Transmission Economic Benchmarking RIN, 2013-14

Basis of Preparation

As submitted to the AER

31 October 2014

CONTACT

This document is the responsibility of the Strategy and Stakeholder Relations Group within Tasmanian Networks Pty Ltd (ABN 24 167 357 299). Please contact the indicated owner of the document with any queries or suggestions.

RESPONSIBILITIES

Document Owner

Regulation Leader
Tasmanian Networks Pty Ltd
1 – 7 Maria Street
Lenah Valley TAS 7008
email: networktariff@Tasnetworks.com.au

Document Management

Strategy and Stakeholder Relations Group

Introduction

From 1 July 2014, TasNetworks (ABN 24 167 357 299) assumed the responsibilities of Transend Networks Pty Ltd, the owner and operator of the transmission system in Tasmania.

This document (RIN Response) represents the response of TasNetworks to the Regulatory Information Notice (RIN) issued in November 2013 by the Australian Energy Regulator (AER), under Division 4 of Part 3 of the National Electricity (Tasmania) Law, for the purposes of collecting information for economic benchmarking analysis.

The information and explanatory material included in this RIN Response relate to Transend's activities as Tasmania's licensed Transmission Network Service Provider (TNSP) during the 2013-14 Regulatory Year.

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Worksheet 3.1 Revenue

Table 3.1.1 Revenue Group of chargeable quantity

(a) Consistency of information with the requirements of the RIN

Revenue information presented has been split in accordance with the categories in the templates. Only prescribed transmission revenues have been included in the worksheet.

(b) Source of information

Reported prescribed transmission revenues have been extracted from TasNetworks' metering and billing system, or a summary thereof. Revenue is therefore based on actual revenue earned and invoiced during the financial year.

(c) Methodology applied to determine information, including assumptions made

Reported prescribed transmission revenues have been extracted from the information maintained in TasNetworks' metering and billing system or summary information prepared from TasNetworks' metering and billing system. TasNetworks has allocated its prescribed charging classifications to the groupings included in the worksheet.

(d) Use of estimates

No estimations have been required in the collation and presentation of this information. Information is based on actual information, historical accounting records or other records used in the ordinary course of business.

(e) Compliance with financial reporting framework

- Non-compliance

  There has been no non-compliance with the financial reporting framework.

- Reason for non-compliance

  Not applicable.

- Changes in accounting policies

  There have been no changes in accounting policy.

Table 3.1.2 Revenue grouping by type of connected equipment

(a) Consistency of information with the requirements of the RIN

Revenue information presented has been split in accordance with the categories in the templates. Only Prescribed Transmission Services revenues have been included in the worksheet.

(b) Source of information

Reported prescribed transmission revenues have been extracted from TasNetworks' metering and billing system, or a summary thereof. Revenue is therefore based on actual revenue earned and invoiced during the financial year.

(c) Methodology applied to determine information, including assumptions made

Reported prescribed transmission revenues have been extracted from the information maintained in the metering and billing system or summary information prepared from the metering and billing system.

(d) Use of estimates

No estimations have been required in the collation and presentation of this information. Information is based on actual information, historical accounting records or other records used in the ordinary course of business.

(e) Compliance with financial reporting framework

- Non-compliance

  There has been no non-compliance with the financial reporting framework.

- Reason for non-compliance

  Not applicable.

- Changes in accounting policies

  There have been no changes in accounting policies for the grouping by type of connected equipment.

Table 3.1.3 Revenue (penalties) allowed (deducted) through incentive schemes

(a) Consistency of information with the requirements of the RIN

Information presented has been split in accordance with the categories in the templates. The rewards of the incentive schemes have been reflected in the year that the penalty or reward is applied.

(b) Source of information

The Service Target Performance Incentive Scheme (STPIS) reward included in the worksheet has been based on the actual reward approved for the financial year and recovered through invoiced prescribed revenues.

(c) Methodology applied to determine information, including assumptions made

The reported STPIS reward was extracted from the information maintained in the pricing model for the financial year.

(d) Use of estimates

No estimations have been required in the collation and presentation of this information. Information is based on actual information, historical accounting records or other records used in the ordinary course of business.

(e) Compliance with financial reporting framework

- Non-compliance

  There has been no non-compliance with the financial reporting framework.

- Reason for non-compliance

  Not applicable.

- Changes in accounting policies

  There have been no changes in accounting policies.

Worksheet 3.2 Operating expenses

Table 3.2.1 Opex Categories

(a) Consistency of information with the requirements of the RIN

Table 3.2.1.1 has not been completed as there has been no material change in cost allocations or bases of preparation for the Regulatory Financial Statements.

(b) Source of information

The reported Opex is consistent with information previously reported in the audited Regulatory Financial Statements.

(c) Methodology applied to determine information, including assumptions made

Information was extracted from the audited Regulatory Financial Statements. No assumptions were necessary in the preparation of the worksheet.

(d) Use of estimates

Information presented reflects actual information. No estimations have been required in the collation and presentation of this information. Information is based on actual information, historical accounting records or other records used in the ordinary course of business.

(e) Compliance with financial reporting framework

- Non-compliance

  There has been no non-compliance with the financial reporting framework.

- Reason for non-compliance

  Not applicable.

- Changes in accounting policies

  There have been no changes in accounting policies for operating expenses.

Table 3.2.3 Provisions

(a) Consistency of information with the requirements of the RIN

Financial Information has been presented for each of the provisions as required under the RIN.

(b) Source of information

The reported provisions are consistent with information previously reported in the audited Regulatory Financial Statements.

(c) Methodology applied to determine information, including assumptions made

Annual Leave

- Opening and closing balances for annual leave were taken from the audited Regulatory Financial Statements.
- Amounts incurred and charged against the provision during the period, being annual leave taken or paid out for departures, were taken from the payroll system.

- The increase or decrease during the period due to discounting of the provision was calculated based on the assumption that each employee takes 20 days of annual leave per year, pay increases will be received consistent with Enterprise Bargaining Agreements, performance increases will be received consistent with historical trends and the time value of money has been determined with reference to the Government Indicative Bond Rates.
- Increases to the provision were derived as the reconciling item as all other factors were known.
- There were no unused amounts of annual leave reversed during any period.

Long Service Leave

- Opening and closing balances for long service leave were taken from the audited Regulatory Financial Statements.
- Amounts incurred and charged against the provision during the period, being long service leave taken or paid out for departures for employees with 7 years of service or more, were taken from the payroll system.
- The decrease during the period due to discounting of the provision was calculated based on the assumption that each employee takes their long service leave when it vests at 10 years, pay increases will be received consistent with Enterprise Bargaining Agreements, performance increases will be received consistent with historical trends and the time value of money has been determined with reference to the Government Indicative Bond Rates.
- Increases to the provision were derived as the reconciling item as all other factors were known.
- Unused amounts of long service leave that were reversed during any period relates to departing employees with less than 7 years of service and was extracted from the payroll system.

Superannuation

- Opening and closing balances for the superannuation provision were taken from the audited Regulatory Financial Statements.
- Amounts incurred and charged against the provision during the period were taken from the detailed superannuation general ledger accounts.
- The increase or decrease during the period due to discounting of the provision was derived as the reconciling item as all other factors were known.
- Increases to the provision during the period were taken from the detailed superannuation general ledger accounts.
- Interest incurred on the defined benefit liability and actuarial gains and losses have been classified as neither operating nor capital expenditure.

Other Minor Provisions

- Other minor provisions include provisions for redundancies and provisions for employee incentives.
- Opening and closing balances for other minor provisions were taken from the audited Regulatory Financial Statements.
- Amounts incurred and charged against the provisions during the period, increases to the provisions and reversals of unused amounts of the provisions were taken from the general ledger.
- As these are only short term provisions, discounting was not required.

Split between Operating and Capital Expenditure

- The allocation of provisions and movement in provisions to operating or capital expenditure was determined with reference to the actual on-costs (including payroll taxes, superannuation etc.).

(d) Use of estimates

No estimations have been required in the collation and presentation of this information. Information is based on actual information, historical accounting records or other records used in the ordinary course of business.

(e) Compliance with financial reporting framework

- Non-compliance

  There has been no non-compliance with the financial reporting framework.

- Reason for non-compliance

  Not applicable.

- Changes in accounting policies

  There have been no changes in accounting policies for provisions.

Worksheet 3.3 Assets (regulatory asset base)

Table 3.3.1 Regulatory asset base values

(a) Consistency of information with the requirements of the RIN

Regulatory asset base (RAB) financial information includes data on overhead lines, underground cables, transformers and other assets. The RAB financial information has been prepared in accordance with the RAB Framework as outlined in the RIN.

(b) Source of information

The reported RAB information has been sourced from the reconciliations of property, plant and equipment (and the underlying detailed asset records) for prescribed transmission assets which are prepared annually for provision to the AER as part of the Regulatory Financial Statements.

(c) Methodology applied to determine information, including assumptions made

Information reported in table 3.3.1 is the aggregate of the asset value roll forward presented by asset in table 3.3.2.

(d) Use of estimates

No estimations have been required in the collation and presentation of this information. Information is based on actual information, historical accounting records or other records used in the ordinary course of business.

(e) Compliance with financial reporting framework

- Non-compliance

  There has been no non-compliance with the financial reporting framework.

- Reason for non-compliance

  Not applicable.

- Changes in accounting policies

  There have been no changes in accounting policies for RAB assets.

Table 3.3.2 Asset value roll forward

(a) Consistency of information with the requirements of the RIN

Regulatory asset base (RAB) financial information includes data on overhead lines, underground cables, transformers and other assets. The RAB financial information has been prepared in accordance with the RAB Financial Reporting Framework as outlined in the RIN.

(b) Source of information

The reported RAB information has been sourced from the reconciliations of property, plant and equipment (and the underlying detailed asset records) for prescribed transmission assets which are prepared annually for provision to the AER as part of the Regulatory Financial Statements.

(c) Methodology applied to determine information, including assumptions made

Aggregate RAB values were able to be directly attributed to the disaggregated asset categories by reviewing the underlying detailed asset records and allocating them directly to the asset categories as required.

For each asset category presented:

- Opening values agreed with the previous year's closing values.
- The inflation addition reflects a CPI increase to the opening net book value of the assets.
- Straight line depreciation is calculated based upon the estimated useful lives of the assets.
- Regulatory depreciation is the net of the inflation addition and the straight line depreciation.
- Recorded additions are based on the cost of the assets for regulatory accounting purposes.
- Roll forward model adjustments have been captured in the actual additions for the financial year.
- Recorded disposals are based on actual assets that were sold or scrapped in the financial year.
- Closing values are derived from the sum of all elements noted above.

(d) Use of estimates

No estimations have been required in the collation and presentation of this information. Information is based on actual information, historical accounting records or other records used in the ordinary course of business.

(e) Compliance with financial reporting framework

- Non-compliance

  There has been no non-compliance with the financial reporting framework.

- Reason for non-compliance

  Not applicable.

- Changes in accounting policies

  There have been no changes in accounting policies for RAB assets.

Table 3.3.3 Total disaggregated regulatory asset base asset values

(a) Consistency of information with the requirements of the RIN

Regulatory asset base (RAB) financial information includes data on overhead lines, underground cables, transformers and other assets. The RAB financial information has been prepared in accordance with the RAB Framework as outlined in the RIN.

(b) Source of information

The reported RAB information has been sourced from the reconciliations of property, plant and equipment for prescribed transmission assets which are prepared annually for provision to the AER as part of the Regulatory Financial Statements.

(c) Methodology applied to determine information, including assumptions made

Information reported in table 3.3.3 has been taken from the closing value of each asset class presented in the asset value roll forward table at 3.3.2.

(d) Use of estimates

No estimations have been required in the collation and presentation of this information. Information is based on actual information, historical accounting records or other records used in the ordinary course of business.

(e) Compliance with financial reporting framework

- Non-compliance

  There has been no non-compliance with the financial reporting framework.

- Reason for non-compliance

  Not applicable.

- Changes in accounting policies

  There have been no changes in accounting policies for RAB assets.

Table 3.3.4 Asset lives

(a) Consistency of information with the requirements of the RIN

Regulatory asset base (RAB) financial information includes data on overhead lines, underground cables, and transformers and other assets. The RAB financial information has been prepared in accordance with the RAB Framework. The useful lives presented are calculated as a weighted average of the entire asset class calculated in accordance with the instructions in the RIN.

(b) Source of information

The reported RAB information has been sourced from the reconciliations of property, plant and equipment (including the underlying detailed asset records) for prescribed transmission assets.

(c) Methodology applied to determine information, including assumptions made

Assets are allocated a useful life at acquisition based on the useful lives historically prescribed to relevant assets per the applicable revenue determinations.

(d) Use of estimates

No estimations have been required in the collation and presentation of this information. Information is based on actual information, historical accounting records or other records used in the ordinary course of business.

(e) Compliance with financial reporting framework

- Non-compliance

  There has been no non-compliance with the financial reporting framework.

- Reason for non-compliance

  Not applicable.

- Changes in accounting policies

  There have been no changes in accounting policies for RAB assets.

Worksheet 3.4 Operational data

Table 3.4.1 Energy Delivery

(a) Consistency of information with the requirements of the RIN

The information provided is consistent with the requirement of the RIN in that the amount of electricity transported through the network has been taken from the downstream settlement location, and includes energy imported and exported over Basslink.

(b) Source of information

Information has been sourced from TasNetworks' metering system, which captures energy supplied to other connected transmission networks, distribution networks and end-users.

(c) Methodology applied to determine information, including assumptions made

Energy supplied to other connected transmission networks over Basslink is measured on the Tasmanian side of the network for both imports and exports.

Energy supplied to distribution networks and directly connected end users and pumping stations is measured at the downstream settlement location which does not include transmission losses.

(d) Use of estimates

No estimations have been required in the collation and presentation of this information. Information is based on actual information, historical accounting records or other records used in the ordinary course of business.

(e) Compliance with financial reporting framework

- Non-compliance

  There has been no non-compliance with the financial reporting framework.

- Reason for non-compliance

  Not applicable.

- Changes in accounting policies

  There have been no changes in accounting policies relating to metering.

Table 3.4.2 Connection point numbers

(a) Consistency of information with the requirements of the RIN

The information provided is consistent with the RIN in that connection point numbers have been reported as the average number of connection points for the regulatory year under system normal conditions.

(b) Source of information

Information has been sourced from TasNetworks' metering system which contains details of all actual connection points.

(c) Methodology applied to determine information, including assumptions made

Basslink has been considered in the presentation of the connection point numbers as an exit point only, and not as an entry point.

(d) Use of estimates

No estimations have been required in the collation and presentation of this information. Information is based on actual information, historical accounting records or other records used in the ordinary course of business.

(e) Compliance with financial reporting framework

- Non-compliance

  There has been no non-compliance with the financial reporting framework.

- Reason for non-compliance

  Not applicable.

- Changes in accounting policies

  There have been no changes in accounting policies for connection points.

Table 3.4.3 System demand

(a) Consistency of information with the requirements of the RIN

Information reported has been determined in accordance with the definitions provided in the RIN.

(b) Source of information

Information has been sourced from TasNetworks' metering system which contains details of coincident and non-coincident maximum system demand by connection point measured at the low voltage side of the supply transformers.

(c) Methodology applied to determine information, including assumptions made

Basslink has been considered in the presentation of the coincident and non-coincident maximum system demand information.

Coincident and non-coincident maximum system demand MVA information was calculated using metering data MW and MVAr of each connection point at each half hour and obtaining the maximum values.

Average overall network power factor conversion is the total average megawatts divided by total average megavolt-amperes.

Average power factor conversion for 220 kV lines is the average megawatts divided by average megavolt-amperes of 220 kV connection points.

Average power factor conversion for 110 kV lines is the average megawatts divided by average megavolt-amperes of 110 kV connection points.

Coincident and non-coincident weather adjusted maximum demand is derived based on the following methodology and assumptions:

- Based on historic daily maximum and minimum temperatures obtained from Bureau of Meteorology, Daily effective temperatures have been calculated in accordance with the definition provided by NIEIR.
- Annual minimum effective temperatures for the period from 1970 to 2014 were extracted from the calculated daily effective temperatures.
- The temperatures at 10% and 50% probability of exceedance were derived from the annual minimum effective temperatures for the period from 1970 to 2014.

- In weather correction of system coincident maximum demand, Hobart temperature (Hobart (Ellerslie Road) weather station of Bureau of Meteorology) is taken as the reference temperature. In system non-coincident maximum demand, each connection point maximum demand was weather corrected based on its closest weather station data.
- Daily maximum demand has been taken from metering data and effective temperature data has been taken from previous calculations for weekdays for 2013-14.
- The assumption has been made that Basslink flow is not dependent on weather, and this load has not been forecast to change with the 10% or 50% probability of exceedance. However, the demand of the major industrial companies is included when deriving the temperature sensitivity in order to avoid the complexity of the calculation.
- Weather adjustments for winter and summer (seasons) have been done separately. December to March is considered as summer months. June to September is considered as winter months. However, for 2014 winter, only June to August is considered.
- The slope of the relationship between effective temperature and daily maximum demand has been calculated for the minimum temperature 25 days of each season and taken as the demand sensitivity to a change in temperature (in megawatts per degree Celsius), assuming a linear relationship. (In section of 25 days interval, R-square of the linear relationship between daily peak demand and daily effective temperature for state demand during winter for 2005 to 2013 was used. Although the relationship was weak, the highest R-square can be observed at 25 data points. R-square for 20 data points: 0.2509, R-square for 25 data points: 0.2856, R-square for 30 data points: 0.2669).
- The difference between the probability of exceedance temperature and the lowest of the daily effective temperature or the historic maximum of annual lowest effective temperatures has been multiplied by the load sensitivity to determine the total change in demand for the probability of exceedance.
- Summation of weather correction maximum demand of each connection is taken as system non-coincident weather adjusted summated maximum demand.
- In calculating coincident weather adjusted maximum demand in MVA, weather adjusted maximum demand in MW was calculated for the MW demand at the time of maximum MVA. Then coincident weather adjusted MVA maximum demand was calculated proportionate to the raw data. Non-coincident demand was also calculated using the same ratio.
- System coincident maximum demand (MW) and System coincident maximum demand (MVA) were observed in two seasons. Therefore, the temperature sensitivities are different to each other.

(d) Use of estimates

No estimations have been required in the collation and presentation of this information. Information is based on actual information, historical accounting records or other records used in the ordinary course of business.

(e) Compliance with financial reporting framework

- Non-compliance

  There has been no non-compliance with the financial reporting framework.

- Reason for non-compliance

  Not applicable.

- Changes in accounting policies

  There have been no changes in accounting policies for system demand.

Worksheet 3.5 Physical assets

Table 3.5.1 Transmission system capacities

(a) Consistency of information with the requirements of the RIN

Data has been reported on the quantities and capacities of physical assets. Data has been disaggregated into the overhead network, underground cable and transformers where necessary.

(b) Source of information

Information regarding the route length measurements and continuous load ratings has been sourced from the Asset Management Information System (AMIS), Ratings Information System (RIS) and Geographical Information System (GIS).

(c) Methodology applied to determine information, including assumptions made

For table 3.5.1.1, in determining the length of the overhead network circuits, information was extracted from the GIS for the 2014 regulatory year, and for energised service status only.

For table 3.5.1.2, in determining the length of the underground cable circuits, information was extracted from AMIS.

For tables 3.5.1.3 and 3.5.1.4, the weighted average megavolt-amperes capacity was calculated from circuit rating and circuit length data from TasNetworks' asset management information systems, consistent with the definition provided in the RIN. The estimated average capacity used in the calculation for transmission lines was the maximum winter capacity whilst for transformers the maximum continuous loading rating was applied. Only those overhead network and underground cable circuits owned by TasNetworks were included in the calculations, not those assets managed by TasNetworks but owned by third parties. The length of the overhead network and underground cable circuits has been taken from tables 3.5.1.1 and 3.5.1.2.

For table 3.5.1.5, information was extracted from AMIS.

To assist with determining the transformer capacity for directly connected end–users owned by the TNSP (TPA0503) reference was made to TasNetworks' 'Customer Relationship management' intranet portal to ascertain which customers TasNetworks has and which Substation they are supplied from. Further confirmation checking using substation power circuit one line diagram (PCOLD) or Operational diagram to ensure that the substations in question only had a direct connect customer as the single point load and no supply to the DNSP to ensure accurate data was recorded.

To assist with determining the capacity for directly connected end-user assets owned by the end user (TPA0504) site data sheets were referenced to access details of end user load requirements as transformer capacity is not known.

For table 3.5.1.6, the asset management information system was interrogated for details of any listed spare assets.

(d) Use of estimates

The only estimation required was in regards to determining the interconnector transformer capacity (TPA0505) as the available load details are in MWs and so an estimated power factor was applied to arrive at the MVA value. The MW value (500MW continuous) was obtained from Basslink website www.basslink.com.au. No other estimations have been required in the collation and presentation of this information.

(e) Compliance with financial reporting framework

- Non-compliance

There has been no non-compliance with the financial reporting framework.

- Reason for non-compliance

  Not applicable.

- Changes in accounting policies

  There have been no changes in accounting policies for physical assets.

Worksheet 3.6 Quality of service

Table 3.6.1 Service component

No information is required for 2013-14 as data is based on a calendar year. Information for calendar year 2013 was provided in the response to the initial TNSP economic benchmarking RIN. The next period, calendar year 2014, will be provided as part of the 2014-15 data provision.

Worksheet 3.7 Operating environment factors

Table 3.7.1 Terrain factors

(a) Consistency of information with the requirements of the RIN

Information has been provided regarding terrain factors in accordance with the definitions included within the RIN.

(b) Source of information

Total number of vegetation maintenance spans

- Information has been sourced from completed work orders which have been issued to vegetation management contractors.

Average vegetation maintenance span cycle

- Information has been sourced from the Transmission Line Easement Asset Management Plan.

Average number of trees per vegetation maintenance span

- Information regarding the total number of vegetation maintenance spans has been sourced from completed work orders which have been issued to vegetation management contractors. The density of vegetation within the spans has been determined by:
- using vegetation density data collected by contractors approximately 10 years ago; and/or
- viewing the spans via an online medium (eg. Google Earth) and, through experience, assigning a particular density to the vegetation in like areas (it is assumed that the vegetation densities assigned by TasNetworks align with those used by the contractors that collected similar data 10 years ago).
- To determine the average number of trees per maintenance span that are being actively managed, TasNetworks has incorporated both maintenance and inspection activities for the spans being maintained.
- TasNetworks has used data provided by Forestry Tasmania in quantifying 'Medium' vegetation density.
- Information for the quantification of other vegetation density categories was sourced internally through experience of TasNetworks' easements and the types of vegetation typically encountered.

Average number of defects per vegetation maintenance span

- Information has been sourced from work orders, which include information as to whether a defect has been noted within a span.

Tropical proportion

- Based on the definition of Tropical Spans within the RIN and as defined by the Australian Bureau of Meteorology Australian Climate Zones Map, this is not applicable to Tasmanian vegetation.

Standard vehicle access

- Structures that intersect with standard vehicle access roads within a nominated radius were identified with reference to TasNetworks' Geographical Information System in consultation with Asset Officers. Span lengths were extracted from the Asset Management Information System.

Altitude

- The altitude of each structure was extracted from the Asset Management Information System, which derives its altitude data for each tower from manually inputted data obtained through the analysis of contour maps.

Bushfire risk

- To determine the number of spans in bushfire risk areas a Tasmanian bushfire likelihood map was obtained from the Department of Primary Industries, Parks, Water and Environment (DPIPWE) showing the five levels of 'likelihood' for bushfire start. From this map, areas of 'Almost Certain' or 'Likely' bushfire likelihood within Tasmania were ascertained.

(c) Methodology applied to determine information, including assumptions made

Total number of vegetation maintenance spans

- Information has been extracted from the asset management system for completed work orders. No assumptions were required for the majority of work orders. A small number of work orders included a scope of works that seemed larger than that suggested by actual expenditure. In the absence of any additional information it has been assumed that the scope of works is correct.

Average vegetation maintenance span cycle

- Information has been sourced from the Transmission Line Easement Asset Management Plan, whereby each asset is inspected on a 5 year cycle, with 20 per cent inspected each year. This inspection cycle results in vegetation maintenance activities that, on average, occur every 5 years.

Average number of trees per vegetation maintenance span

- The average number of trees per vegetation maintenance span has been arrived at by multiplying the span length (for the span where the maintenance was completed) by the easement width by the determined density of vegetation within each of the spans (the 'density factor'). It has been assumed that all 110 kV transmission lines have an easement width of 50 metres, and 220 kV lines have a width of 60 metres.

Average number of defects per vegetation maintenance span

- The majority of defects per vegetation maintenance span are grouped and recorded as a single defect if they occur, regardless of the number of defects within the span. It is assumed that the number of spans where multiple defects have been recorded is not material.

Tropical proportion

- Based on the definition of Tropical Spans within the RIN and as defined by the Australian Bureau of Meteorology Australian Climate Zones Map, this is not applicable to Tasmanian vegetation.

Standard vehicle access

- A 10 metre radius was applied to each structure to determine if they intersect with standard vehicle access roads. Asset Officers were consulted for confirmation of the accessibility of the structures. Only those structures that are accessible all year round were included for the purposes of presenting this data. It has been assumed that if standard vehicle access is possible to a tower, then access to the span forward from that tower is also possible, and it is this span length that has been counted.
- TasNetworks has reported this variable as the route line length not accessible to standard vehicles.

Altitude

- For each structure that is installed at 600 metres above sea level or higher, the forward span length was counted to determine the Route Line Length.
- TasNetworks' altitude measurements have been made at the tower base. Therefore there may be a very small number of towers whereby the conductor attachment point is in excess of 600 metres, yet the tower base is below 600 metres, and hence the structure and associated span forward, would not be counted.

Bushfire risk

- A map of the location of all towers was overlaid on the DPIPWE Tasmanian bushfire likelihood map, to locate those towers that are located in areas of either 'Almost Certain' or 'Likely' bushfire likelihood. Due to the way in which the risk model is constructed, TasNetworks has assumed that the use of likelihood, rather than risk, more appropriately meets the requirements of the AER. TasNetworks has also assumed that 'Almost Certain' and 'Likely' bushfire likelihood is equivalent to 'High' bushfire risk as specified by the AER.

(d) Use of estimates

Total number of vegetation maintenance spans

- No estimations have been required (other than those assumptions outlined in the methodology applied above) in the collation and presentation of this information. Information is based on actual information, historical accounting records or other records used in the ordinary course of business.

Average vegetation maintenance span cycle

- No estimations have been required (other than those assumptions outlined in the methodology applied above) in the collation and presentation of this information. Information is based on actual information, historical accounting records or other records used in the ordinary course of business.

Average number of trees per vegetation maintenance span

- The determined density factor has been broken down into four bands, and an estimate has been required to assign the number of trees in each band of density (through practical experience and through an assessment of aerial photos for each easement where vegetation maintenance has occurred). This estimate has been required as information has historically been impracticable to collect and maintain. The level of accuracy for these vegetation densities is considered to be very low for the 'Medium' and 'High' categories.
- Pasture = 5 trees per Ha
- Low = 50 trees per Ha
- Medium = 1300 per Ha (approximately equal to typical Forestry Tasmania plantation density)
- High = 2000 per Ha

TasNetworks does not currently have the capability or asset information to take into account vegetation density variation due to changes in easement geography or vegetation height. Accordingly the quantities reported are all trees within the span rather than those which may require active management.

Average number of defects per vegetation maintenance span

- No estimations have been required in the collation and presentation of this information. Information is based on actual information, historical accounting records or other records used in the ordinary course of business.

Tropical proportion

- No estimations have been required in the collation and presentation of this information.

Standard vehicle access

- No estimations (other than those assumptions outlined in the methodology applied above) have been required in the collation and presentation of this information. Information is based on actual information; historical accounting records or other records used in the ordinary course of business, and has been determined in line with the methodology set out above.

Altitude

- No estimations (other than those assumptions outlined in the methodology applied above) have been required in the collation and presentation of this information. Information is based on actual information;

historical accounting records or other records used in the ordinary course of business, and has been determined in line with the methodology set out above.

Bushfire risk

- No estimations (other than those assumptions outlined in the methodology applied above) have been required in the collation and presentation of this information. Information is based on actual information; historical accounting records or other records used in the ordinary course of business, and has been determined in line with the methodology set out above.

(e) Compliance with financial reporting framework

- Non-compliance

  There has been no non-compliance with the financial reporting framework.

- Reason for non-compliance

  Not applicable.

- Changes in accounting policies

  Changes in accounting policies are not applicable for the operating environment.

Table 3.7.2 Network characteristics

(a) Consistency of information with the requirements of the RIN

Information has been provided regarding network characteristics in accordance with the definitions included within the RIN.

(b) Source of information

Route line length

- The total route line length has been sourced from information maintained within AMIS.

Variability of dispatch

- Information has been sourced from historical metering information.

Concentrated load distance

- Information has been sourced from the GIS.

Total number of spans

- The total number of spans has been sourced from information maintained within AMIS.

(c) Methodology applied to determine information, including assumptions made

Route line length

- Information was extracted from AMIS. All asset service statuses are included in the information presented.

Variability of dispatch

- Variability of dispatch was determined with reference to historical metering information, including only that energy generated by hydro and wind powered stations.

Concentrated load distance

- Information has been extracted from the GIS. Sheffield Substation has been selected as the generation node and Greater Hobart as the load centre to meet the AER definition.

Total number of spans

- The total number of spans has been has been extracted from the AMIS. All asset service statuses are included in the information presented.

(d) Use of estimates

No estimations have been required in the collation and presentation of this information. Information is based on actual information, historical accounting records or other records used in the ordinary course of business.

(e) Compliance with financial reporting framework

- Non-compliance

  There has been no non-compliance with the financial reporting framework.

- Reason for non-compliance

  Not applicable.

- Changes in accounting policies

  Changes in accounting policies are not applicable for the operating environment.

Table 3.7.4 Weather stations

(a) Consistency of information with the requirements of the RIN

Weather station location details have been taken from the Bureau of Meteorology, which were then input to TasNetworks' geographical information systems.

(b) Source of information

A weather station was considered to be relevant to the management of the network when there is a transmission asset within a 20 kilometre radius of the weather station. Weather station postcodes were also generated using TasNetworks' geographical information systems.

Weather stations have been considered not relevant to the management of the network where they are located more than 20 kilometres from a transmission asset.

(c) Methodology applied to determine information, including assumptions made

A weather station was considered to be relevant to the management of the network when there is a transmission asset within a 20 kilometre radius of the weather station. Weather station postcodes were also generated using TasNetworks' geographical information systems.

Weather stations have been considered not relevant to the management of the network where they are located more than 20 kilometres from a transmission asset.

(d) Use of estimates

No estimations have been required in the collation and presentation of this information. Information is based on actual information, historical accounting records, or other records used in the ordinary course of business, and has been determined in line with the assumptions set out above.

(e) Compliance with financial reporting framework

- Non-compliance

  There has been no non-compliance with the financial reporting framework.

- Reason for non-compliance

  Not applicable.

- Changes in accounting policies

  Changes in accounting policies are not applicable for the operating environment.


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