are frequently cancelled by AEMO in the days leading up to them.

Cancellations occur because, quite rightly, AEMO cannot approve them if they would jeopardise reliability on the grid. In summary, AEMO cannot approve a transmission outage if it forecasts Lack of Reserve 2 (LOR 2) conditions for the time of the outage. The challenge is that this relies heavily on forecast availability of wind and solar resources, particularly in the period from 40 to 72 hours out, and that these forecasts are increasingly uncertain during that time.

The details here are complex, but the impact is that TNSPs have very few ‘degrees of freedom’ when it comes to scheduling outages. The practical reality is that MIC implications cannot be considered, meaning that even if the MCC was a valid measure of the underlying problem, the other constraints on TNSP’s ability to schedule outages override the impact it can have.

ENA acknowledges that outage scheduling is not the only behaviour targeted by the MIC. The Table below summarises the list of ‘desirable behaviours’ the AER identified in developing the MIC and provides an observation in relation to each in the current context. The Table suggests that there may be little or no ‘work left to do’ for the MIC.

Behaviour	Comment
Plan outages when unlikely to cause a market impact	<i>LOR2 problem – outages often declined. The cost of rescheduling is material (turn trucks around, ongoing risk). No reliable ‘pattern’ in when outages are likely to be low cost</i>
Reschedule outages if market impacts emerge	<i>In-service work is undertaken wherever it does not pose a significant personal safety risk to workers e.g. protection testing/replacements, thermographic imaging, use of on-line condition monitoring.</i>
Reduce outages by adopting different maintenance procedures e.g. live-line working	<i>ElectraNet is actively working to improve understanding of dynamic line limits through past NCIPAP project and with PEC integration</i>
Increase nominated line ratings by more accurately specifying the thermal, voltage or stability limits of the network	<i>There is far more weather data available now than in 2007 and much more use is made of it.</i>
Increase nominated line ratings by more comprehensively monitoring network conditions (for example ambient temperatures, wind conditions and asset conditions)	<i>As above we have very narrow windows in which outages can be taken due to LOR concerns. We have a strong incentive to coordinate already e.g. through the AEMO Coordination Forum</i>
Coordinate network outages so one outage covers multiple network elements rather than making the same impact several times	<i>Notice is given well in advance, but there is a very real chance that outages are cancelled with very short notice for reasons beyond TNSPs control.</i>
Notify market participants of the outage well enough ahead to allow participants to minimise the impacts of the outage through the contract market or through their own actions	

Flaws #3 and 4 - The incentive payment and target are not meaningful

The MIC's approach to target setting relies on the assumption that the efficient level of outages can be revealed over time through the MIC itself. In turn, this depends on the assumption that the penalty TNSPs incur when outages cause price increases reflects the cost of those increases. This requires that the metric is a robust measure of the value of the outages in question.

Contrary to this, the MIC penalty is a function of a TNSP's Maximum Allowable Revenue. It is not connected in any way to the cost imposed by the outages. Indeed with the current approach it cannot reflect this because the MCC does not measure it.

The same problem affects the MIC bonus, where there is no relationship between the benefit customers enjoy through reduced wholesale prices and the reward TNSPs receive for providing that benefit. Insofar as targets are concerned, the rapid transition of the generation sector means that tomorrow's network does not resemble yesterday's network and certainly not that of the previous decades used to set the targets. The current history based target setting is not meaningful because it doesn't represent the future operating environment.

Moving forward - modifying the MIC

In the discussion paper the AER sets out several alternative ways to modify the MIC. ENA offers the following comments on the alternatives suggested by the AER. In summary, ENA considers that none of the proposed modifications will address the flaws articulated above. For this reason, none will cause the MIC to achieve its underlying objective.

ENA would welcome the opportunity to work with the AER to explore ways that a suitable incentive mechanism could be designed. In the meantime, though, ENA considers that the best approach is to suspend the MIC with immediate effect, including on existing revenue determinations, unless and until relevant improvements can be made.

Continue with the Status quo

- » Not supported by either the AER or ENA as being fit for purpose.

Move to a transparency approach

- » The purpose and objective of any reporting should be clear, noting that the current metric is likely to 'have no meaning' in terms of the MIC objective;
- » In the absence of a more appropriate alternative, a transparency approach could be considered, but only if a suitable metric can be identified;

Revise the performance targets

- » There is no guidance or rationale as to how the targets would be revised, the averaging based on history will not appropriately reflect the current and future operating environments;
- » Changing the targets still does not change the lack of alignment between the incentive value and customer benefit/cost;

- » Given the MCC has no meaning as a measure of the objective, changing the threshold (from \$10 to \$100/MWh) does not give it meaning.

Better target rewards and penalties

- » ENA notes that the AER's options considered in the paper are more complex. Rerunning NEMDE would likely achieve the desired outcome, but would add to AEMO costs to an extent likely to outweigh the benefit of the scheme to consumers;
- » ENA also considers that limiting the scheme to trunk lines vs radial may be problematic to agree and this can also change over time impacting the validity of the scheme.

Network Capability Component

- » ENA agrees with the AER that the Network Capability Component is administratively burdensome. To improve the scheme, ENA considers that the penalties should be tied to the value of the project, rather than the relevant NSP's Maximum Allowable Revenue and that the scheme should be made an optional scheme.

The NCC provides an incentive for TNSPs to identify projects with a high net benefit and a short payback period that improve the capability of the transmission network. These projects are identified and prioritised, discussed with AEMO and approved by the AER. Individual projects must be less than the regulatory investment test for transmission (RIT-T) threshold, currently \$7million and must not involve network augmentation. The total cost of proposed projects cannot exceed 1% of MAR and the annual incentive cannot exceed 1.5% of the average annual MAR. If projects are not completed or improvement targets are not met, then the penalty is up to 3.5% of MAR.

The NCC has delivered substantial consumer benefits since its introduction in 2012. For the regulatory periods spanning 2012-2023, TNSPs undertook 88 priority projects. Projects are required to go through a cost benefit analysis to ensure they deliver sufficient network or customer benefits.

The AER's discussion paper correctly identifies that project numbers have been decreasing. We do not consider that this is an indication that the scheme is no longer effective or that it should be removed. When the scheme was first introduced, TNSPs were able to identify a larger number of projects. Projects are becoming harder to identify as 'low hanging fruit' has largely been picked. In addition, the RIT-T threshold that caps the individual project value has not been increased since 2021, meaning that due to inflation and cost increases, there are less projects that fall under this threshold. ENA suggests a review of the project threshold, including whether it

should be increased above the RIT-T threshold to capture a wider range of projects that deliver substantial consumer and network benefits.

Augmentation of the network to facilitate the transition to renewable energy will remain a key focus for at least the next decade, if not longer. However, this does not mean that low cost, high benefit projects that increase the capability of existing assets do not have an important role to play. Incentivising the identification and delivery of these projects, when the focus is on larger augmentation, may be increasingly necessary. Although project numbers have been decreasing, the scheme may have an increasing role to play in the future as assets age or capability limitations of newer assets emerge or become apparent.

In addition, ENA suggests that the NCC be modified as follows:

- » Enable TNSPs to opt out at the time of each revenue proposal to reduce the administrative burden if projects are unable to be identified;
- » Modify the penalty regime so that the penalty is linked to the project benefit rather than MAR;
- » Reduce administrative burden by removing the requirement for AEMO involvement. NCC projects should be accepted or not based on the TNSP's analysis and assessed through the AER's standard capex review processes.

Service Component

- » ENA recommends that the Service Component (SC) also be considered in this review. The scheme needs to be symmetrical and incentivise good performance. ENA suggests that the X and Y system minutes thresholds are removed from the STPIS, Appendix A and determined through the Revenue Determination process.

While the AER's issues paper does not include the service component in the review, in particular, ENA requests that the AER consider the appropriate treatment of the 'X' and 'Y' thresholds in the Service Component.

X and Y are the system minutes thresholds in the SC. Inflexible system minutes thresholds can result in a TNSP's targets to be zero, in which case the SC becomes a penalty-only measure. This gives the TNSP no incentive to maintain or improve performance although, despite the thresholds falling to zero, improvement can still be achieved in practice. This must be considered in this review because, unlike the SC targets which are set every five years as part of the Revenue Determination process, 'X' and 'Y' are specified in the STPIS instrument.

ENA proposes that X and Y should be removed from the STPIS instrument and set as part of a TNSP's Revenue Determination process.

This is a 'no regrets' change from the AER's perspective. Shifting 'X' and 'Y' to the Revenue Determination process will not require the AER to change the levels, though

in some cases ENA considers that they should be changed. The change proposed here merely gives the AER the ability to change them if it considers this appropriate. This allows improved flexibility for consideration at the time of each Regulatory Proposal and better reflects the agility needed for a transition to renewables. It is also consistent with the scheme's objectives, that is the need to promote transparency and efficient setting of expenditure allowances to maintain reliability throughout the transition.