Transgrid

People. Power. Possibilities.

Regulatory Information Notice Basis of Preparation

2023-28 Transgrid Revised Revenue Proposal

30 August 2022

Contents

1. Introduction

Transgrid operates and manages the major high voltage electricity transmission network in NSW and the ACT as a transmission network service provider, connecting generators, distributors and major end users.

Transgrid is the trading name for the NSW Electricity Networks Operations Pty Ltd (ACN 609 169 959) as a Trustee for the NSW Electricity Networks Operations Trust (ABN 70 250 995 390).

On 23 September 2021, the Australian Energy Regulator (AER) issued Transgrid with a Regulatory Information Notice Under Division 4 of Part 3 of the National Electricity (New South Wales) Law (the 'Reset RIN'), requiring the business to prepare and submit certain information to support the AER's regulatory responsibilities. On 14 January 2022, the AER revoked its 23 September 2021 Reset RIN and replaced this with an updated Reset RIN addressed to the correct Transgrid entity.[1] Otherwise, the Reset RIN workbooks remain unchanged.

This Basis of Preparation document has been prepared to support the audited information package for Transgrid's Revised Revenue Proposal that is due to be submitted to the AER by 30 November 2022. It relates to the audited Service Target Performance Incentive Scheme (STPIS) data set out in Schedule 1, sections 11.1(b) and 11.2(b) of the Reset RIN as follows:

11. Service Target Performance Incentive Scheme

11.1 For the service component of the STPIS, provide the values that TransGrid proposes are to be attributed to the performance incentive scheme parameters for the purposes of the application to TransGrid of the STPIS in the attached Workbook 1 – Forecast, regulatory template 7.9, in two parts:

(a) data for 2016-2020, and the proposed scheme parameters based on that data is to be provided by 31 January 2022;
(b) data for 2017-2021, and the proposed scheme parameters based on that data is to be provided by 30 November 2022;

…

11.2 For the Market Impact Component of the STPIS, provide performance data in accordance with Appendix C of the STPIS for the seven calendar years, in two parts:

(a) Data for 2014-2020 is to be provided by 31 January 2022.
(b) Data for 2015-2021 is to be provided by 30 November 2022.

Transgrid's RIN package for the Revised Revenue Proposal comprised of:

1. The populated RIN worksheets
   a. Workbook 1 – Forecast, RIN 7.9 STPIS
   b. Workbook 2 – MIC – 2021
   c. Resubmission of Workbook 2 – MIC – 2015 to 2020 to reflect AER's STPIS clarification on 4 April 2022

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[1] The Rest RIN issued on 14 January 2022, was addressed to NSW Electricity Networks Operations Pty Ltd as a Trustee for the NSW Electricity Networks Operations Trust (ABN 70 250 995 390) (TransGrid). The Reset RIN issued on 23 September 2021 is addressed to TransGrid Services Pty Ltd as Trustee for TransGrid Services Trust (ABN 94 121 353 950).

      i.   Workbook 2 – MIC - 2015 to reclassify 32 counts of previously non-excluded dispatch intervals to exclusion code 1. This resulted in changes to some 'planned with exclusions' RIN variables in Transgrid's Workbook 1 – Forecast, RIN 7.9 STPIS, Table 7.9.4 submission on 31 January 2022 (i.e. 20 fewer counts in September 2015 and 12 fewer counts in October 2015).

     ii.   Workbook 2 – MIC – 2016-2020 to change the exclusion code 11 to exclusion code 1. This does not affect any RIN variables in Transgrid's Workbook 1 – Forecast, RIN 7.9 STPIS, Table 7.9.4.

2. The Basis of Preparation for historical information covered in these RIN worksheets
3. Review Report by the independent auditor provided as Appendix C to the RIN.

2. Compliance with the RIN Requirements

The Reset RIN outlines the requirements for the Basis of Preparation as follows:

SCHEDULE 2

1.2 For information other than forecast information, prepare a basis of preparation in accordance with the requirements specified in Schedule 1. The basis of preparation must:

- (a) *demonstrate how the information provided is consistent with the requirements of this notice;*
- (b) *explain the source from which TransGrid obtained the information provided;*
- (c) *explain the methodology TransGrid applied to provide the required information, including any assumptions TransGrid made;*
- (d) *explain, in circumstances where TransGrid cannot provide actual information and therefore must provide estimated information:*
  (i) why an estimate was required, including why it was not possible for TransGrid to use actual information;
  (ii) the basis for the estimate, including the approach used, assumptions made and reasons why the estimate is TransGrid's best estimate.
- (e) *explain, in circumstances where TransGrid provides a 'NULL' response as an input for a variable:*
  (i) why TransGrid believes the variable is not applicable for TransGrid.

APPENDIX E: INSTRUCTIONS

1. Part A: General

Basis of Preparation

1.1   TransGrid must explain the basis upon which it prepared information to populate the input cells for all information (other than forecast information) in the regulatory templates (basis of preparation).

1.2   The basis of preparation must be a separate document (or documents) that TransGrid submits with its completed regulatory templates.

1.3   The basis of preparation must follow a logical structure that enables auditors, assurance practitioners and the AER to clearly understand how TransGrid has complied with the requirements of this notice.

1.4   At a minimum, the basis of preparation must meet the requirements of Schedule 2, paragraph 1.2.

1.5   TransGrid may provide additional detail beyond the minimum requirements if TransGrid considers it may assist a user to gain an understanding of the information presented in the regulatory templates.

1.6   When reporting an audit opinion or making an attestation report on the regulatory templates presented by TransGrid, an auditor or assurance practitioner shall opine or attest by reference to TransGrid's basis of preparation.

To promote a common approach across the business to addressing the requirements of the Reset RIN, TransGrid has gathered information from across the business using a template prepared to respond to each of the AER's requirements. This is outlined in the table below.

Data variable & Transgrid's interpretation		Data sources, locations and 'owners'	Estimation or actual information, calculations and assumptions			Variable value	
Variable reference & AER description	Transgrid's interpretation of data variable	Data sources	Is this variable 'Estimated Information' as per AER definition[2]?	How the values for this variable are calculated	Assumptions made to allow calculation / estimation of the variable	Is this variable null?	Why is the variable null?
'Variable_Code' & 'Variable' from worksheet	*If AER definition is not clear, document Transgrid interpretation and its rationale* ***Responds to RIN requirement a)***	*Specify source systems, reports, forms, other RIN variables etc* ***Responds to RIN Requirement b)***	*Yes/No* *If estimate is used for this variable, document:* • *Why an estimate was required, including why it was not possible to use Actual Financial Information or Actual Non-Financial Information* • *Estimate basis, including the approach used, assumptions made and reasons why the estimate is Transgrid's best estimate* ***Responds to RIN Requirement d)***	*Clear description of approach steps / methodology* ***Responds to RIN Requirement c)***	*Clearly describe any assumptions used and the rationale for each assumption* ***Responds to RIN Requirement c)***	*Yes/No*	*Describe why the variable is not applicable for Transgrid* ***Responds to RIN Requirement e)***

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[2] 'Information presented in response to the Notice whose presentation is not Materially dependent on information recorded in the TNSP's historical accounting records or other records used in the normal course of business, and whose presentation for the purposes of the Notice is contingent on judgments and assumptions for which there are valid alternatives, which could lead to a Materially different presentation in

3. Principles of Preparation

Transgrid's response to the RIN has been prepared in accordance with the AER issued *"Regulatory Information Notice Under Division 4 of Part 3 of the National Electricity (New South Wales) Law"* to Transgrid.

In accordance with the AER's instructions Transgrid has provided actual information using 'records used in the normal course of business' wherever this is possible.

Where Transgrid has been unable to provide actual information, the variables have been estimated as follows:

- In the first instance, where actual information exists, but the presentation is contingent of a judgement or assumption, Transgrid has used actual information to prepare the variable and stated the judgement or assumption that has been made.
- Where actual information exists, but the information is incomplete over the time period or by the categories required by the RIN, Transgrid has used the actual information as far as practicable and stated the methodology used to estimate the remaining data.
- Where no actual information is recorded for the variable in the normal course of business, Transgrid has stated the methodology that it has used to estimate the variable required by the AER, including the assumptions made and the data sources used.

By following these principles of preparation, Transgrid considers that where estimates have been provided, these represent the best estimate available for each variable, noting that considerable uncertainty remains with respect to the AER's specific purpose(s) for the information.

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the response to the Notice. If the TNSP inserts a 'NULL' response to a variable in the notices, this will constitute estimated information.'
Transgrid 2024-28 Final RIN Appendix F Definitions.

4. Information Sources

Transgrid has drawn data from a large number of information sources that are used across its business. In most cases it has been necessary to undertake additional analysis to derive the specific information that is required in the RIN response.

The key systems and information sources that have been relied on are summarised in the table below, and are referred to, in the detailed basis of preparation tables in section 5.

Information Source	Brief Description	Supports
Economic Benchmarking RIN 3.6.1	Service Component of Quality of Services.	Workbook 1 – Forecast, Worksheet 7.9 STPIS
TheOS	Transgrid's Outage Management System. Stores information relating to planned and unplanned outages.	Workbook 1 – Forecast, Worksheet 7.9 STPIS
Opslog	Operators' Logs. A Transgrid application used by network operators to keep logs of events that occur in the network.	Workbook 1 – Forecast, Worksheet 7.9 STPIS
StBkend Database	An access database stored on the shared drive (access permissions set to only allow authorised users) used to store detailed information about unplanned outages, with information drawn primarily from TheOS and Opslog.	Workbook 1 – Forecast, Worksheet 7.9 STPIS
High Voltage Operating Diagrams (HVODs)	Substation switchyard diagrams that detail the high voltage equipment, operational nomenclature and electrical connections.	Workbook 1 – Forecast, Worksheet 7.9 STPIS
AEMO SCADA Reports	AEMO's annual email reports monitoring the interruptions to the Supervisory Control and Data Acquisition (SCADA) interface between Transgrid and AEMO.	Workbook 1 – Forecast, Worksheet 7.9 STPIS
Ez2view	A third party GUI application developed by vendor Global Roam, used to access and query National Electricity Market data from AEMO's Market Management System (MMS) database.	Workbook 1 – Forecast, Worksheet 7.9 STPIS
NOS	Network Outage Scheduler (NOS) is AEMO's online database for network outage data and associated market constraints.	Workbook 1 – Forecast, Worksheet 7.9 STPIS

5. Detailed Basis of Preparation

This section outlines the Basis for Preparation for the Reset RIN workbooks in line with the RIN requirements set out in section 2, in particular the following RIN templates:

- Workbook 1 – Forecast
    - Worksheet 7.9 Service Target Performance Incentive Scheme (STPIS)

5.1. Workbook 1 – Forecast

5.1.1. Worksheet 7.9 STPIS

Data variable & Transgrid's interpretation		Data sources, locations and 'owners'	Estimation or actual information, calculations and assumptions			Variable value	
Variable reference & AER description	**Transgrid's interpretation of data variable**	**Data sources**	**Is this variable 'Estimated Information' as per AER definition? (Y/N)**	**How the values for this variable are calculated**	**Assumptions made to allow calculation / estimation of the variable**	**Is this variable null? (Y/N)**	**Why is the variable null?**
7.9.1 Historical performance and proposed floor, caps and targets for the service component of the STPIS							
Transmission Line Fault Outage Rate Performance Actuals in Table 7.9.1	This variable is interpreted as the total number of instantaneous outages (fault outages as defined by the AER) on transmission line and/or underground cable circuits owned and operated by Transgrid, divided by the total number (three phase equivalent) of such transmission lines and/or underground circuits averaged for that calendar year. This measure has excluded outages (as defined in V5 of the AER	Relevant Files: RINB-79-01, RINB-79-02, RINB-79-03, RINB-79-04 and RINB-79-05 The relevant files contain the historical outage data and the associated calculations for this variable, for the 2017 to 2021 calendar years. The "QAPR Comment on Outage" table within the StBkend.accdb database stored on Transgrid's shared drive (with secure access for only staff requiring access). An extract of this table is provided in the "NPR Outages List Linked Table" worksheet. The "QAPR Comment on Outage" Table in StBkend.accdb is populated by importing data into it from THEOS (the business application used by Network Operations staff to record outage data). Each of these outage records in the StBkend database is assigned with an AER code. Selecting the appropriate AER code occasionally requires obtaining additional information from Opslog (a	No. This is actual information.	Every outage record in the "NPR Outages List Linked Table" worksheet of the relevant spreadsheet whose AER code field (column L) is Z, and Component Type field (column P) is TL or UG, is counted across the relevant calendar year and forms this value. Every equipment record in the "Equipment Count Linked Table" worksheet of the relevant spreadsheet whose Component field (column A) is TL or UG, has its AllCircuits count (column G) averaged across each month of the relevant calendar year. This RIN variable is formed by the counted fault outages divided by the averaged equipment count for the calendar year. This value (amongst various others) is presented in the	Accuracy of the record data sources (THEOS and/or Opslog) maintained by the Network Operations group within Transgrid. Accuracy of the System Development Summary documents and/or High Voltage Operating Diagrams produced by the Network Operations group within Transgrid.	Yes (partially)	Only past five years of historical actual performance values are required for the calculation of the service component values for the 2023-28 regulatory period. The 2016 value has been left null as it is not within the 2017 to 2021 five year period and to avoid any confusion in which the floor, target and cap values have been calculated for the 2023-28 regulatory period.

Data variable & Transgrid's interpretation		Data sources, locations and 'owners'	Estimation or actual information, calculations and assumptions			Variable value	
Variable reference & AER description	Transgrid's interpretation of data variable	Data sources	Is this variable 'Estimated Information' as per AER definition? (Y/N)	How the values for this variable are calculated	Assumptions made to allow calculation / estimation of the variable	Is this variable null? (Y/N)	Why is the variable null?
	STPIS) removed from the count. These variables are the same as the corresponding variables reported in the annual EB RIN 3.6.	separate business application used as a diary/logbook by Network Operators). The "tblCircuits_SettingData" table within the StBkend.accdb database stored on Transgrid's shared drive (with secure access for only staff requiring access). An extract of this table is provided in the "Equipment Count Linked Table" worksheet. The data contained in the "tblCircuits_SettingData" table in StBkend.accdb is regularly updated in an incremental manner, based on System Development Summaries and/or High Voltage Operating Diagrams released by the Network Operations group.		"Main" worksheet of the spreadsheet.			
Transformer Fault Outage Rate Performance Actuals in Table 7.9.1	This variable is interpreted as the total number of instantaneous outages (fault outages as defined by the AER) on transformers owned and operated by Transgrid, divided by the total number (three phase equivalent)	Relevant Files: RINB-79-01, RINB-79-02, RINB-79-03, RINB-79-04 and RINB-79-05 The relevant files contain the historical outage data and the associated calculations for this variable, for the 2017 to 2021 calendar years. The "QAPR Comment on Outage" table within the StBkend.accdb database stored on Transgrid's shared drive (with secure access for only staff requiring access). An extract of this table is	No. This is actual information.	Every outage record in the "NPR Outages List Linked Table" worksheet of the relevant spreadsheet whose AER code field (column L) is Z, and Component Type field (column P) is TX, is counted across the relevant calendar year and forms this value. Every equipment record in the "Equipment Count Linked Table" worksheet of the relevant spreadsheet	Accuracy of the record data sources (THEOS and/or Opslog) maintained by the Network Operations group within Transgrid. Accuracy of the System Development Summary documents and/or High Voltage Operating Diagrams produced by the Network Operations group within Transgrid.	Yes (partially)	Only past five years of historical actual performance values are required for the calculation of the service component values for the 2023-28 regulatory period. The 2016 value has been left null as it is not within the 2017 to 2021 five year period and to avoid

Data variable & Transgrid's interpretation		Data sources, locations and 'owners'	Estimation or actual information, calculations and assumptions			Variable value	
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	of such transformer circuits averaged for that calendar year. This measure has excluded outages (as defined in V5 of the AER STPIS) removed from the count.

These variables are the same as the corresponding variables reported in the annual EB RIN 3.6. | provided in the "NPR Outages List Linked Table" worksheet.

The "QAPR Comment on Outage" Table in StBkend.accdb is populated by importing data into it from THEOS (the business application used by Network Operations staff to record outage data). Each of these outage records in the StBkend database is assigned with an AER code.

Selecting the appropriate AER code occasionally requires obtaining additional information from Opslog (a separate business application used as a diary/logbook by Network Operators).

The "tblCircuits_SettingData" table within the StBkend.accdb database stored on Transgrid's shared drive (with secure access for only staff requiring access). An extract of this table is provided in the "Equipment Count Linked Table" worksheet.

The data contained in the "tblCircuits_SettingData" table in StBkend.accdb is regularly updated in an incremental manner, based on System Development Summaries and/or High Voltage Operating Diagrams released by the Network Operations group. | | whose Component field (column A) is TX, has its AllCircuits count (column G) averaged across each month of the relevant calendar year.

This RIN variable is formed by the counted fault outages divided by the averaged equipment count for the calendar year. This value (amongst various others) is presented in the "Main" worksheet of the spreadsheet. | | | any confusion in which the floor, target and cap values have been calculated for the 2023-28 regulatory period. |

Data variable & Transgrid's interpretation		Data sources, locations and 'owners'	Estimation or actual information, calculations and assumptions			Variable value	
Variable reference & AER description	Transgrid's interpretation of data variable	Data sources	Is this variable 'Estimated Information' as per AER definition? (Y/N)	How the values for this variable are calculated	Assumptions made to allow calculation / estimation of the variable	Is this variable null? (Y/N)	Why is the variable null?
Reactive Plant Fault Outage Rate

Performance Actuals in Table 7.9.1 | This variable is interpreted as the total number of instantaneous outages (fault outages as defined by the AER) on Reactors and Capacitors at 66kV and above, and Static VAr Compensators (SVCs) at all voltages, owned and operated by Transgrid, divided by the total number (three phase equivalent) of such reactive plant averaged for that calendar year. This measure has excluded outages (as defined in V5 of the AER STPIS) removed from the count.

These variables are the same as the corresponding variables reported | Relevant Files:

RINB-79-01, RINB-79-02, RINB-79-03, RINB-79-04 and RINB-79-05

The relevant files contain the historical outage data and the associated calculations for this variable, for the 2017 to 2021 calendar years.

The "QAPR Comment on Outage" table within the StBkend.accdb database stored on Transgrid's shared drive (with secure access for only staff requiring access). An extract of this table is provided in the "NPR Outages List Linked Table" worksheet.

The "QAPR Comment on Outage" Table in StBkend.accdb is populated by importing data into it from THEOS (the business application used by Network Operations staff to record outage data). Each of these outage records in the StBkend database is assigned with an AER code.

Selecting the appropriate AER code occasionally requires obtaining additional information from Opslog (a separate business application used as a diary/logbook by Network Operators).

The "tblCircuits_SettingData" table within the StBkend.accdb database stored on Transgrid's shared drive (with secure access for only staff requiring access). An extract of this table is | No. This is actual information. | Every outage record in the "NPR Outages List Linked Table" worksheet of the relevant spreadsheet whose AER code field (column L) is Z, and Component Type field (column P) is CAP or RX or SVC, is counted across the relevant calendar year and forms this value.

Every equipment record in the "Equipment Count Linked Table" worksheet of the relevant spreadsheet whose Component field (column A) is CAP or RX or SVC, has its AllCircuits count (column G) averaged across each month of the relevant calendar year.

This RIN variable is formed by the counted fault outages divided by the averaged equipment count for the calendar year. This value (amongst various others) is presented in the "Main" worksheet of the spreadsheet. | Accuracy of the record data sources (THEOS and/or Opslog) maintained by the Network Operations group within Transgrid.

Accuracy of the System Development Summary documents and/or High Voltage Operating Diagrams produced by the Network Operations group within Transgrid. | Yes (partially) | Only past five years of historical actual performance values are required for the calculation of the service component values for the 2023-28 regulatory period. The 2016 value has been left null as it is not within the 2017 to 2021 five year period and to avoid any confusion in which the floor, target and cap values have been calculated for the 2023-28 regulatory period. |

Data variable & Transgrid's interpretation		Data sources, locations and 'owners'	Estimation or actual information, calculations and assumptions			Variable value	
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	in the annual EB RIN 3.6.	provided in the "Equipment Count Linked Table" worksheet. The data contained in the "tblCircuits_SettingData" table in StBkend.accdb is regularly updated in an incremental manner, based on System Development Summaries and/or High Voltage Operating Diagrams released by the Network Operations group.					
Transmission Line Forced Outage Rate Performance Actuals in Table 7.9.1	This variable is interpreted as the total number of outages that are not instantaneous, however less than 24 hours' notice is given to the customer and/or AEMO (forced outages as defined by the AER) on transmission line and/or underground cable circuits owned and operated by Transgrid, divided by the total number (three phase equivalent) of such	Relevant Files: RINB-79-01, RINB-79-02, RINB-79-03, RINB-79-04 and RINB-79-05 The relevant files contain the historical outage data and the associated calculations for this variable, for the 2017 to 2021 calendar years. The "QAPR Comment on Outage" table within the StBkend.accdb database stored on Transgrid's shared drive (with secure access for only staff requiring access). An extract of this table is provided in the "NPR Outages List Linked Table" worksheet. The "QAPR Comment on Outage" Table in StBkend.accdb is populated by importing data into it from THEOS (the business application used by Network Operations staff to record outage data). Each of these outage records in the	No. This is actual information.	Every outage record in the "NPR Outages List Linked Table" worksheet of the relevant spreadsheet whose AER code field (column L) is E, and Component Type field (column P) is TL or UG, is counted across the relevant calendar year and forms this value. Every equipment record in the "Equipment Count Linked Table" worksheet of the relevant spreadsheet whose Component field (column A) is TL or UG, has its AllCircuits count (column G) averaged across each month of the relevant calendar year. This RIN variable is formed by the counted forced	Accuracy of the record data sources (THEOS and/or Opslog) maintained by the Network Operations group within Transgrid. Accuracy of the System Development Summary documents and/or High Voltage Operating Diagrams produced by the Network Operations group within Transgrid.	Yes (partially)	Only past five years of historical actual performance values are required for the calculation of the service component values for the 2023-28 regulatory period. The 2016 value has been left null as it is not within the 2017 to 2021 five year period and to avoid any confusion in which the floor, target and cap values have been calculated for the

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	transmission lines and/or underground circuits averaged for that calendar year. This measure has excluded outages (as defined in V5 of the AER STPIS) removed from the count. These variables are the same as the corresponding variables reported in the annual EB RIN 3.6.	StBkend database is assigned with an AER code. Selecting the appropriate AER code occasionally requires obtaining additional information from Opslog (a separate business application used as a diary/logbook by Network Operators). The "tblCircuits_SettingData" table within the StBkend.accdb database stored on Transgrid's shared drive (with secure access for only staff requiring access). An extract of this table is provided in the "Equipment Count Linked Table" worksheet. The data contained in the "tblCircuits_SettingData" table in StBkend.accdb is regularly updated in an incremental manner, based on System Development Summaries and/or High Voltage Operating Diagrams released by the Network Operations group.		outages divided by the averaged equipment count for the calendar year. This value (amongst various others) is presented in the "Main" worksheet of the spreadsheet.			2023-28 regulatory period.
Transformer Forced Outage Rate Performance Actuals in Table 7.9.1	This variable is interpreted as the total number of outages that are not instantaneous, however less than 24 hours' notice is given to the customer and/or AEMO (forced outages as defined by the	Relevant Files: RINB-79-01, RINB-79-02, RINB-79-03, RINB-79-04 and RINB-79-05 The relevant files contain the historical outage data and the associated calculations for this variable, for the 2017 to 2021 calendar years. The "QAPR Comment on Outage" table within the StBkend.accdb database stored on Transgrid's shared drive (with	No. This is actual information.	Every outage record in the "NPR Outages List Linked Table" worksheet of the relevant spreadsheet whose AER code field (column L) is E, and Component Type field (column P) is TX, is counted across the relevant calendar year and forms this value.	Accuracy of the record data sources (THEOS and/or Opslog) maintained by the Network Operations group within Transgrid. Accuracy of the System Development Summary documents and/or High Voltage Operating Diagrams	Yes (partially)	Only past five years of historical actual performance values are required for the calculation of the service component values for the 2023-28 regulatory period. The 2016 value has been left

Data variable & Transgrid's interpretation		Data sources, locations and 'owners'	Estimation or actual information, calculations and assumptions			Variable value	
Variable reference & AER description	Transgrid's interpretation of data variable	Data sources	Is this variable 'Estimated Information' as per AER definition? (Y/N)	How the values for this variable are calculated	Assumptions made to allow calculation / estimation of the variable	Is this variable null? (Y/N)	Why is the variable null?
	AER) on transformers owned and operated by Transgrid, divided by the total number (three phase equivalent) of such transformer circuits averaged for that calendar year. This measure has excluded outages (as defined in V5 of the AER STPIS) removed from the count. These variables are the same as the corresponding variables reported in the annual EB RIN 3.6.	secure access for only staff requiring access). An extract of this table is provided in the "NPR Outages List Linked Table" worksheet. The "QAPR Comment on Outage" Table in StBkend.accdb is populated by importing data into it from THEOS (the business application used by Network Operations staff to record outage data). Each of these outage records in the StBkend database is assigned with an AER code. Selecting the appropriate AER code occasionally requires obtaining additional information from Opslog (a separate business application used as a diary/logbook by Network Operators). The "tblCircuits_SettingData" table within the StBkend.accdb database stored on Transgrid's shared drive (with secure access for only staff requiring access). An extract of this table is provided in the "Equipment Count Linked Table" worksheet. The data contained in the "tblCircuits_SettingData" table in StBkend.accdb is regularly updated in an incremental manner, based on System Development Summaries and/or High Voltage Operating Diagrams released by the Network Operations group.		Every equipment record in the "Equipment Count Linked Table" worksheet of the relevant spreadsheet whose Component field (column A) is TX, has its AllCircuits count (column G) averaged across each month of the relevant calendar year. This RIN variable is formed by the counted forced outages divided by the averaged equipment count for the calendar year. This value (amongst various others) is presented in the "Main" worksheet of the spreadsheet.	produced by the Network Operations group within Transgrid.		null as it is not within the 2017 to 2021 five year period and to avoid any confusion in which the floor, target and cap values have been calculated for the 2023-28 regulatory period.

Data variable & Transgrid's interpretation		Data sources, locations and 'owners'	Estimation or actual information, calculations and assumptions			Variable value	
Variable reference & AER description	Transgrid's interpretation of data variable	Data sources	Is this variable 'Estimated Information' as per AER definition? (Y/N)	How the values for this variable are calculated	Assumptions made to allow calculation / estimation of the variable	Is this variable null? (Y/N)	Why is the variable null?
Reactive Plant Forced Outage Rate

Performance Actuals in Table 7.9.1 | This variable is interpreted as the total number of outages that are not instantaneous, however less than 24 hours' notice is given to the customer and/or AEMO (forced outages as defined by the AER) on Reactors and Capacitors at 66kV and above, and Static VAr Compensators (SVCs) at all voltages, owned and operated by Transgrid, divided by the total number (three phase equivalent) of such reactive plant averaged for that calendar year. This measure has excluded outages (as defined in V5 of the AER STPIS) removed from the count.

These variables are the same as the corresponding | Relevant Files:

RINB-79-01, RINB-79-02, RINB-79-03, RINB-79-04 and RINB-79-05

The relevant files contain the historical outage data and the associated calculations for this variable, for the 2017 to 2021 calendar years.

The "QAPR Comment on Outage" table within the StBkend.accdb database stored on Transgrid's shared drive (with secure access for only staff requiring access). An extract of this table is provided in the "NPR Outages List Linked Table" worksheet.

The "QAPR Comment on Outage" Table in StBkend.accdb is populated by importing data into it from THEOS (the business application used by Network Operations staff to record outage data). Each of these outage records in the StBkend database is assigned with an AER code.

Selecting the appropriate AER code occasionally requires obtaining additional information from Opslog (a separate business application used as a diary/logbook by Network Operators).

The "tblCircuits_SettingData" table within the StBkend.accdb database stored on Transgrid's shared drive (with secure access for only staff requiring access). An extract of this table is | No. This is actual information. | Every outage record in the "NPR Outages List Linked Table" worksheet of the relevant spreadsheet whose AER code field (column L) is E, and Component Type field (column P) is CAP or RX or SVC, is counted across the relevant calendar year and forms this value.

Every equipment record in the "Equipment Count Linked Table" worksheet of the relevant spreadsheet whose Component field (column A) is CAP or RX or SVC, has its AllCircuits count (column G) averaged across each month of the relevant calendar year.

This RIN variable is formed by the counted forced outages divided by the averaged equipment count for the calendar year. This value (amongst various others) is presented in the "Main" worksheet of the spreadsheet. | Accuracy of the record data sources (THEOS and/or Opslog) maintained by the Network Operations group within Transgrid.

Accuracy of the System Development Summary documents and/or High Voltage Operating Diagrams produced by the Network Operations group within Transgrid. | Yes (partially) | Only past five years of historical actual performance values are required for the calculation of the service component values for the 2023-28 regulatory period. The 2016 value has been left null as it is not within the 2017 to 2021 five year period and to avoid any confusion in which the floor, target and cap values have been calculated for the 2023-28 regulatory period. |

Data variable & Transgrid's interpretation		Data sources, locations and 'owners'	Estimation or actual information, calculations and assumptions			Variable value	
Variable reference & AER description	**Transgrid's interpretation of data variable**	**Data sources**	**Is this variable 'Estimated Information' as per AER definition? (Y/N)**	**How the values for this variable are calculated**	**Assumptions made to allow calculation / estimation of the variable**	**Is this variable null? (Y/N)**	**Why is the variable null?**
	variables reported in the annual EB RIN 3.6.	provided in the "Equipment Count Linked Table" worksheet. The data contained in the "tblCircuits_SettingData" table in StBkend.accdb is regularly updated in an incremental manner, based on System Development Summaries and/or High Voltage Operating Diagrams released by the Network Operations group.					
Loss of Supply Event Frequency > (x) System Minutes

Performance Actuals in Table 7.9.1 | This is taken to be the number of unplanned outages in the relevant year entailing a loss of supply exceeding the 'X' threshold set by the AER for Transgrid (which is 0.05 system minutes), subtracting any applicable exclusions as defined by the AER STPIS V5.

These variables are the same as the corresponding variables reported | Relevant Files: RINB-79-01, RINB-79-02, RINB-79-03, RINB-79-04, RINB-79-05, RINB-79-18 and RINB-79-19 The relevant files contain the historical loss of supply event data and the associated calculations for this variable, for the 2017 to 2021 calendar years. The "ENS Lost Load" table within the StBkend.accdb database stored on Transgrid's shared drive (with secure access for only staff requiring access). An extract of this table is provided in the "ENS Lost Load Linked Table" worksheet. The "ENS Lost Load" Table in StBkend.accdb is populated by manually entering data into it using information sourced from THEOS (the business application used by Network Operations staff to record outage data) and/or Opslog (a separate business | No. This is actual information. | Every outage record in the "ENS Lost Load Linked Table" worksheet of the relevant spreadsheet which is not excluded (i.e. column N is false) and whose system minute value (column AD) exceeds the 0.05 system minute threshold, is counted across the relevant calendar year and forms this value. This RIN variable (amongst various others) is presented in the "Main" worksheet of the spreadsheet

The mathematical relationship between MWh and system minutes is: MWh = system minutes / 60 * (record MW demand). The record MW demand was obtained from the | Accuracy of the record data sources (THEOS and/or Opslog) maintained by the Network Operations group within Transgrid. Accuracy of data from AEMO. | Yes (partially) | Only past five years of historical actual performance values are required for the calculation of the service component values for the 2023-28 regulatory period. The 2016 value has been left null as it is not within the 2017 to 2021 five year period and to avoid any confusion in which the floor, target and cap values have been calculated for the 2023-28 regulatory period. |

Data variable & Transgrid's interpretation		Data sources, locations and 'owners'	Estimation or actual information, calculations and assumptions			Variable value	
Variable reference & AER description	**Transgrid's interpretation of data variable**	**Data sources**	**Is this variable 'Estimated Information' as per AER definition? (Y/N)**	**How the values for this variable are calculated**	**Assumptions made to allow calculation / estimation of the variable**	**Is this variable null? (Y/N)**	**Why is the variable null?**
	in the annual EB RIN 3.6.	application used as a diary/logbook by Network Operators). The "Peak Demand" table in within the StBkend.accdb database stored on Transgrid's shared drive (with secure access for only staff requiring access). An extract of this table is provided in the "Peak Demand Linked Table" worksheet. The "Peak Demand" Table in StBkend.accdb is populated by manually entering peak demand data using information sourced from AEMO.		2012 National Electricity Forecasting Report by AEMO (shortcut RINB-79-18 & report RINB-79-19), on page 4-9.			
Loss of Supply Event Frequency > (y) System Minutes Performance Actuals in Table 7.9.1	This is taken to be the number of unplanned outages in the relevant year entailing a loss of supply exceeding the 'Y' threshold set by the AER for Transgrid (which is 0.25 system minutes), subtracting any applicable exclusions as defined by the AER STPIS V5. These variables are the same as the corresponding	Relevant Files: RINB-79-01, RINB-79-02, RINB-79-03, RINB-79-04, RINB-79-05, RINB-79-18 and RINB-79-19 The relevant files contain the historical loss of supply event data and the associated calculations for this variable, for the 2017 to 2021 calendar years. The "ENS Lost Load" table within the StBkend.accdb database stored on Transgrid's shared drive (with secure access for only staff requiring access). An extract of this table is provided in the "ENS Lost Load Linked Table" worksheet. The "ENS Lost Load" Table in StBkend.accdb is populated by manually entering data into it using information sourced from THEOS (the business application used by Network	No. This is actual information.	Every outage record in the "ENS Lost Load Linked Table" worksheet of the relevant spreadsheet which is not excluded (i.e. column N is false) and whose system minute value (column AD) exceeds the 0.25 system minute threshold, is counted across the relevant calendar year and forms this value. This RIN variable (amongst various others) is presented in the "Main" worksheet of the spreadsheet The mathematical relationship between MWh and system minutes is: MWh = system minutes / 60 * (record MW demand).	Accuracy of the record data sources (THEOS and/or Opslog) maintained by the Network Operations group within Transgrid. Accuracy of data from AEMO.	Yes (partially)	Only past five years of historical actual performance values are required for the calculation of the service component values for the 2023-28 regulatory period. The 2016 value has been left null as it is not within the 2017 to 2021 five year period and to avoid any confusion in which the floor, target and cap values have been calculated for the

Data variable & Transgrid's interpretation		Data sources, locations and 'owners'	Estimation or actual information, calculations and assumptions			Variable value	
Variable reference & AER description	**Transgrid's interpretation of data variable**	**Data sources**	**Is this variable 'Estimated Information' as per AER definition? (Y/N)**	**How the values for this variable are calculated**	**Assumptions made to allow calculation / estimation of the variable**	**Is this variable null? (Y/N)**	**Why is the variable null?**
	variables reported in the annual EB RIN 3.6.	Operations staff to record outage data) and/or Opslog (a separate business application used as a diary/logbook by Network Operators). The "Peak Demand" table in within the StBkend.accdb database stored on Transgrid's shared drive (with secure access for only staff requiring access). An extract of this table is provided in the "Peak Demand Linked Table" worksheet. The "Peak Demand" Table in StBkend.accdb is populated by manually entering peak demand data using information sourced from AEMO.		The record MW demand was obtained from the 2012 National Electricity Forecasting Report by AEMO (shortcut RINB-79-18 & report RINB-79-19), on page 4-9.			2023-28 regulatory period.
Average Outage Duration Performance Actuals in Table 7.9.1	This is the average duration in minutes of all unplanned outages in a given year involving a loss of supply, which are not excluded (as defined by the AER STPIS V5). These variables are the same as the corresponding variables reported in the annual EB RIN 3.6.	Relevant Files: RINB-79-01, RINB-79-02, RINB-79-03, RINB-79-04, RINB-79-05 The relevant files contain the historical loss of supply event data and the associated calculations for this variable, for the 2017 to 2021 calendar years. The "ENS Lost Load" table within the StBkend.accdb database stored on Transgrid's shared drive (with secure access for only staff requiring access). An extract of this table is provided in the "ENS Lost Load Linked Table" worksheet. The "ENS Lost Load" Table in StBkend.accdb is populated by manually entering data into it using information sourced from THEOS (the	No. This is actual information.	Every outage record in the "ENS Lost Load Linked Table" worksheet of the relevant spreadsheet which is not excluded (i.e. column N contains FALSE), has its Lost Load Time Hrs (column E) averaged across the relevant calendar year. This is subsequently multiplied by 60 to convert from hours to minutes, which forms this value. This RIN variable (amongst various others) is presented in the "Main" worksheet of the spreadsheet.	Accuracy of the record data sources (THEOS and/or Opslog) maintained by the Network Operations group within Transgrid. Accuracy of data from AEMO.	Yes (partially)	Only past five years of historical actual performance values are required for the calculation of the service component values for the 2023-28 regulatory period. The 2016 value has been left null as it is not within the 2017 to 2021 five year period and to avoid any confusion in which the floor, target and cap values have been

Data variable & Transgrid's interpretation		Data sources, locations and 'owners'		Estimation or actual information, calculations and assumptions			Variable value	
Variable reference & AER description	Transgrid's interpretation of data variable	Data sources	Is this variable 'Estimated Information' as per AER definition? (Y/N)	How the values for this variable are calculated	Assumptions made to allow calculation / estimation of the variable	Is this variable null? (Y/N)	Why is the variable null?
		business application used by Network Operations staff to record outage data) and/or Opslog (a separate business application used as a diary/logbook by Network Operators).						calculated for the 2023-28 regulatory period.
Failure of Protection System

Performance Actuals in Table 7.9.1 | Number of events in a given year where the protection system does not operate for a fault or operates where there is no actual fault.

These variables are the same as the corresponding variables reported in the annual EB RIN 3.6. | Relevant Files:

RINB-79-01, RINB-79-02, RINB-79-03, RINB-79-04, RINB-79-05

The relevant files contain the historical loss of supply event data and the associated calculations for this variable, for the 2017 to 2021 calendar years.

The "QAPR Comment on Outage" table within the StBkend.accdb database stored on Transgrid's shared drive (with secure access for only staff requiring access). An extract of this table is provided in the "NPR Outages List Linked Table" worksheet.

The "QAPR Comment on Outage" Table in StBkend.accdb is populated by importing data into it from THEOS (the business application used by Network Operations staff to record outage data). Each of these outage records in the StBkend database is populated with a TRUE/FALSE value for the AER Protection Failure field.

Selecting the appropriate AER Protection Failure value occasionally | No. This is actual information. | Every outage record in the "NPR Outages List Linked Table" worksheet of the relevant spreadsheet classified as a Protection Failure (i.e. column AL contains TRUE), is counted across the relevant calendar year and forms this value. This RIN variable (amongst various others) is presented in the "Main" worksheet of the spreadsheet. | Accuracy of source data (THEOS and/or Opslog) maintained by the Network Operations group within Transgrid. | Yes (partially) | Only past five years of historical actual performance values are required for the calculation of the service component values for the 2023-28 regulatory period. The 2016 value has been left null as it is not within the 2017 to 2021 five year period and to avoid any confusion in which the floor, target and cap values have been calculated for the 2023-28 regulatory period. |

Data variable & Transgrid's interpretation		Data sources, locations and 'owners'	Estimation or actual information, calculations and assumptions			Variable value	
Variable reference & AER description	Transgrid's interpretation of data variable	Data sources	Is this variable 'Estimated Information' as per AER definition? (Y/N)	How the values for this variable are calculated	Assumptions made to allow calculation / estimation of the variable	Is this variable null? (Y/N)	Why is the variable null?
		requires obtaining additional information from Opslog (a separate business application used as a diary/logbook by Network Operators).					
Incorrect Operational Isolation of Primary or Secondary Equipment

Performance Actuals in Table 7.9.1 | Number of events in a given year where the primary or secondary equipment is not properly isolated during scheduled or emergency maintenance. Incorrect isolation is defined as any accidental or deliberate action by a staff member or contractor that results in an unplanned outage. No data is available to indicate the occurrence of incorrect isolation action which did not lead to unplanned outages. | Relevant Files:

RINB-79-01, RINB-79-02, RINB-79-03, RINB-79-04, RINB-79-05

The relevant files contain the historical loss of supply event data and the associated calculations for this variable, for the 2017 to 2021 calendar years.

The "QAPR Comment on Outage" table within the StBkend.accdb database stored on Transgrid's shared drive (with secure access for only staff requiring access). An extract of this table is provided in the "NPR Outages List Linked Table" worksheet.

The "QAPR Comment on Outage" Table in StBkend.accdb is populated by importing data into it from THEOS (the business application used by Network Operations staff to record outage data). Each of these outage records in the StBkend database is populated with a TRUE/FALSE value for the AER Incorrect Isolation field. Selecting the appropriate AER Incorrect Isolation | No. This is actual information. | Every outage record in the "NPR Outages List Linked Table" worksheet of the relevant spreadsheet classified as an Incorrect Isolation (i.e. column AM contains TRUE), is counted across the relevant calendar year and forms this value. This RIN variable (amongst various others) is presented in the "Main" worksheet of the spreadsheet. | Accuracy of source data (THEOS and/or Opslog) maintained by the Network Operations group within Transgrid. | Yes (partially) | Only past five years of historical actual performance values are required for the calculation of the service component values for the 2023-28 regulatory period. The 2016 value has been left null as it is not within the 2017 to 2021 five year period and to avoid any confusion in which the floor, target and cap values have been calculated for the 2023-28 regulatory period. |

Data variable & Transgrid's interpretation		Data sources, locations and 'owners'	Estimation or actual information, calculations and assumptions			Variable value	
Variable reference & AER description	Transgrid's interpretation of data variable	Data sources	Is this variable 'Estimated Information' as per AER definition? (Y/N)	How the values for this variable are calculated	Assumptions made to allow calculation / estimation of the variable	Is this variable null? (Y/N)	Why is the variable null?
	These variables are the same as the corresponding variables reported in the annual EB RIN 3.6.	value occasionally requires obtaining additional information from Opslog (a separate business application used as a diary/logbook by Network Operators).					
Material Failure of SCADA

Performance Actuals in Table 7.9.1 | The number of Transgrid SCADA outage events advised by AEMO to Transgrid in any given year.

These variables are the same as the corresponding variables reported in the annual EB RIN 3.6. | Relevant Files:
RINB-79-06, RINB-79-07, RINB-79-08, RINB-79-09, RINB-79-10

This data is sourced from periodic email reports from AEMO, listing the monthly counts of such events. | No. This is actual information. | This value was calculated by counting all occurrences of SCADA outages reported from AEMO to Transgrid, for the relevant calendar year. AEMO is responsible for monitoring and reporting this variable. The 'Num' column within AEMO's reports contains the monthly count of such events. | Accuracy of data from AEMO. | Yes (partially) | Only past five years of historical actual performance values are required for the calculation of the service component values for the 2023-28 regulatory period. The 2016 value has been left null as it is not within the 2017 to 2021 five year period and to avoid any confusion in which the floor, target and cap values have been calculated for the 2023-28 regulatory period. |

Data variable & Transgrid's interpretation		Data sources, locations and 'owners'	Estimation or actual information, calculations and assumptions			Variable value	
Variable reference & AER description	**Transgrid's interpretation of data variable**	**Data sources**	**Is this variable 'Estimated Information' as per AER definition? (Y/N)**	**How the values for this variable are calculated**	**Assumptions made to allow calculation / estimation of the variable**	**Is this variable null? (Y/N)**	**Why is the variable null?**
Proposed Floor, Target and Cap values (for all Service Component parameters in Table 7.9.1)	These proposed floor, targets, and caps for the Service Component STPIS parameters in Table 7.9.1 of the RIN template are the proposed performance values that will earn Transgrid the maximum penalty, zero incentive, and maximum incentive respectively for each measure in the 2023-2028 regulatory control period. This is done based on historical performance actuals during the calendar years 2017-2021.	The source data for calculating these floor, caps, and targets are all the preceding variables entered as Performance Actuals into Table 7.9.1 of the RIN template. The proposed floor, targets, and caps are determined on the basis of this input data.	No. This is actual information.	The report RINB-79-20 contains the method of determination for the proposed floor, targets, and caps of each STPIS Service Component parameter. The final outputs of these calculations, which form the values entered into the RIN template, are presented in the report. In summary, the @Risk plug-in of Microsoft Excel is used to determine a probability density function (from a set of predefined distribution functions) and associated distribution parameters, which best fit the input data. The 5th and 95th percentile values of these best fitting probability density functions form the caps and floor respectively, while the targets are set to the arithmetic mean of the input data. The RINB-79-20 report goes into full technical detail in describing the manner in which these values are calculated.	Any previously stated assumption apply for the input data, as they are used to determine the floor, targets and caps. .	No	

Data variable & Transgrid's interpretation		Data sources, locations and 'owners'	Estimation or actual information, calculations and assumptions			Variable value	
Variable reference & AER description	Transgrid's interpretation of data variable	Data sources	Is this variable 'Estimated Information' as per AER definition? (Y/N)	How the values for this variable are calculated	Assumptions made to allow calculation / estimation of the variable	Is this variable null? (Y/N)	Why is the variable null?
7.9.4 Market impact component							
Market Impact Parameter, Planned, Without Exclusions (Table 7.9.4)	The number of binding constraint dispatch periods with a marginal cost of constraint >$10/MWh due to Transgrid's planned outages, including those that are excluded (as defined within the AER STPIS V5), for the relevant month in Table 7.9.4 of the RIN template. A planned outage is defined by the AER as one with notice not less than 24 hours.	Relevant Files: RINB-79-11, RINB-79-12, RINB-79-13, RINB-79-14, RINB-79-15, RINB-79-16 and RINB-79-17 The relevant files contain the market constraint data and associated calculations to determine these values, for each month of the 2015, 2016, 2017, 2018, 2019, 2020 and 2021 calendar years respectively. The data in the spreadsheets were sourced from the spreadsheet files which were submitted to the AER for the corresponding calendar year's STPIS submission. The underlying data is from various sources including THEOS (the business application used by Network Operations staff to record outage data), Opslog (a separate business application used as a diary/logbook by Network Operators), ez2view (a software package developed by 3rd party vendor Global Roam, used to retrieve National Electricity Market data from AEMO), and NOS (AEMO's online database for network outage data resulting in market constraints).	No. This is actual information.	The spreadsheet files which were submitted to the AER as part of the STPIS submissions were used as the source data for determining the values entered into Table 7.9.4 of this RIN template. Any adjustments or information requests made by the AER during their process of assessing Transgrid's STPIS submission were subsequently made to these spreadsheets, so that the data presented in this RIN template reflects the AER's assessment. Each market constraint record in these spreadsheets was classified as PLANNED or UNPLANNED, in order to facilitate counting the required quantities for Table 7.9.4 of this RIN template. Each qualifying market constraint record due to a PLANNED outage (regardless of whether excluded or not) is counted to form this variable, in	Accuracy of National Electricity Market data from AEMO, which is provided via the ez2view software and NOS. Accuracy of the record data sources (THEOS and/or Opslog) maintained by the Network Operations group within Transgrid	Yes (partially)	Only past seven years of historical actual performance values are required for the calculation of the market impact component values for the 2023-28 regulatory period. The 2014 value has been left null as it is not within the 2015 to 2021 seven year period and to avoid any confusion in which the floor, target and cap values have been calculated for the 2023-28 regulatory period.

Data variable & Transgrid's interpretation		Data sources, locations and 'owners'	Estimation or actual information, calculations and assumptions			Variable value	
Variable reference & AER description	**Transgrid's interpretation of data variable**	**Data sources**	**Is this variable 'Estimated Information' as per AER definition? (Y/N)**	**How the values for this variable are calculated**	**Assumptions made to allow calculation / estimation of the variable**	**Is this variable null? (Y/N)**	**Why is the variable null?**
				each of the seven relevant files.			
Market Impact Parameter, Planned, With Exclusions (Table 7.9.4)	The number of binding constraint dispatch periods with a marginal cost of constraint >$10/MWh due to Transgrid's planned outages, not including those that are excluded (as defined within the AER STPIS V5), for the relevant month in Table 7.9.4 of the RIN template. A planned outage is defined by the AER as one with notice not less than 24 hours.	Relevant Files: RINB-79-11, RINB-79-12, RINB-79-13, RINB-79-14, RINB-79-15, RINB-79-16 and RINB-79-17 The relevant files contain the market constraint data and associated calculations to determine these values, for each month of the 2015, 2016, 2017, 2018, 2019, 2020 and 2021 calendar years respectively. The data in the spreadsheets were sourced from the spreadsheet files which were submitted to the AER for the corresponding calendar year's STPIS submission. The underlying data is from various sources including THEOS (the business application used by Network Operations staff to record outage data), Opslog (a separate business application used as a diary/logbook by Network Operators), ez2view (a software package developed by 3rd party vendor Global Roam, used to retrieve National Electricity Market data from AEMO), and NOS (AEMO's	No. This is actual information.	The spreadsheet files which were submitted to the AER as part of the STPIS submissions were used as the source data for determining the values entered into Table 7.9.4 of this RIN template. Any adjustments or information requests made by the AER during their process of assessing Transgrid's STPIS submission were subsequently made to these spreadsheets, so that the data presented in this RIN template reflects the AER's assessment. Each market constraint record in these spreadsheets was classified as PLANNED or UNPLANNED, in order to facilitate counting the required quantities for Table 7.9.4 of this RIN template.	Accuracy of National Electricity Market data from AEMO, which is provided via the ez2view software and NOS. Accuracy of the record data sources (THEOS and/or Opslog) maintained by the Network Operations group within Transgrid	Yes (partially)	Only past seven years of historical actual performance values are required for the calculation of the market impact component values for the 2023-28 regulatory period. The 2014 value has been left null as it is not within the 2015 to 2021 seven year period and to avoid any confusion in which the floor, target and cap values have been calculated for the 2023-28 regulatory period.

Data variable & Transgrid's interpretation		Data sources, locations and 'owners'		Estimation or actual information, calculations and assumptions			Variable value	
Variable reference & AER description	Transgrid's interpretation of data variable	Data sources	Is this variable 'Estimated Information' as per AER definition? (Y/N)	How the values for this variable are calculated	Assumptions made to allow calculation / estimation of the variable		Is this variable null? (Y/N)	Why is the variable null?
		online database for network outage data resulting in market constraints).		Each qualifying market constraint record due to a PLANNED outage that is not excluded is counted to form this variable, in each of the seven relevant files.				
Market Impact Parameter, Unplanned, Without Exclusions (Table 7.9.4)	The number of binding constraint dispatch periods with a marginal cost of constraint >$10/MWh due to Transgrid's unplanned outages, including those that are excluded (as defined within the AER STPIS V5), for the relevant month in Table 7.9.4 of the RIN template. An unplanned outage is defined by the AER as one with notice less than 24 hours.	Relevant Files: RINB-79-11, RINB-79-12, RINB-79-13, RINB-79-14, RINB-79-15, RINB-79-16 and RINB-79-17 The relevant files contain the market constraint data and associated calculations to determine these values, for each month of the 2015, 2016, 2017, 2018, 2019, 2020 and 2021 calendar years respectively. The data in the spreadsheets were sourced from the spreadsheet files which were submitted to the AER for the corresponding calendar year's STPIS submission. Because this RIN table 7.9.4 requests data itemised by month, the annual unplanned events limit cap defined in STPIS is not applied to these variables. This is to prevent the ambiguity that would otherwise result, regarding which month(s) the counts in excess of the cap would be subtracted from. The underlying data is from various sources including THEOS (the business	No. This is actual information.	The spreadsheet files which were submitted to the AER as part of the STPIS submissions were used as the source data for determining the values entered into Table 7.9.4 of this RIN template. Any adjustments or information requests made by the AER during their process of assessing Transgrid's STPIS submission were subsequently made to these spreadsheets, so that the data presented in this RIN template reflects the AER's assessment. Each market constraint record in these spreadsheets was classified as PLANNED or UNPLANNED, in order to facilitate counting the required quantities for Table 7.9.4 of this RIN template.	Accuracy of National Electricity Market data from AEMO, which is provided via the ez2view software and NOS. Accuracy of the record data sources (THEOS and/or Opslog) maintained by the Network Operations group within Transgrid		Yes (partially)	Only past seven years of historical actual performance values are required for the calculation of the market impact component values for the 2023-28 regulatory period. The 2014 value has been left null as it is not within the 2015 to 2021 seven year period and to avoid any confusion in which the floor, target and cap values have been calculated for the 2023-28 regulatory period.

Data variable & Transgrid's interpretation		Data sources, locations and 'owners'	Estimation or actual information, calculations and assumptions			Variable value	
Variable reference & AER description	Transgrid's interpretation of data variable	Data sources	Is this variable 'Estimated Information' as per AER definition? (Y/N)	How the values for this variable are calculated	Assumptions made to allow calculation / estimation of the variable	Is this variable null? (Y/N)	Why is the variable null?
		application used by Network Operations staff to record outage data), Opslog (a separate business application used as a diary/logbook by Network Operators), ez2view (a software package developed by 3rd party vendor Global Roam, used to retrieve National Electricity Market data from AEMO), and NOS (AEMO's online database for network outage data resulting in market constraints).		Each qualifying market constraint record due to an UNPLANNED outage (regardless of whether excluded or not) is counted to form this variable, in each of the seven relevant files.			
Market Impact Parameter, Unplanned, With Exclusions (Table 7.9.4)	The number of binding constraint dispatch periods with a marginal cost of constraint >$10/MWh due to Transgrid's unplanned outages, not including those that are excluded (as defined within the AER STPIS V5), for the relevant month in Table 7.9.4 of the RIN template. An unplanned outage is defined by the AER as one with notice less than 24 hours.	Relevant Files: RINB-79-11, RINB-79-12, RINB-79-13, RINB-79-14, RINB-79-15, RINB-79-16 and RINB-79-17 The relevant files contain the market constraint data and associated calculations to determine these values, for each month of the 2015, 2016, 2017, 2018, 2019, 2020 and 2021calendar years respectively. The data in the spreadsheets were sourced from the spreadsheet files which were submitted to the AER for the corresponding calendar year's STPIS submission. Because this RIN table 7.9.4 requests data itemised by month, the annual unplanned events limit cap defined in STPIS is not applied to these variables. This is to prevent the ambiguity that would otherwise result, regarding which	No. This is actual information.	The spreadsheet files which were submitted to the AER as part of the STPIS submissions were used as the source data for determining the values entered into Table 7.9.4 of this RIN template. Any adjustments or information requests made by the AER during their process of assessing Transgrid's STPIS submission were subsequently made to these spreadsheets, so that the data presented in this RIN template reflects the AER's assessment. Each market constraint record in these spreadsheets was classified as PLANNED or UNPLANNED, in order to facilitate counting the required quantities for	Accuracy of National Electricity Market data from AEMO, which is provided via the ez2view software and NOS. Accuracy of the record data sources (THEOS and/or Opslog) maintained by the Network Operations group within Transgrid	Yes (partially)	Only past seven years of historical actual performance values are required for the calculation of the market impact component values for the 2023-28 regulatory period. The 2014 value has been left null as it is not within the 2015 to 2021 seven year period and to avoid any confusion in which the floor, target and cap values have been calculated for the 2023-28 regulatory period.

Data variable & Transgrid's interpretation		Data sources, locations and 'owners'	Estimation or actual information, calculations and assumptions			Variable value	
Variable reference & AER description	Transgrid's interpretation of data variable	Data sources	Is this variable 'Estimated Information' as per AER definition? (Y/N)	How the values for this variable are calculated	Assumptions made to allow calculation / estimation of the variable	Is this variable null? (Y/N)	Why is the variable null?
		month(s) the counts in excess of the cap would be subtracted from. The underlying data is from various sources including THEOS (the business application used by Network Operations staff to record outage data), Opslog (a separate business application used as a diary/logbook by Network Operators), ez2view (a software package developed by 3rd party vendor Global Roam, used to retrieve National Electricity Market data from AEMO), and NOS (AEMO's online database for network outage data resulting in market constraints).		Table 7.9.4 of this RIN template. Each qualifying market constraint record due to an UNPLANNED outage that is not excluded is counted to form this variable, in each of the seven relevant files.			