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# **SPI PowerNet Pty Ltd**

**AER Economic Benchmarking  
Regulatory Information Notice**

**2014 Regulatory Year Basis of Preparation**



## Basis of Preparation – Economic Benchmarking Data

2014 Regulatory Year

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### 1. Overview

This Basis of Preparation document supports the preparation and reporting of the 2014 Regulatory Year data presented in AusNet Transmission Group Pty Ltd's<sup>1</sup> ("AusNet Transmission") reports entitled 'TNSP economic benchmarking data - Actual Information', 'TNSP economic benchmarking data - Estimated Information', and 'TNSP economic benchmarking data - Consolidated Information' ("the Reports"). The Reports provide data solely for the use of the Australian Energy Regulator ("the AER") to perform benchmarking activities under the AER's Better Regulation program.

The ultimate Australian parent of AusNet Transmission is AusNet Services (Transmission) Ltd<sup>2</sup> which is part of a listed stapled group trading as AusNet Services<sup>3</sup>. AusNet Services comprises the Stapled Group of AusNet Services (Distribution) Ltd and its subsidiaries, AusNet Services (Transmission) Ltd and its subsidiaries, and AusNet Services Finance Trust. The Stapled Group is also referred to as the AusNet Services Group.

The Reports have been prepared in accordance with the 'Regulatory Information Notice issued under section Division 4 of Part 3 of the *National Electricity (Victoria) Law*' ("RIN") issued by the AER on 28 November 2013, the accompanying 'Economic Benchmarking RIN for transmission network service providers - Instructions and Definitions' and other authoritative pronouncements of the AER.

AusNet Transmission's 2014 Regulatory Year is the period 1 April 2013 to 31 March 2014 ("Regulatory Year"). All financial data included in the Reports is presented in thousands of Australian dollars, rounded to the nearest dollar. Non-financial data is stated as per the measures specified in the Reports.

Materiality has been applied throughout the Reports and Basis of Preparation. Materiality is defined as information that if omitted, misstated or not disclosed has the potential, individually or collectively to influence the economic decisions of users.

In conformity with AER requirements, the preparation of the Reports requires the use of certain critical management estimates. For the purpose of preparing the reports, 'estimated information' is defined as information presented in the Reports whose presentation is not materially dependent on information recorded in accounting records or other records used in the normal course of business, and whose presentation for the purpose of the RIN is contingent on judgments and assumptions for which there are valid alternatives, which could lead to a materially different presentation in the Reports.

Where estimated information has been presented, the circumstances and the basis for the estimate, including the approach used, assumptions made and reasons why the estimate is AusNet Transmission's best estimate has also been set out below. By definition, estimates seldom equal the related actual results and estimates have only been made for the purpose of disclosing the information requested. Considerations of the cost and efficiency of preparation as well as the reliability and accuracy of data available have been taken into account in determining the best methodology to determine the estimates.

<sup>1</sup> Prior to 4 August 2014, AusNet Transmission Group Pty Ltd was trading under the name SPI PowerNet Pty Ltd.

<sup>2</sup> Prior to 4 August 2014, AusNet Services (Transmission Ltd) was trading under the name SPI Australia Networks (Transmission) Ltd.

<sup>3</sup> Prior to 4 August 2014, AusNet Services was trading under the name SP AusNet.

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‘Actual Information’ is defined as information materially dependent on information recorded in historical accounting records or other records used in the normal course of business, and whose presentation is not contingent on judgments and assumptions for which there are valid alternatives, which could lead to a materially different presentation.

Some information required in the reports is data managed by the Australian Energy Market Operator (“AEMO”). AusNet Transmission, in conjunction with the AER, has identified within the Reports which data is maintained by AEMO and these cells have been blacked out in the Reports. Therefore, AusNet Transmission has also not provided any details in relation to the basis of preparation of these variables.

The preparation methodologies and information sources adopted in the preparation of the Reports are set out below.

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### 3.1 Revenue

Prescribed Transmission Services Revenue (“Revenue”) is measured at the fair value of the consideration received or receivable, net of the amount of Goods and Services Tax payable to the taxation authority. Revenue is recognised as the services are rendered and is reported inclusive of incentive scheme penalties and rewards. Total Revenue is disaggregated by chargeable quantity and also by type of connected equipment.

The accounting policies applied by AusNet Transmission in relation to Revenue in the 2014 Regulatory Year have not materially changed compared to any of the Regulatory Years previously reported.

#### **Table 3.1.1 Revenue grouping by chargeable quantity**

Revenue reported has been classified into the Chargeable Quantity which most closely reflects the basis upon which the revenue was charged to customers. Where it has been determined that Revenues cannot be allocated to the specified chargeable quantities in ET\_REV3110\_00001 to ET\_REV3110\_00009, Revenue has been reported against ‘Revenue from other Sources’ (ET\_REV3110\_00010). Additionally gross proceeds from the sale of assets which relate to Prescribed Transmission Services have been included in ‘Revenue from other Sources’ (ET\_REV3110\_00010).

#### Preparation Methodology:

Data obtained from the Annual Transmission Customer Charges schedule, AusNet Transmission’s internal Transmission Revenue Tracking Tool and information from the Financial System was allocated into the required categories as determined by the customer. These customers are clearly identifiable in the Annual Transmission Customer Charges schedule, which includes Prescribed Services revenue (i.e. revenue included in AusNet Transmission’s revenue cap, plus Group 3 revenue).

Revenue from the Australian Energy Market Operator, gross proceeds from the sale of assets and Easement Tax have been included in ‘Revenue from other Sources’ (ET\_REV3110\_00010).

#### Estimated Information:

The information provided is considered actual information as no estimates were required.

#### **Table 3.1.2 Revenue Grouping by type of connected equipment**

Revenue reported has been classified into the Type of Connected Equipment. Gross proceeds from the sale of assets which relate to Prescribed Transmission Services have been included in ‘Other Revenue’ (ET\_REV3120\_00005).

#### Preparation Methodology:

Data obtained from the Annual Transmission Customer Charges schedule, AusNet Transmission’s internal Transmission Revenue Tracking Tool and information from the Financial System was allocated into the required categories based on the nature of the revenue.

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Revenue from the Australian Energy Market Operator, gross proceeds from the sale of assets and Easement Tax was allocated to 'Other Revenue' (ET\_REV3120\_00005).

### Estimated Information:

The information provided is considered actual information as no estimates were required.

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

The penalties or rewards from the service target performance incentive scheme ("STPIS") or efficiency benefit sharing scheme ("EBSS") have been reported based on the year that the penalty or reward was applied, not the year in which it was earned.

### Preparation Methodology:

Information used in the preparation of Table 3.1.3 has been sourced from the AER Final Determination 2008/09-2013/14 Transmission Revenue Reset, AER STPIS Determinations (data is extracted and included in AusNet Transmission's internal Transmission Revenue Estimator Tool) and the Post Tax Revenue Model.

### *EBSS:*

Revenue in relation to the Efficiency Glide Path schemes (equivalent scheme to EBSS) has been categorised as 'EBSS' for the purposes of this Report.

The Glide Path factor as per the AER determination was obtained and the associated nominal revenue calculated (adjusted for indexation and smoothed based on the 'smoothed revenue profile' applied for the 2014 Regulatory Year).

### *STPIS:*

Revenue attributable to the STIPIS was obtained from the AER STPIS Determinations for the 2014 Regulatory Year.

### Estimated Information:

The EBSS data provided is considered 'estimated' information due to the assumptions included in the preparation methodology. It has been assumed that Efficiency Glide Path Revenue was collected in accordance with the allowance or penalties prescribed for the applicable 6 year Revenue determination period.

The information provided is considered Management's best estimate of EBSS based on the information available as the data is not able to be separately captured.

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### 3.2 Operating Expenses (“Opex”)

Operating Expenses (“Opex”) are the costs of operating and maintaining the network (excluding all capital costs and capital construction costs) and relate to Prescribed Transmission Services.

The AusNet Services Group owns and operates 3 regulated networks – an electricity distribution network, a gas distribution network, and an electricity transmission network. Opex that is incurred for a particular network is allocated directly to that network. Overhead costs that cannot be directly allocated to a particular network are proportioned amongst AusNet Services’ 3 regulated and unregulated networks via a quarterly Activity Based Costing survey process completed by all cost centre managers and in accordance with AusNet Services’ Cost Allocation Methodology (“CAM”).

The accounting policies adopted by AusNet Transmission in relation to Opex have not materially changed during the 2014 Regulatory Year in comparison with Regulatory Years previously reported.

#### **Table 3.2.1 Opex categories: Table 3.2.1.1 Current Opex categories and cost allocations**

In Table 3.2.1.1, Opex has been reported in accordance with the Opex presentation in the Annual Regulatory Account Requirements in the 2014 Regulatory Year. There have not been any material changes in the CAM during the 2014 Regulatory Year (in comparison to previously reported Regulatory Years); and as such, no changes have been made pertaining to changes in cost allocation methodologies.

The information presented in the columns ‘2006’ to ‘2013’ is consistent with the information presented in the AusNet Transmission’s previous submission for the 2006 to 2013 Regulatory Years.

For the 2014 Regulatory Year, information in Table 3.2.1.1 is consistent with information in Table 3.2.1.2 as the presentation of Opex in the Annual Regulatory Accounts has remained unchanged.

#### Preparation Methodology:

Information reported was extracted directly from the 2014 Annual Regulatory Accounts which were prepared using information from the Financial System.

#### Estimated Information:

The information provided for the 2014 Regulatory Year is considered actual information as no estimates were required.

#### **Table 3.2.1 Opex categories: Table 3.2.1.2 Historical Opex categories and cost allocations**

Opex categories and allocations have been presented in accordance with the requirements of the CAM, the Annual Regulatory Accounts and the Annual Reporting Requirements that were in effect for the individual Regulatory Year. Opex reconciles to historical Opex for Prescribed Transmission Services as disclosed in the Annual Regulatory Accounts.

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### Preparation Methodology:

The line items and figures were sourced from the historical Opex templates of the respective Regulatory Year's Annual Regulatory Accounts which were prepared using information from the Financial System.

The information presented in the columns '2006' to '2013' is consistent with the information presented in AusNet Transmission's previous submission for the 2006 to 2013 Regulatory Years.

### Estimated Information:

The information provided for the 2014 Regulatory Year is considered actual information as no estimates were required.

### **Table 3.2.2 Provisions**

Provisions are recognised when AusNet Transmission has a present legal or constructive obligation as a result of past events, it is more likely than not that an outflow of resources will be required to settle the obligation, and the amount of the provision can be measured reliably. Provisions are not recognised for future operating losses.

The amount recognised as a provision is the best estimate of the consideration required to settle the present obligation at the relevant reporting date, taking into account the risks and uncertainties surrounding the obligations. Where a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows.

Financial information on provisions for Prescribed Transmission Services has been reported in accordance with the requirements of the CAM and the Annual Regulatory Accounts that were in effect for the 2014 Regulatory Year.

The accounting policies adopted by AusNet Transmission in relation to Provisions have not materially changed during the 2014 Regulatory Year in comparison with Regulatory Years previously reported.

Provisions have been separately presented based on the nature of the provision and allocated between an Opex component, a Capex component and an Other component based on the classification of the underlying cost associated with the provision. Financial information on provisions reconciles to the reported amounts for provisions in the Annual Regulatory Accounts for the 2014 Regulatory Year.

### Preparation Methodology:

For the 2014 Regulatory Year, the total movements in provisions were obtained from the Annual Regulatory Accounts and supplemented with information from the Financial System to derive provision amounts.

The amounts reported in the 'Provision - Employee Entitlements' table relate to liabilities for wages and salaries, including non-monetary benefits and annual leave recognised in respect of employees' services up to the reporting date and are measured at the amounts expected to be paid when the liabilities are settled.



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On 31 March 2014, the Management Services Agreement between AusNet Services and SPI Management Services Pty Ltd (“SPIMS”) was terminated. Upon termination of this agreement, a number of SPIMS employees have been transferred into AusNet Transmission, and the corresponding employee entitlement provisions existing at 31 March 2014 have also been transferred across to AusNet Transmission. The ‘other component’ amount reported in the section ‘The increase during the period in the discounted amount arising from the passage of time and the effect of any change in the discount rate’ within the ‘Provision - Employee Entitlements’ table relates to this transfer of employee provisions.

The amounts reported in the ‘Provisions – Miscellaneous’ table relate to a restructuring provision.

### Estimated Information:

For the Provision for Employee Entitlements, the split between the Opex component and the Capex component was estimated. This was required as this data is not separately captured in the Financial System.

To determine the proportion of these provisions that should be applied to Capex, AusNet Services has used the results from its quarterly capitalised overheads model which calculate the proportion of labour costs to be capitalised. The quarterly capitalised overheads model uses results from the quarterly Activity Based Costing surveys which provide the percentage split of management effort between all of AusNet Services’ regulated and unregulated networks as well as between Opex and Capex.

The Miscellaneous Provisions is all Opex, given the nature of the provision. This is considered actual information.

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### **3.3 Assets (RAB)**

The Regulated Asset Base (“RAB”) values have been prepared and reported as per AusNet Services’ interpretation of the AER instructions set out in Section 4 of the RIN Instructions and Definitions (“RIN I&Ds”).

Consistent with the instructions outlined in the RIN I&Ds, the AER Final Decision SP AusNet Transmission determination 2014–15 to 2016–17 (and specifically the published roll forward model) has been used as the basis for the RAB values as this is the latest AER Decision to incorporate actual information.

The accounting policies adopted by AusNet Transmission in relation to Capex (the only regulatory accounting input into the RAB) have not materially changed during the 2014 Regulatory Year (in comparison to prior Regulatory Years reported).

#### **Table 3.1.1 Regulatory Asset Base Values**

The RAB values have been prepared and reported as per AusNet Transmission’s interpretation of the AER instructions set out in Section 4 of the RIN I&Ds.

#### Preparation Methodology:

Information was sourced from the AER Final Decision SP AusNet Transmission determination 2014–15 to 2016–17 and the Annual Regulatory Accounts.

The AER Final Decision SP AusNet Transmission determination 2014–15 to 2016–17 roll forward model has been used as the basis for the RAB Values as this is the latest AER Decision to incorporate actual information. This model incorporates actual data and has been reconciled to the Annual Regulatory Accounts. Information for the 2014 Regulatory Year has been updated for actual Capex values and re-calculated for regulatory depreciation based on actual Capex.

The roll forward model RAB directly makes adjustments in the 2008 Regulatory Year to correct for any forecasting errors in relation to that year. These adjustments are reflected in “Closing value for asset value” (ET\_RAB331\_00007). Adjustments have been made for the difference between actual and forecast net Capex, return on difference (Capex), the difference between actual and forecast of prescribed augmentation assets rolled in, and the return on difference.

The roll in of the prescribed augmentation assets in the 2014 Regulatory Year will be included in the opening RAB for the 2015 Regulatory Year.

#### Estimated Information:

The information provided is considered actual information as no estimates were required.

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### Table 3.2.2 Asset value Roll forward

The disaggregated RAB values have been prepared and reported as per AusNet Transmission's interpretation of the AER instructions set out in Section 4 of the RIN I&Ds.

AusNet Transmission has recorded assets in the RAB and in the Annual Regulatory Accounts in asset classes that allow a direct attribution into the AER's Economic Benchmarking RAB Asset classes. The exception is that there is no split in the transmission RAB between overhead and underground assets. The existing disaggregated RAB consists of the following asset categories:

- Lines
- Transformers
- Switchgear
- Reactive
- Establishment
- Secondary
- Communications
- Land
- Easements
- Inventory
- IT
- Vehicles
- Premises
- Other (non-system)

That is, for each category above, Opening value, Inflation addition, Straight line depreciation, Regulatory depreciation, Actual additions (recognised in RAB), Disposals and Closing value for overhead transmission asset value is generated.

#### Preparation Methodology:

Information was sourced from the AER Final Decision SP AusNet Transmission determination 2014–15 to 2016–17, and Annual Regulatory Accounts.

Each line of the RAB information Opening value, Inflation addition, Straight line depreciation, Regulatory depreciation, Actual additions (recognised in RAB), Disposals and Closing value for transmission asset value is aggregated as per the table below:

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Benchmarking Asset Classes	RAB Asset Classes
Overhead transmission assets (wires and towers/poles etc)	Towers and Conductors*
Underground transmission assets (cables, ducts etc)	*Proportional estimate
Substations, switchyards	Switchgear Transformers Reactive Establishment Land
Easements	Easements
Other assets with long lives (please specify)	Secondary Communications Premises other
Other assets with short lives (please specify)	Inventory IT Vehicles

\*To determine the split between overhead and underground assets for 2014, the RAB Asset Class 'Towers and Conductors' (Inflation, Straight line depreciation, Regulatory depreciation) was allocated proportionally based on their share of the 2013 closing RAB values.

All additions relate to overhead transmission assets.

Engineering assessments were used as the basis for determining the aggregation of the RAB Asset Classes into the prescribed Benchmarking Asset Classes.

The closing values reflect any impact caused by the 2008 Regulatory Year adjustments as described in Table 3.1.1 above.

### Estimated Information:

Overhead transmission assets and Underground transmission assets is considered estimated information. Refer to discussion above. The information provided was estimated based on an assessment by a suitable Subject Matter Expert ("SME") and is considered Management's best estimate based on the information available. Information regarding the other categories is considered actual information.

### **Table 3.3.3 Total disaggregated RAB asset values**

#### Preparation Methodology:

The total disaggregated RAB values are taken directly from Table 3.3.2 and are calculated as the average of the opening and closing RAB values from Table 3.3.2.

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### Estimated Information:

Estimated and actual information is consistent with Table 3.3.2.

### **Table 3.3.4 Asset lives**

#### Preparation Methodology:

For measures ET\_RAB3341\_00001, ET\_RAB3341\_00002, ET\_RAB3341\_00003, ET\_RAB3342\_00001, ET\_RAB3342\_00002 and ET\_RAB3342\_00003, the data was calculated based on assets held as per the Asset Management System. These measures were completed based on unit rates and asset lives applied on a per asset basis utilising data supplied for the Transmission Revenue Reset (“TRR”) submitted in 2012/2013. An internal document AMS 10-101 Asset Life Evaluation defines the useful lives utilised.

For variables ET\_RAB3341\_00004, TET\_RAB3341\_00005, TET\_RAB3342\_00004, and ET\_RAB3342\_00005 the AER’s Final Roll Forward Model (“RFM”) for the 2014-17 Victorian Transmission Determination, updated for 2014 actuals, was taken to accurately reflect the lives of the assets in these categories. For these variables, the weighted average service life and weighted average residual service life were calculated based on Standard Lives and Remaining lives from the AER’s RFM.

#### Estimated Information:

For variables ET\_RAB3341\_00001, ET\_RAB3341\_00002, ET\_RAB3341\_00003, ET\_RAB3342\_00001, ET\_RAB3342\_00002 and ET\_RAB3342\_00003, the weighted average service life and weighted average residual service life were calculated using the AER’s REPEX model with age profile, and assets lives from the AER’s Category Analysis’ template. Unit cost data was sourced from the units rates supplied for the TRR from the Asset Management System.

Weighted average asset service life and average residual service life is considered estimated information. These values are based on the asset lives and age profiles in the Category Analysis templates which are estimated data. Information for asset age profiles is sourced from the Asset Management Systems and is current data as at June 2014 due to the Asset Management Systems being ‘live’ databases. Due to a combination of inaccuracies in asset data from historical records (leading to continual data cleansing processes occurring over the Regulatory years) and system limitations which prevent asset reports to be run at specific (historic) points in time, the information is considered estimated but it is the best available data Management can use to fulfil the table 3.3.4 requirements.

Where an asset’s unit rate was not supplied for the TRR, a reasonable estimate was established on available unit rates for similar asset and scaled based as a percentage of the original unit rate.

For variables ET\_RAB3341\_00004, TET\_RAB3341\_00005, TET\_RAB3342\_00004, and ET\_RAB3342\_00005, the weighted average service life and weighted average residual service life were calculated based on each asset category’s share of the 2014 Opening RAB. The allocation of RAB categories to Benchmarking Categories was consistent with the Table in Section 3.3.2 above.

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All quantity data reported has an element of estimation in it due to the judgements made in order to match the AusNet Services' asset categories with the categories required by the AER. As these judgements were made by a suitable SME, these are considered Management's best estimates.

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### **3.4 Operational Data**

**Table 3.4.1 Energy delivery;**

**Table 3.4.2 Connection point numbers;**

**Table 3.4.3.1 Annual system maximum demand characteristics – MW measure;**

**Table 3.4.3.2 Annual system maximum demand characteristics – MVA measure and**

**Table 3.4.3.3 Power factor**

The above tables have not been completed as the required information is maintained by AEMO.

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### 3.5 Physical Assets

#### Table 3.5.1.1 Overhead network length of circuit at each voltage and

#### Table 3.5.1.2 Underground cable circuit length at each voltage

The overhead network length of circuit at each voltage level has been reported. The network length of circuit is the circuit length (measured in kilometres) of lines in service. A double circuit line counts as twice the length. Length does not take into account vertical components such as sag.

The underground cable circuit length at each voltage level has been reported. The underground cable circuit length is the circuit length (measured in kilometres) of lines in service.

#### Preparation Methodology:

The 2014 information was directly sourced using a query script run in the Asset Management System.

#### Estimated Information:

The information provided is considered actual information as no estimates were required.

#### Table 3.5.1.3 Estimated overhead network weighted average MVA capacity by voltage class and

#### Table 3.5.1.4 Estimated underground network weighted average MVA capacity by voltage class

Weighted average capacities have been reported for both the overhead and underground network for each of the listed voltage classes. The data provided is based on weighted average carrying capacities under normal circumstances taking account of limits imposed by thermal ratings. Voltage drop considerations have not been taken into account as AusNet Transmission does not have access to information on the carrying capacity of Victorian transmission lines that are limited due to voltage stability.

#### Preparation Methodology:

Data for the 2014 Regulatory Year was sourced from the Asset Management System for each span of transmission circuit. The Asset Management System holds records including the conductor voltage (“Volts”), current rating (“Amps”) and line length in kilometres (“length”) for each section of line.

The weighted average was calculated based on the following methodology:

$$\frac{\text{Line 1: (length * Volts * Amps) + Line 2: (length * Volts * Amps) + Line 3: (length * Volts * Amps) etc.}{(\text{Line 1 length} + \text{Line 2 length} + \text{Line 3 length etc.})}$$

For three phase lines each group in the numerator has also been multiplied by  $\sqrt{3}$ .



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### Estimated Information:

The carrying capacities included in the above weighted average calculation assume all assets have summer peaking Maximum Demands, which is a reasonable assumption given summer capacity is lower as the network is more constrained during this period compared to winter.

The information provided for the 2014 Regulatory Year is considered estimated as the calculation performed is not in accordance with the definition of weighted average capacities provided by the AER. As discussed above, actual capacity voltage drop considerations have not been taken into account due to the unavailability of this data. It is further noted that a significant number of lines in Victoria (at all voltage levels) are limited due to voltage stability. A nominal voltage rate is used instead.

Based on the data availability constraints, the calculation performed to estimate the required AER information is considered Management's best estimate as it was performed by a suitable SME.

### **Table 3.5.1.5 Installed transmission system transformer capacity and Table 3.5.1.6 Cold spare capacity**

Transformer capacity involved in the prescribed transformation levels has been reported. The transformer capacities reported in Table 3.5.1.5 are inclusive of Cold Spare Capacity which has been separately disclosed in Table 3.5.1.6. Data presented relates to assets providing Prescribed Transmission Services.

For each category, the summation of normal assigned continuous rating has been reported (including forced cooling or other capacity improving factors where relevant). Assigned ratings have been determined by the nameplate rated. Only regulated transformers (included in the Regulatory Asset Base) have been included. Step-up transformers at generation connection locations have been excluded. Oil insulated or cooled reactors and station service transformers which provide auxiliary AC and DC for secondary systems in terminal stations have also been excluded.

### Preparation Methodology:

Data for both in-service and disposed-of transformers were extracted from the Asset Management System for all time periods. Data extracted included name plate data, installation dates and disposal dates. A review and analysis of the information was performed and based on this, the extracted data was supplemented and confirmed with information from transformer instruction manuals and subject matter experts.

### Estimated Information:

For variable ET\_PHA3515\_00004 'Transformer capacity for directly connected end-users owned by the end-user' AusNet Transmission has used nameplate ratings records held in its own asset management systems and verified them where possible with AEMO. Nonetheless, these ratings are valid only under certain assumptions with regards to cooling equipment. As AusNet Transmission has no direct knowledge of the cooling equipment installed by these end users, these ratings should be considered estimates only. The remaining variables are all considered actual data.

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### 3.6 Quality of Services

‘Outage’ means ‘loss of connection’ rather than loss of supply by a connected system or customer. To allow summation into an overall Average Circuit outage rate, both numerator (number of events with defined circuits unavailable per annum) and denominator (total number of defined circuits) have been provided as well as the calculated percentage rate for each item.

**Table 3.6.1.1 Service Parameter 1 – Average circuit outage rate**

**Table 3.6.1.2 Service Parameter 2 – Loss of supply event frequency – number in ranges specified**

**Table 3.6.1.3 Service Parameter 3 – Average outage duration**

**Table 3.6.1.4 System Parameter 4 – Proper operation of equipment – number of failure events**

**Table 3.6.2 – Market Impact Component**

The parameter variables ET\_QOS3611\_00001 to ET\_QOS3620\_00001 are calculated and reported on a calendar year basis in accordance with STPIS performance reporting. In the previous Economic Benchmarking Submission (2006-13 Submission), the parameters reported in the 2013 column equated to the STPIS reporting parameters for the 2013 calendar year (i.e. year ending 31 December 2013).

For the 2014 Regulatory Year, data is unavailable for the calendar year ending 31 December 2014. Therefore, as agreed with the AER, no variables are reported for the 2014 Regulatory Year.

**Table 3.6.3 System losses**

System losses (ET\_QOS3630\_00001) was calculated as the difference between electricity inflows and outflows as a percentage of electricity inflows.

Electricity inflows is the total electricity inflow into the transmission network including from generation, other connected Transmission Network Service Providers (“TNSPs”) at the connection point, and connected Distribution Network Service Providers (“DNSPs”) as measured by revenue meters.

Electricity outflows is the total electricity outflow into the networks of connected distribution network service providers, other transmission networks and directly connected end-users as measured by revenue meters.

#### Preparation Methodology:

Data metering systems collect and process energy metering data for all terminal stations. At each terminal station, the total cumulative received energy (inflows) and transferred energy (outflows) in Watt hour (“Wh”) associated with connections are collected and recorded in Data Metering Systems.

Using this information, the System Loss percentage was calculated for the 2014 Regulatory Year by calculating the difference between inflows and outflows for the months April 2013 to March 2014, and dividing by the total inflows for this same period.

Information captured and reported relates to both the Regulated and Unregulated Network.

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### Estimated Information:

The information provided is considered actual information as no estimates were required.

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### 3.7 Operating Environment

#### Table 3.7.1 Terrain factors

##### ***Total number of vegetation maintenance spans (ET\_OEF3710\_00001)***

‘Total number of maintenance spans’ is the total count of spans in the network that are subject to active vegetation management practices in the 2014 Regulatory Year.

##### Preparation Methodology:

Information in relation to the total number of vegetation maintenance spans was sourced from work orders (PT1, PT30, PT90, PT180 & PT365) recorded in the Asset Management System, where each span is assigned to a work order. These types of work orders represent maintenance spans which require vegetation maintenance within the next 12 months; that is, PT30 means vegetation maintenance is required within 30 days, PT 90 means vegetation maintenance is required within 90 days etc.

##### Estimated Information:

The information provided is considered actual information as no estimates were required.

##### ***Average vegetation maintenance span cycle (ET\_OEF3710\_00002)***

Maintenance span cycle refers to the planned number of years (including fractions of years) between which cyclic vegetation maintenance is performed for the relevant area.

##### Preparation Methodology:

Information in relation to the average vegetation maintenance span cycles was obtained from the Vegetation Management system and also per the vegetation management plan whereby 3 patrols are conducted per annum.

##### Estimated Information:

The information provided is considered actual information as no estimates were required.

##### ***Average number of trees per vegetation maintenance span (ET\_OEF3710\_00003)***

‘Average number of trees per maintenance span’ includes only trees that require active vegetation management to meet its vegetation management obligations during a 3 year cycle. It excludes trees that only require inspections and no other vegetation management activities are required to comply with AusNet Transmission’s vegetation management obligations.

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### Preparation Methodology:

The information provided was estimated based on expert knowledge and field experience managing vegetation around transmission assets. An estimate was required as the data requested is not captured in any form in existing systems or reports. This information is considered Management's best estimate.

The data provided excludes information in relation to vegetation management of saplings (during a 3 year cycle) as this information is not able to be estimated.

### Estimated Information:

Refer to discussion above in relation to estimates and assumptions applied. The information provided was estimated based on expert knowledge and is considered the best estimate based on the information available.

### ***Average number of defects per vegetation maintenance span (ET\_OEF3710\_00004)***

Defects are any recorded incidence of noncompliance with the vegetation clearance standard. This also includes vegetation outside a TNSP's standard clearance zone that is recognised as hazardous vegetation and which would normally be reported as requiring management under inspection practices.

### Preparation Methodology:

The information for the 2014 Regulatory Year was estimated by extracting a report from the Asset Management System to show the number of vegetation maintenance spans actioned due to defects (which required action within 30 days) in the 2014 Regulatory Year. Defects on a vegetation maintenance span are recorded as one, regardless of the number of defects on the span. The number of spans actioned was divided by the total number of vegetation maintenance spans to derive an estimate of the required information.

### Estimated Information:

Refer to discussion above in relation to estimates and assumptions applied. As this information is not separately captured by the existing systems, the calculation performed is considered Management's best estimate of the required data based on the information available.

### ***Tropical Proportion (ET\_OEF3710\_00005)***

Tropical spans are the approximate total number of urban and rural Maintenance Spans in the Hot Humid Summer and Warm Humid Summer regions as defined by the Australian Bureau of Meteorology Australian Climatic Zones map (based on temperature and humidity). There are no Tropical Spans in AusNet Transmission's Maintenance Spans.

## **Basis of Preparation – Economic Benchmarking Data**

2014 Regulatory Year

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### ***Standard Vehicle Access (ET\_OEF3710\_00006)***

Standard vehicle access refers to areas which are serviced through made roads, gravel roads and open paddocks (including gated and fenced paddocks). It excludes areas only accessible by a two wheel drive vehicle.

#### Preparation Methodology:

Information in relation to Standard Vehicle Access was estimated as the total amount of lines in kilometers patrolled via a maintained access track (which generally runs down the centre of the easement). The data is based on tracks built for 4WD vehicle access all year round. This measure does not take into account tracks or private roads needed to access tracks or easements. It also does not take into consideration open paddock access as this is determined by the weather conditions at the time of access.

#### Estimated Information:

Refer to discussion above in relation to estimates and assumptions applied. As this information is not separately captured by the existing systems, actual data could not be obtained. The estimation process as described above is considered Management's best estimate of the data required based on the information available.

### ***Altitude (ET\_OEF3710\_00007)***

Altitude is the route line length 600 meters above sea level.

#### Preparation Methodology:

Information in relation to altitude was obtained by reviewing profile drawings and PLS-Cadd line terrain models to identify levels for tower bases at the start and end of route sections above 600 meters above sea level.

#### Estimated Information:

The information provided is considered actual information as no estimates were required.

### ***Bushfire Risk (ET\_OEF3710\_00008)***

Bushfire risk is the number of Maintenance Spans in high bushfire risk areas.

#### Preparation Methodology:

Information was sourced from the Asset Management System to determine, of the Maintenance Spans actioned and reported in ET\_OEF3710\_00001, how many were actioned in low bushfire risk areas. This amount was subtracted from the total Maintenance Spans actioned to determine the number of Maintenance Spans in high bushfire risk areas.

## **Basis of Preparation – Economic Benchmarking Data**

2014 Regulatory Year

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### Estimated Information:

The information provided is considered actual information as no estimates were required.

### **Table 3.7.2 Network characteristics**

#### ***Route line length (ET\_OEF3720\_00001) and Total number of spans (ET\_OEF3720\_00004)***

The route line length is the aggregate length in kilometers of lines, measured as the length of each conductor span between poles and/or towers and does not include vertical components such as line sag. Each easement span is considered only once irrespective of how many circuits it contains. This is the distance between line segments.

Information in relation to route line length and total number of easement spans was obtained from the Asset Management System for the 2014 Regulatory Year. Data was extracted from the equipment record together with the original creation date (assumed consistent with installation date) and asset disposal dates (where applicable). Based on these records, route line length and total number of spans was calculated for the 2014 Regulatory Year.

### Estimated Information:

The information provided is considered actual information as no estimates were required.

#### ***Variability of dispatch (ET\_OEF3720\_00002) and Concentrated load distance (ET\_OEF3720\_00003)***

The data relevant to ET\_OEF3720\_00002 and ET\_OEF3720\_00003 is maintained by AEMO, therefore not required to be disclosed in the Template.

### **Table 3.7.3 Weather stations**

Weather station data (including the weather station number, post code, suburb/locality) has been provided for all weather stations within AusNet Transmission's service area; being the state of Victoria.

Where weather data from a weather station is considered relevant to the management of the network, the weather station has been identified as material.

### Preparation Methodology:

Data was extracted from the Bureau of Meteorology website. Some weather stations do not have a postcode (e.g. located in the sea), therefore are marked with '0' in the corresponding post code cell.

All weather stations have been identified as not material as AusNet Transmission does not perform any Transmission network management activities which require information from weather stations.

### Estimated Information:

The information provided is considered actual information as no estimates were required.