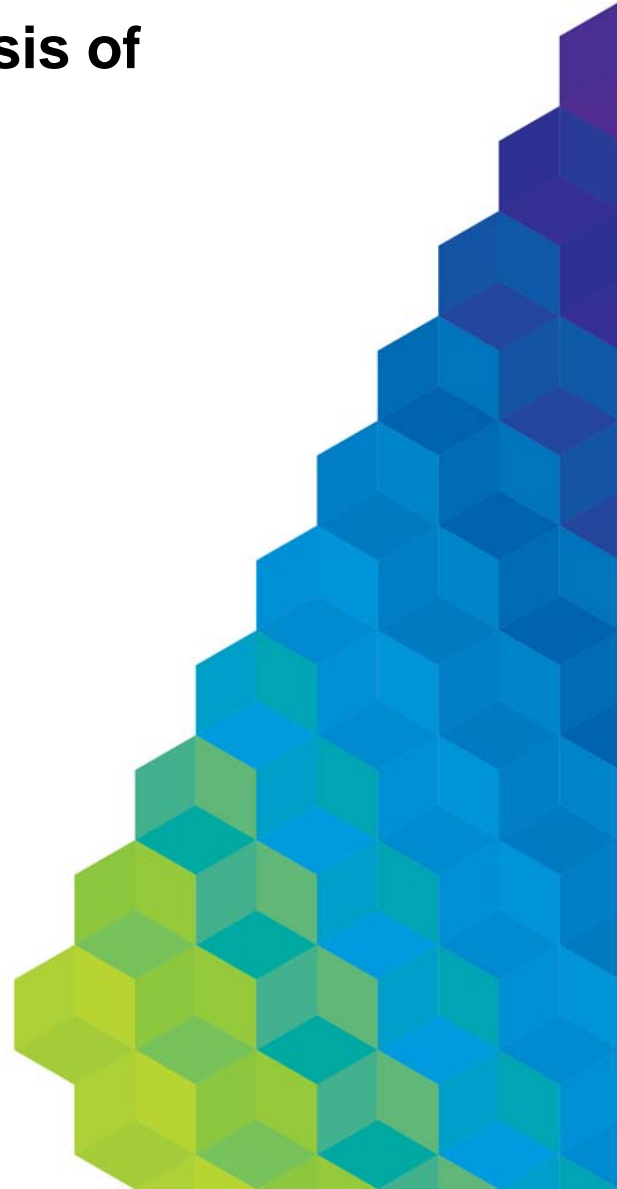




AusNet Transmission Group Pty Ltd

**AER Category Analysis
Regulatory Information Notice**

**2015/16 Regulatory Year Basis of
Preparation**



Basis of Preparation – Category Analysis

2016 Regulatory Year

1. Overview

This Basis of Preparation document supports the preparation and reporting of the 2016 Regulatory Year data presented in AusNet Transmission Group Pty Ltd's ("AusNet Transmission" or the "Company") reports entitled '2015-16 AusNet Services Category Analysis - Actual Information', '2015-16 AusNet Services Category Analysis - Estimated Information', '2015-16 AusNet Services Category Analysis - Consolidated Information' and 'Other Supporting Information' ("the Reports"). The Reports provide data solely for the use of the Australian Energy Regulator ("the AER") to perform category analysis benchmarking activities under the AER's Better Regulation program.

The immediate Australian parent entity of the Company is AusNet Services (Transmission) Ltd, a company incorporated in Australia, which, on 31 March 2015, was part of a listed stapled group trading as AusNet Services. On 18 June 2015, AusNet Services completed a legal entity restructure under which the existing stapled entities became wholly owned by a new listed company (AusNet Services Ltd). As a result of the restructure, the ultimate parent of the Company is AusNet Services Ltd.

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 7 March 2014 and other authoritative pronouncements of the AER.

Some information required in the reports is 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 left blank in the Reports. Therefore, AusNet Transmission has not provided any details in relation to the Basis of Preparation of these variables.

AusNet Transmission's 2016 Regulatory Year is the period 1 April 2015 to 31 March 2016 ("Regulatory Year"). All financial data included in the Reports is presented in Australian dollars. Non-financial data is stated as per the measures specified in the Reports.

The AusNet Services' Group owns and operates 3 regulated networks – an electricity distribution network, a gas distribution network, and an electricity transmission network. Employees of the AusNet Services Group work across the 3 regulated networks and there are shared costs and overhead and other corporate costs that cannot be directly allocated to a particular network. These costs are proportioned amongst AusNet Services' 3 regulated networks, as well as unregulated businesses, based on a Activity Based Costing ("ABC") survey process completed by all cost centre managers and in accordance with AusNet Services' Cost Allocation Methodology ("CAM").

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.

Based on the RIN instructions and other supplementary guidance received from the AER, AusNet Services must report all variables as 'Actual Information', unless it is unable to do so.

'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

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materially different presentation. Based on this definition, ‘Actual Information’ may include management judgments and assumptions (providing it does not result in a presentation that could be materially incorrect). Any information or allocation which has been calculated via the ABC survey process is considered ‘Actual information’, as this is in accordance with the AER-approved CAM, even though management judgments are used in the completion of the survey.

‘Estimated Information’ is information not materially dependent on information recorded in the AusNet Services’ historical accounting records or other records used in the normal course of business, and whose presentation for the purposes 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 response to the Notice.

Interpretation of the AER’s definition of Actual and Estimated information requires management judgments to be made as to the appropriate classification of information including:

- the extent to which the information is sourced from accounting or other records used in the normal course of business; and
- the degree of estimation involved and whether the information is materially dependent on judgments and assumptions for which there are valid alternatives, which could lead to a materially different presentation.

The methodologies, assumptions and judgments made by management in respect of variables are described within the relevant sections of this Basis of Preparation.

Based on the RIN instructions and other supplementary guidance received from the AER, in circumstances where AusNet Services is unable to provide ‘Actual Information’, the information is required to be estimated and an explanation included in this Basis of Preparation document as to why AusNet Services was unable to provide ‘Actual Information’, how the estimate was derived and why it is the best estimate in the circumstances. Based on supplementary guidance received from the AER, in the absence of evidence that AusNet is unable to provide ‘Actual Information’ the AER may regard the provision of ‘Estimated Information’ as non-compliant with the RIN.

Where ‘Estimated Information’ has been presented, the circumstances and the basis for the estimate, including the approach used, assumptions made, reasons why an estimate was required and why and why the estimate is AusNet Transmission’s best estimate have also been set out below. On this basis, AusNet Services consider data provided is in compliance with the RIN Instructions.

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.

AusNet Services implemented a new Enterprise Resource Planning system (“ERP System”) SAP, effective 4 May 2015. Therefore in many instances, the data presented in the Templates has been sourced (for the month of April 2015) from the same systems as used for the 2015 Category Analysis submission; and the May to March period data has been sourced from the new system. The new system consolidates a number of systems and was designed to record actual data in a manner to support the preparation of the Regulatory Accounts. The implementation of this new system has had no impact on the

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CAM. When referring to Financial Systems, the first 1 month refers to Oracle and the remaining 11 months refers to SAP. These circumstances have been explained in the Basis of Preparation where applicable.

To the extent applicable, the information reported has been prepared in a manner consistent with the policies and methodologies applied in preparing the Annual Regulatory Accounts. There were no changes in Accounting Policies in the 2016 Regulatory Year (in comparison with the previous Regulatory Year) which had a material impact on the information presented.

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

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2.1 Expenditure Summary

Capital Expenditure (“Capex”) reported is the capital costs and capital construction costs of operating the network and relates to prescribed transmission services only.

Operating Expenditure (“Opex”) reported is the costs of operating and maintaining the network (excluding all Capex) and relates to prescribed transmission services only.

Table 2.1.1 Prescribed transmission services Capex (as incurred) and

Table 2.1.2 Prescribed transmission services Opex

The information reported was prepared using Capex and Opex data extracted from the Financial Systems. The expenditure in the Capex and Opex categorisations in Table 2.1.1 and Table 2.1.2 is mutually exclusive and collectively exhaustive.

The expenditure reported for Replacement expenditure, Connections, Non-network, Vegetation Management and Maintenance relates to direct costs only and excludes expenditure on overheads. Total Capex and Opex have been reported on an ‘as incurred’ basis. All expenditure has been presented in nominal dollars.

Preparation Methodology:

Replacement Expenditure and Connections Capex were reported on an ‘as incurred’ basis and are consistent with the data provided in Template 2.12 Input Tables. The information reported was sourced from the Financial Systems. The data does not directly reconcile to Templates 2.2 Repex and 2.5 Connections respectively, as data in these Templates are reported on a ‘project close’ basis.

Augmentation expenditure has been left blank as the required information is captured by the Australian Energy Market Operator (“AEMO”).

Non-network Capex and Non-network Opex are consistent with the data provided in Template 2.6 Non-network. For Non-network Capex information was sourced from the Financial Systems and from workings used in the preparation of Template 2.6 Non-Network.

Vegetation Management Opex is consistent with the data provided in Template 2.7 Vegetation Management. Maintenance Opex is consistent with the data provided in Template 2.8 Maintenance. Data was sourced from the Financial Systems and from workings used in the preparation of the relevant Templates.

Using data extracted from the Financial Systems for the preparation of the 2016 Annual Regulatory Accounts, Capitalised Network Overheads and Capitalised Corporate Overheads in Table 2.1.1, and Network Overheads and Corporate Overheads in Table 2.1.2 were calculated. The sum of these metrics reconciles to Template 2.10 Overheads.

The ‘balancing items’ represent the differences between expenditure included in the Annual Regulatory Accounts which doesn’t meet the definitions of data requested in the Category Analysis templates and expenditure included in the Category Analysis templates which are not required to be reported in the

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Annual Regulatory Accounts (for example, Connection projects).

Estimated Information:

The information reported is considered 'Actual Information'.

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2.2 Repex

Replacement Expenditure (“Repex”) is the non-demand driven Capex to replace an asset with its modern equivalent where the asset has reached the end of its economic life. Capex has a primary driver of replacement expenditure if the factor determining the expenditure is the existing asset's inability to efficiently maintain its service performance requirement.

Asset Failure (Repex) is the failure of an asset to perform its intended function safely and in compliance with jurisdictional regulations, not as a result of external impacts such as:

- extreme or atypical weather events; or
- third party interference, such as traffic accidents and vandalism; or
- wildlife interference, but only where the wildlife interference directly, clearly and unambiguously influenced asset performance; or
- vegetation interference, but only where the vegetation interference directly, clearly and unambiguously influenced asset performance.

It excludes planned interruptions.

Asset refurbishments/ life extension Capex is the non-demand driven Capex to restore an asset to its former functionality where the asset has reached the end of its economic life. The works undertaken must result in a material extension in the expected life of the asset.

The following definitions have been applied in the preparation of the data:

Asset Type	Definition
Transmission towers	These are vertically oriented assets that provide load bearing structural support for conductors or other lines assets. This also includes associated transmission tower support structures, insulators, earthing, footings, where these are replaced in conjunction with a transmission tower replacement project. It excludes any assets that are included in any other asset group.
Transmission Tower Support Structures	These are horizontally oriented structures and their components that provide support for conductors or other line assets to be located on a transmission tower and provide adequate clearances. This expenditure relates to that which TNSPs incur when transmission tower support structures are replaced independently of the transmission tower they are located on. This includes tower section, arms, insulators, earthing. It excludes any assets that are included in any other asset group.
Conductors	These assets have the primary function of transmitting power, above ground, within the transmission network. It excludes any assets that are included in any other asset category.
Single circuit configuration	A single circuit configuration is a transmission line that has one set of conductors that are operated as a single electrical circuit. However, for the purposes of this definition, where a line has been constructed as a multi-circuit line but operates as a single circuit line, it should be included as a multi-circuit line.
Multiple circuit configuration	A multiple circuit configuration is a transmission line that includes more than one electrical circuit.
Transmission cables	These assets have the primary function of transmitting power, below ground, between segments of the network. This includes the material primarily used to transmit the power and cable ends, joints, terminations and associated hardware and equipment (e.g.

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	surge diverters, etc.), cable tunnels, ducts, pipes, pits and pillars. It excludes any assets that are included in any other asset group.
Substation switchbays	These are all assets used to provide switching within the substation and includes disconnect switches, circuit breakers, current transformers, voltage transformers and associated busbars and steelwork. It excludes any assets that are included in any other asset group.
Circuit breaker	A switch that can open under fault current conditions to protect equipment and electrical circuits from damage.
Gas Insulated Switchgear Unit	Enclosed gas insulated switchgear that may comprise circuit breakers, disconnectors, isolators, and other gas insulated components.
Substation power transformers	These are assets used to transform between voltage levels within segments of the network. This includes all its components such as the cooling systems and tap changing equipment. It excludes any assets that are included in any other asset group. For the avoidance of doubt, this does not include instrument transformers as defined in the National Electricity Rules.
Substation reactive plant	These are assets used to support the transfer of real power across the network. This includes reactors, synchronous condensers, shunt capacitors, static VAR compensators, dynamic VAR compensators. It excludes any assets that are included in any other asset group.
SCADA and Network Control and Protection systems replacement	Replacement expenditure associated with SCADA and network control hardware, software and associated IT systems. Includes replacement of protection and control systems and communication systems. This excludes all costs associated with SCADA and Network Control Expenditure that exist within gateway devices (routers, bridges etc.) at corporate offices. A protection system has the meaning prescribed in the National Electricity Rules.

Table 2.2.1 – Replacement Expenditure, Volumes and Asset Failures by Asset Category

Replacement expenditure and volumes have been provided for the prescribed standardised asset categories. Capex and associated non-financial information has been reported against the Regulatory Year on a 'project close' basis.

Financial Information

Expenditure reported relates to costs directly attributable to replacement/refurbishment of the asset and excludes expenditures on Overheads. All Capex has been presented in nominal dollars.

Preparation Methodology:

Financial information was sourced from the Financial System (SAP).

A SAP report was generated showing all completed projects in the Transmission business. Using work codes, replacement projects were identified. A report was then generated in SAP which provided the life to date direct costs of the replacement projects and a Fixed Asset report was generated showing all assets (life to date) commissioned.

The Fixed Asset report provided the disaggregation of costs between the relevant Asset Types – Secondary, Communications, Switchgear, Transformers, Reactive, Transmission Lines, Establishment, Network Switching Centre, Easements, Land and Non-system.

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For the majority of projects completed in the 2016 Regulatory Year, expenditure was directly allocated into one of the prescribed categories as these projects only involved the replacement of assets in a single Asset Category. Two projects involve major works at terminal stations. The costs of these projects have been disaggregated into the prescribed Asset Categories using the proportion of the costs in the project cost estimate prepared before construction commenced. The costs of one project, involving replacement of ground wire, were disaggregated into Conductor Other (Groundwire) and Optical Groundwire (OPGW) on the basis of conductor length.

It is noted that 2 projects that were listed as closed in the 2014 submission but have subsequently incurred additional post-commissioning expenditure. The additional expenditure incurred on these projects has been disclosed in Template 2.2.

Estimated Information:

The financial information reported is considered 'Actual Information'.

Non-Financial Information

Asset replacements are the replacement of a complete asset in each Asset Category except the 'Other' categories. Asset replacements reported in the 'Other' categories are replacement/refurbishment of components and replacement of assets in the Asset Group that do not fit the description of one of the defined Asset Categories.

Asset failures are the failure of an asset to perform its intended function as described in the AER RIN Instructions and Definitions.

Preparation Methodology:

For the 2016 Regulatory Year, the Asset Replacement quantity data was sourced from SAP.

Using a combination of data from the SAP Fixed Asset Register and a review of business cases by subject matter experts ("SMEs"), the Asset Replacement quantities were assigned to the respective AER asset category.

Projects that refurbish the existing asset are captured in the 'Other' categories for Substation Power Transformers, SCADA, Network Control and Protections Systems and Station Property & Civil Infrastructure.

Asset Failure data has been based on a list of Notifications extracted from the SAP Asset Management System. These Notifications relate to faults (notification type ZK) and system incident reports (notification type ZL). The Notification data extracted from SAP covered an 11 month period only (May 2015 to March 2016) due to the ERP system change outlined in Overview above. The data extracted was extrapolated over 12 months (to provide the number of Asset Failures in the 2016 Regulatory Year) and rounded to the nearest whole unit of measure.

Notifications are created in the Asset Management System when a fault or system incident occurs. Each notification is connected to a specific asset in the SAP Asset Management System.

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Notification types ZK and ZL were extracted from the Asset Management System. The list of notifications was reviewed and those which do not relate to an asset failure, such as those associated with a security alarm or a low-fuel alarm were removed.

It has been assumed that a notification has been raised because an asset is not functioning correctly (and therefore constitutes a failure per the AER definition). A notification may result in the assets being replaced, repaired, reset or other action to restore function (without replacing the asset). As a result there are instances where asset failures have been reported but there is no correlating 'replacement' expenditure.

Significant Asset Replacement projects reported include –

- Fall Arrest Installation Project
- Ringwood Terminal Station Project
- Rowville Terminal Station Project

The Fall Arrest Installation project involves the installation of 6,545 fall arrest systems on transmission lattice towers. These systems provide a method of preventing a fall from the tower when the tower is climbed for inspection and/or maintenance. The data is reported in the Transmission Towers 'Other' Category. This project is reported under 'Other' in the Transmission Towers Asset Group.

The Ringwood Terminal Station and Rowville Terminal Station Projects involve the replacement of bulk-oil 220kV Circuit Breakers and associated equipment as shown in the table below.

Terminal Station	220kV Circuit Breakers (units)	220kV Isolators & Earth Switches (units)	220kV VTs (units)	Protection Relays (units)
Ringwood Terminal Station	9	10	0	18
Rowville Terminal Station	8	18	11	10

Estimated Information:

Asset replacements are considered 'Actual Information' as the data is primarily extracted from SAP supported by business cases which define the scope of completed projects.

Asset failures are considered 'Actual information' as notifications are extracted directly from SAP against each item of equipment and each item of equipment is directly assigned to an asset category. The extrapolation of the 11 month data to cover the full 2016 Regulatory Year is not considered to constitute 'Estimated Information' on the basis of materiality.

Table 2.2.2 – Selected Asset Characteristics

The total volume of assets currently in commission and the replacement volumes of certain asset groups by specified aggregated metrics have been provided.

MVA_r refers to reactive capacity.

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Preparation Methodology:

Conductor material type:

'Conductor Material Type' for Asset Volumes Currently in Commission was extracted directly from the SAP Asset Management System.

Asset replacements were obtained from the Asset Replacements in Table 2.2.1. The quantities replaced have been entered into the final year of the project ('project close' basis).

Substation reactive plant:

Reactive plant capacity volumes currently in commission were extracted directly from the SAP Asset Management System.

One project was completed during the year which resulted in the partial replacement of an Static VAR Compensator ("SVC"). This project did not result in any change to the total reactive capacity and therefore no change to the reactive capacity is recorded. The volume of refurbishments (1) is recorded against SVC refurbishment.

Estimated Information:

The Asset volumes data included for Conductors and Substation reactive plant in Table 2.2.2 is considered 'Actual information' as it's directly from the SAP Asset Management System.

Asset replacements are considered 'Actual Information' as they are extracted from Table 2.2.1 which is 'Actual Information'.

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2.3 Augex

Table 2.3.1 — Augex asset data - Substations

Table 2.3.2 — Augex asset data - Lines

Table 2.3.3 — Augex data - total expenditure

The above tables have not been completed as the required network augmentation information is captured by AEMO.

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2.5 Connections

Connections expenditure, connection rating and connection voltage have been reported for all Transmission Terminal Stations where complex connection projects have been installed. Data provided relates to prescribed connection services (as defined in the National Electricity Rules) only and excludes negotiated connection services and contestable works. AEMO connection projects have been excluded.

Expenditure reported is nominal direct Capex and excludes expenditure on Overheads and Capitalised Finance Charges. Capex and the associated non-financial information have been reported against the Regulatory Year on a 'project close' basis - i.e. against the year in which the project was completed.

Connection rating (MVA) is the normal cyclic rating and Connection voltage (KV) is the Nominal voltage.

Table 2.5.1 Expenditure on Connection Projects

Preparation Methodology:

A report was generated in the SAP system showing all completed projects in the Transmission business. Work codes were used as a basis of determining connection related projects. The report was also reviewed by a subject matter expert to ensure only projects which met the definition of prescribed connection services were included.

Financial information ('life to date') Capex, was obtained from a separate report generated in SAP which provided the split of life to date project costs, split between Materials, Labour, Contracts, Other Direct, Capitalised Finance Costs and Overheads. Only Direct Material and Direct Labour costs are reported.

Estimated Information:

The financial information reported is considered 'Actual Information'.

Table 2.5.2 Description of Connection Projects

Preparation Methodology:

Information in relation to the Connection Voltage, Underground/Overhead and Year of Connection Project Completion was obtained from the Project Management and the Stations Rating Systems respectively.

The Regulatory Year each connection project was completed is noted in the column 'Year of Connection Project Completion'.

Information in relation to the Connections Rating for transformer connection projects, new switchyard bays and extensions, and protection changes and upgrades on feeders and lines were obtained as follows:

1. For transformer connection projects, the MVA rating of the transformer was used
2. For new switchyard bays and extensions, the MVA rating of the bay was used
3. In relation to projects involving distribution businesses (DBs) feeder(s) connections and protection changes and upgrades on DB feeders and lines, MVA ratings of the customer feeders are not known. As such, the maximum feeder ratings at the last connection point within the respective terminal stations have been provided.

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Table 2.5.2 only allows each project to be designated as either an ‘Overhead’ or ‘Underground’ connection. For projects which display both characteristics, an analysis was performed to determine which characteristic was more predominant; and the choice to allocate each project as either an ‘Overhead’ or ‘Underground’ connection was based on this predominance.

Estimated Information:

Information reported is considered ‘Actual Information’.

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2.6 Non-network

Non-network expenditure reported relates to direct Opex and direct Capex costs only (i.e. only costs directly attributable to the prescribed expenditure categories) and excludes expenditures on Overheads. Capex and associated non-financial information has been reported against the Regulatory Year on an 'as incurred' basis. All Capex and Opex have been presented in nominal dollars.

Table 2.6.1 Non-network Expenditure

IT and Communications Expenditure

Non-network IT & Communications Expenditure which is directly attributable to IT and communications assets including replacement, installation, operation, maintenance, licensing, and leasing costs at corporate offices have been reported. All costs associated with SCADA and Network Control Expenditure that exists beyond gateway devices has been excluded.

Expenditure reported has been allocated between 'Client Devices', 'Recurrent' and 'Non-recurrent Expenditure'.

Client Devices Expenditure is expenditure related to a hardware device that accesses services made available by a server. Client Devices Expenditure includes hardware involved in providing desktop computers, laptops, tablets and thin client interfaces and handheld end user computing devices including smart phones, tablets and laptops.

Recurrent expenditure is all IT & Communications Expenditure that returns time after time, excluding any expenditure reported as Client Devices Expenditure. Temporally, expenditure that would be expected to be reasonably consistent from regulatory period to regulatory period would be recurrent expenditure.

Non-recurrent expenditure is all IT & Communications Expenditure that is not Recurrent expenditure excluding any expenditure reported under Client Devices Expenditure.

Non-network IT & Communications Expenditure has been split between Capex and Opex.

Preparation Methodology:

Opex:

Using data extracted from the Financial Systems for the preparation of the 2016 Regulatory Accounts, the total direct costs for IT and Communications Expenditure was calculated. Expenditure for non-regulated services was excluded (this was derived based on Activity Based Costing surveys for the 2016 Regulatory Year).

Non-recurrent operating costs identified by a suitable SME at the AusNet group level were scaled for Prescribed Transmission Services. The Recurrent portion is calculated by deducting this non-recurrent portion from the Electricity Distribution IT and Communications Expenditure.

Capex:

Data was obtained from the 2016 Annual Regulatory Accounts and the supporting working files which include a list of projects and the associated financial information (excluding overheads). An appropriate

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SME performed an assessment of the nature of each of the projects (recurrent expenditure, non-recurrent expenditure or client device expenditure) and based on this assessment, the expenditure was classified into the prescribed categorisations in Table 2.6.1. The allocations are performed at a project level (i.e. whether the project is recurring). Where a project has been split between recurrent and non-recurrent, this was based on the approved Transmission Revenue Reset and is not considered to represent 'Estimated Information'.

Estimated Information:

The information provided in relation to IT and Communications Capex and Client Device expenditure is considered 'Actual Information'.

Total IT and Communications Opex is 'Actual Information', however, the allocation of expenditure between recurrent and non-recurrent was estimated based on judgement of the SME. Actual data could not be obtained as it's not separately captured in the Financial Systems. The allocation is considered management's best estimate.

Motor Vehicles

Motor Vehicle Expenditure is all expenditure directly attributable to motor vehicles including: purchase, replacement, operation and maintenance of motor vehicles assets registered for use on public roads, excluding mobile plant and equipment. It excludes expenditure on vehicles not generally moved large distances on public roads under their own power.

The following definitions have been applied to determine the categorisation of motor vehicles:

<i>Car</i>	<p>Cars are Motor Vehicles other than those that comply with the definition of Light commercial vehicle, Heavy commercial vehicle, or Elevated Work Platform.</p> <p>Motor Vehicles are any motor vehicle registered for use on public roads excluding motor vehicles not generally moved large distances on public roads under their own power (e.g. tractors, forklifts, backhoes, bobcats and any other road registered mobile plant).</p>
<i>Heavy Commercial Vehicle (HCV)</i>	<p>Heavy commercial vehicles (HCVs) are Motor Vehicles that are registered for use on public roads excluding Elevated Work Platform (HCVs) that:</p> <ul style="list-style-type: none"> ➤ have a gross vehicle mass greater than 4.5 tonnes; or ➤ are articulated Vehicles; or ➤ are buses with a gross vehicle mass exceeding 4.5 tonnes.
<i>Light Commercial Vehicle (LCV)</i>	<p>Light commercial vehicles (LCVs) are Motor Vehicles that are registered for use on public roads excluding Elevated Work Platforms that:</p> <ul style="list-style-type: none"> ➤ are rigid trucks or load carrying vans or utilities having a gross vehicle mass greater than 1.5 tonnes but not exceeding 4.5 tonnes; or ➤ have cab-chassis construction, and a gross vehicle mass greater than 1.5 tonnes but not exceeding 4.5 tonnes; or ➤ are buses with a gross vehicle mass not exceeding 4.5 tonnes.
<i>Elevated Work</i>	<p>Elevated Work Platform (EWP - HCV) are HCV's that have permanently attached</p>

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<i>Platform (EWP - HCV)</i>	elevating work platforms.
<i>Elevated Work Platform (EWP - LCV)</i>	Elevated Work Platform (EWP - LCV) are LCV's that have permanently attached elevating work platforms.

Preparation Methodology:

Opex:

For the 2016 Regulatory Year, a report was generated from the Fleet System showing the total Motor Vehicle Opex. The report provides operating expenditure for each motor vehicle and specifies vehicle type. Vehicle types were aggregated into the prescribed categories in Table 2.6.1 to determine total Opex by vehicle type.

Using information from the 2016 Regulatory Accounts, a calculation of the percentage of total Operating Expenditure incurred in relation to the provision of PTS was performed. This percentage was applied to Motor Vehicle Opex to derive an estimate of PTS related Motor Vehicle Opex.

Capex:

A fixed asset additions list was generated in the Financial System (fixed asset register) which provided details of all motor vehicles acquired during the 2016 Regulatory Year. A motor vehicle report was generated from the Fleet System which provided additional information regarding the motor vehicle type of vehicles purchased. Using the additional Fleet System data, the fixed asset register information was allocated into the prescribed vehicle categorisations. Only vehicles relating to the Transmission business were included.

Estimated Information:

The information provided in relation to Motor Vehicle Capex is considered 'Actual Information'.

In relation to Motor Vehicle Opex, the Financial System does not separately capture the motor vehicle operating expenditure which is directly related to the Transmission business' PTS related activities. An estimated PTS expenditure percentage was applied to the total Motor Vehicle Opex. The PTS percentage utilised was derived from the 2016 Regulatory Accounts. Based on the above preparation methodology, the data provided is 'Estimated Information' and is considered management's best estimation of the required information.

Buildings and Property Expenditure

Expenditure directly attributable to non-network buildings and property assets has been reported, including the replacement, installation, operation and maintenance of non-network buildings, fittings and fixtures. It includes expenditure related to real chattels (e.g. interests in land such as a lease) but excludes expenditure related personal chattels (e.g. furniture).

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Preparation Methodology:

Opex:

A detailed Income Statement report was extracted from the Financial Systems for the 2016 Regulatory Year's based on Buildings and Property cost centres. An analysis was performed of the General Ledger accounts in the Income Statement to determine whether the costs incurred were in accordance with the Buildings and Property definition prescribed by the AER. Expenditure not directly attributable to the replacement, installation, operation and maintenance of non-network buildings, fittings and fixtures was excluded. The relevant costs were summed for the 2016 Regulatory Year and reported in Table 2.6.1. In addition, Taxes and Charges Opex per the Regulatory Accounts was included, as this represents additional Building and Property Opex (e.g. Land Tax) per the Financial System.

Capex:

Project reports were generated from the Financial System (excluding overheads) using the relevant Buildings and Property work codes and cost codes. The reports were reviewed for any expenditure on projects which met the definition of Buildings and Property expenditure. Projects which did not meet the definition were included in 'Other Expenditure' as described below.

Estimated Information:

The information provided in relation to Buildings and Property Opex and Capex is considered 'Actual Information' as it was extracted from financial records.

Other Expenditure

Other Expenditure consists of expenditure directly attributable to the following:

- Motor Vehicles which are not reported within Motor Vehicles Expenditure as per above (e.g. trailers)
- Buildings and Property which is not reported within Buildings and Property Expenditure as per above, such as personal chattels (e.g. furniture); and
- Other general assets.

Preparation Methodology:

When determining the Motor Vehicle expenditure which meets the AER prescribed definitions, 'other' motor vehicle expenditure was identified.

When determining the Buildings and Property expenditure which meets the AER prescribed definitions, 'other' building and property expenditure was identified.

Using data extracted from the Financial System for the preparation of the Annual Regulatory Accounts, other general assets information was calculated. All expenditure reported relates to direct costs only.

Estimated Information:

The information provided in relation to Other Opex and Capex is considered 'Actual Information'.

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Other Expenditure – Tools and Equipment

As \$1 million or more (nominal) in capital expenditure has been incurred in the 2016 Regulatory Year for Tools and Equipment, this has been disclosed separately. Tools and Equipment relates to miscellaneous tools, equipment and office furniture.

Preparation Methodology:

Using data extracted from the Financial System for the preparation of the Annual Regulatory Accounts, total Tools and Equipment Expenditure was calculated. Expenditure reported relates to direct costs only.

Estimated Information:

The information provided in relation to Tools and Equipment Capex is considered 'Actual Information'.

Table 2.6.2 Annual Descriptor Metrics – IT & Communications Expenditure

Employee Numbers

Employee numbers are the average number of employees engaged in prescribed transmission services work over the year scaled for time spent on prescribed transmission services ("PTS") work. This metric does not include labour engaged under labour hire agreements.

Preparation Methodology:

A report showing the number of full time employees and equivalents (by month) was generated in the HR/Payroll System. This report included information in relation to the 2016 Regulatory Year and provided Employee Numbers in total across all AusNet Services' businesses.

Using Activity Based Costing ("ABC") surveys, the headcount report was allocated between Distribution Regulated, Transmission Regulated (PTS) and Unregulated. The information from ABC surveys has been applied to all employees in a cost centre, assuming that the survey results are applicable to employees who are directly involved in projects as well as those that are not directly involved in projects. The ABC surveys applied were taken from monthly surveys for the year ended 31 March 2016. The calculations performed derived an estimate of the average Employee Numbers for the 2016 Regulatory Year.

Estimated Information:

The data reported is considered 'Estimated information' due to the assumptions involved in the percentage allocations as described above. An estimate was required as the information is not separately captured by the business. The information provided is considered management's best estimate given the data available.

User Numbers

User numbers are defined as active IT system log in accounts scaled for prescribed transmission services use.

Basis of Preparation – Category Analysis

2016 Regulatory Year

Preparation Methodology:

The Total User Numbers was extracted from the domain IT system. The data extracted provided User Numbers in total across all AusNet Services' businesses. User Numbers in the Transmission business (prescribed transmission services use) was derived by applying the ABC Survey percentage allocation outcome as described under 'Employee Numbers' above.

Estimated Information:

While the Total User Numbers across the AusNet Services businesses is 'Actual Information', the subsequent split between Distribution Regulated, Transmission Regulated (PTS) and Unregulated are considered estimates based on ABC surveys. An estimate was required as the information is not separately captured by the business. The data provided is considered management's best estimate of the information required.

Client Devices

Device numbers are defined as the number of client devices scaled for prescribed transmission services use. Client Devices are hardware devices that access services made available by a server.

Preparation Methodology:

Information in relation to the number of laptops and desktop computers was obtained from ICT Desktop Support and is extracted from the Microsoft System Center Configuration Manager ("SCCM") system. The report provided the number of devices across the AusNet Services businesses.

Information in relation to handheld devices (smartphones and tablets) was obtained from a Lotus Notes database maintained by the AusNet Services IT Service Desk, and filtered to ensure that the list reflected devices acquired on or before 31 March 2016.

The reports described above were summed to provide the total number of Client Devices across the AusNet Services businesses. Using the same percentages applied in allocating 'Employee Numbers and 'User Numbers', the number of Client Devices in the Transmission business (used for prescribed transmission service activities only) were derived.

Estimated Information:

Client device information is considered 'Estimated Information' due the approximate percentages applied to derive an estimate of the devices owned by AusNet Transmission in relation to PTS.

An estimate was required as the information is not separately captured by the business. The calculation performed is considered management's best estimate of the required information.

Basis of Preparation – Category Analysis

2016 Regulatory Year

Table 2.6.3 Annual Descriptor Metrics – Motor Vehicles

Average Kilometres Travelled

Preparation Methodology:

For the 2016 Regulatory Year, total yearly kilometres travelled per vehicle was obtained directly from the Fleet System. The report was filtered to exclude Distribution business vehicles and to exclude vehicles which did not meet the motor vehicle definitions prescribed by the AER. Total kilometres travelled per category was calculated then divided by the number of vehicles in each category to obtain the average kilometres travelled.

The average kilometers travelled per vehicle was scaled for PTS use. The percentage of PTS use that was applied was consistent with the 'Proportion of Total Fleet Expenditure Allocated as Regulatory Expenditure' as discussed below.

Estimated Information:

This information provided is considered 'Estimated Information' due to the approximation of PTS use. An estimate is required as the system does not capture the data needed. The data provided is considered management's best estimate of the information required.

Number Purchased, Number Leased and Number in Fleet

Preparation Methodology:

Number Purchased was obtained from the SAP reports generated to prepare the Annual Regulatory Accounts. Vehicles which did not meet the prescribed Motor Vehicle definition were excluded.

The total number leased and total number in fleet as at 31 March 2016 was sourced from motor vehicle reports generated from the Fleet System. Using data compiled for the 2015 Category Analysis submission (sourced from the Fleet System) the total number leased and total number in fleet as at 31 March 2015 was extracted. A simple average was calculated to determine the average number leased and average number in fleet. Vehicles which did not meet the prescribed Motor Vehicle definition were excluded. For the 2016 (and 2015) Regulatory Year, 'number leased' is interpreted as number of vehicles leased in fleet rather than the number of new leases entered into during the Regulatory Year.

The number of vehicles in the fleet purchased, the number of vehicles leased in the fleet and the total number of vehicles in the fleet were scaled for PTS use. The percentage of PTS use that was applied was consistent with the 'Proportion of Total Fleet Expenditure Allocated as Regulatory Expenditure' as discussed below.

Estimated Information:

This information provided is considered 'Estimated Information' due to the approximation of PTS use. An estimate is required as the system does not capture the data needed. The data provided is considered management's best estimate of the information required.

Basis of Preparation – Category Analysis

2016 Regulatory Year

Proportion of Total Fleet Expenditure Allocated as Regulatory Expenditure

Preparation Methodology:

The 'Proportion of Total Fleet Expenditure Allocated as Regulatory Expenditure' was calculated based on information contained in the Annual Regulatory Accounts. The percentage reported is the amount of Operating Costs relating to Prescribed Transmission Services divided by the total Operating Costs. This calculation was performed for the 2016 Regulatory Year.

Estimated Information:

The percentage reported is considered 'Estimated Information' as it has been assumed that the proportion of 'Total Fleet Expenditure Allocated to Regulatory Expenditure' is consistent with the proportion of Total Operating Expenditure Allocated to Regulatory Expenditure. An estimate was required as the information is not separately captured by the business. This is considered management's best estimate based on the data available.

Basis of Preparation – Category Analysis

2016 Regulatory Year

2.7 Vegetation Management

Vegetation management zones are segments of the transmission network distinguished from other vegetation management segments by material differences in recognised cost drivers.

An assessment of vegetation management zones has been performed taking into consideration areas where bushfire risk mitigation costs are imposed by legislation, regulation or ministerial order and areas of the network where other recognised drivers affect the costs of performing vegetation management work. The key driver of vegetation management costs across AusNet Services' businesses is the level of bushfire risk. The Transmission network vegetation management program does not separate high bush fire risk areas from low bushfire risk areas – as the vegetation management program is in accordance with the requirements of the Electrical Safety Regulations (for Transmission businesses). Based on this, one vegetation management zone has been identified within AusNet Transmission's network.

The Electrical Safety (Electric Line Clearance) Regulations impose a material cost on performing vegetation management works. The cost of compliance is consistent with the information reported in Table 2.7.2.

There are no self-imposed standards per AusNet Transmission's Vegetation Management program.

Route Line Length within Zone

Preparation Methodology:

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

Note – the route line length reported is the overhead route line length only, consistent with previous years. Underground route line length has been excluded from the data reported.

Information in relation to overhead route line length was obtained from the SDME Asset Management System. The data extracted provided wire segment and functional location information. Using the coordinates of in-service towers, overhead route line length was determined.

Estimated Information:

The information provided is considered 'Actual information'.

Number of Maintenance Spans

The 'Number of maintenance spans' is the total count of spans in the network that are subject to active vegetation management practices in the 2016 Regulatory Year.

Preparation Methodology:

Information in relation to the total number of maintenance spans was sourced from work orders (PT1, PT30, PT90, PT180, PT365 and PT900) recorded in the Financial System (SAP) where each span is assigned to a work order. These types of work orders represent maintenance spans which require

Basis of Preparation – Category Analysis

2016 Regulatory Year

vegetation maintenance within a certain timeframe, that is, PT30 means vegetation maintenance is required within 30 days, PT90 means vegetation maintenance is required within 90 days etc. The maintenance spans reported in the calculation are the spans which were actioned during the 1 April 2015 to 31 March 2016 period.

Estimated Information:

The information provided is considered 'Actual information'.

Total Length of Maintenance Spans

Preparation Methodology:

The Total Length of Maintenance Spans is not separately captured within AusNet Services' systems. The figure is calculated as the total number of maintenance spans (as above), multiplied by the average length of a transmission span. This provides an estimate of the 'Total Length of Maintenance Spans'.

The average length of a transmission span was calculated by dividing the route line length (per above) by the number of transmission towers. The number of transmission towers was obtained from a report extracted from the SDME Asset Management System.

Estimated Information:

Data provided is considered 'Estimated Information' as it is not separately captured. This is considered the best estimate of the data requested.

Average Number of Trees per Maintenance Span

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

Preparation Methodology:

Vegetation Management field staff record the number of trees to be actioned (PT1, PT30, PT90, PT180, PT365, PT900) in each span, into the Asset Management Systems. Systems analysts then run a query to quantify average numbers of actioned trees per maintenance span.

Estimated Information:

The information provided is considered an estimate as this average is calculated based on 398 maintenance spans recorded in the Asset Management Systems. This represents approximately 24% of the total Number of Maintenance Spans - as AusNet Services commenced capturing this data during the 2016 Regulatory Year. Based on the RIN Instructions and Definitions, this information is permitted to be 'Estimated Information' on an ongoing basis.

Basis of Preparation – Category Analysis

2016 Regulatory Year

Length of Vegetation Corridors

A vegetation corridor is a tract of land along which vegetation is maintained in order to form a passageway along the route of a power line or lines that is free of vegetation encroachment into the asset clearance space. This does not include portions of the corridor where no managed vegetation exists or where vegetation is not managed.

Preparation Methodology:

The Length of Vegetation Corridors is not separately captured within AusNet Services' systems.

The total number of maintenance spans which require vegetation maintenance within the next 900 days was obtained from the Asset Management Systems. This was multiplied by the average length of a transmission span to provide an estimate of the 'Total Length of Vegetation Corridors'.

The average length of a transmission span was calculated by dividing the route line length (per above) by the number of transmission towers. The number of transmission towers was obtained from a report extracted from the SDME Asset Management System.

Estimated Information:

The data provided is considered 'Estimated Information' as it is not separately captured. This is considered the best estimate of the information requested.

Average Width of Vegetation Corridors

The width of vegetation corridor is the total width of a vegetation corridor (the entire width of the tract of land along which vegetation is maintained).

Preparation Methodology:

The information provided has been estimated based on Transmission network data extracted from the Asset Management System. Using a sample of easement segments (where easement width information was available) the weighted average width per easement segment was calculated to provide an indicative average easement width.

Estimated Information:

It has been assumed that the easement widths in the sample are representative of the easement widths of all segments. The data provided is considered 'Estimated Information' as it is not separately captured. This is considered the best estimate of the information requested.

Average Frequency of Cutting Cycle

The cutting cycle is the average planned number of years (including fractions of years) between which cyclic vegetation maintenance is performed within vegetation management zones. It has been assumed that cutting cycles are the same as maintenance span cycles (the planned number of years (including fractions of years) between which cyclic vegetation maintenance is performed).

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Preparation Methodology:

Information in relation to the average vegetation maintenance span cycles was obtained from the Asset Management System and also per the vegetation management plan whereby 3 patrols are conducted per annum, with an aim to clear these segments on a 900 day cycle.

Estimated Information:

The information provided is considered 'Actual information'.

Table 2.7.2 – Expenditure Metrics by Zone

Table 2.7.2 has been completed based on the one vegetation management zone identified above. Expenditure provided relates to direct costs, excluding overhead expenditure and has been presented in nominal dollars.

Preparation Methodology:

Data was extracted from the Financial Systems (SAP and Oracle) based on the Vegetation Management work code. The information extracted included project data for the various vegetation management functions.

The 'Mandatory Works' project provided the total expenditure on both 'Tree Trimming' and 'Vegetation Corridor Clearance'. The allocation between 'Tree Trimming' and 'Vegetation Corridor Clearance' was determined based on an analysis of the underlying supplier information.

The 'Management Labour' project provided the expenditure on 'Inspection', 'Audit' and 'Contractor Liaison Expenditure'. The allocation of Management Labour to categories was based on an analysis of the time spent by employees involved in performing these activities (as determined by an SME).

The balance of costs (i.e. the difference between the total costs included in Vegetation Management work code and the above categories) has been allocated to 'Other Vegetation Management Costs not Specified in Sheet'.

Estimated Information:

The data reported for 'Tree Trimming', 'Vegetation Corridor Clearance' and 'Other Vegetation Management Costs not Specified in Sheet' is considered 'Actual Information' as it is based on information directly extracted from the Financial Systems.

The information reported for 'Inspection', 'Audit' and 'Contractor Liaison Expenditure', although subject to SME allocation, is considered to constitute 'Actual Information' on the basis of materiality. The expenditure in total is from project information and is not considered material to the total Vegetation Management expenditure. Therefore, any alternative allocation approaches between the three categories would not lead to a materially different presentation.

Table 2.7.3 – Descriptor Metrics Across All Zones – Unplanned Vegetation Events

Unplanned vegetation events are system outages and fire starts caused by either vegetation grow-ins or vegetation blow-ins/fall-ins.

Basis of Preparation – Category Analysis

2016 Regulatory Year

***Number of Fire Starts Caused by Vegetation Grow-Ins (NSP Responsibility);
Number of Fire Starts Caused by Blow-Ins and Fall-Ins (NSP Responsibility);
Number of Outages Caused by Vegetation Grow-Ins (NSP Responsibility); and
Number of Outages Caused by Blow-Ins and Fall-Ins (NSP Responsibility)***

Preparation Methodology:

A review of information contained in the Incident Management System was performed. Based on this review, there have been no Fire Starts or Outages caused by vegetation grow-ins, blow-ins or fall-ins (AusNet Transmission responsibility) in the 2016 Regulatory Year.

Estimated Information:

The information provided is considered 'Actual information'.

***Number of Fire Starts Caused by Vegetation Grow-Ins (Other Party Responsibility);
Number of Fire Starts Caused by Blow-Ins and Fall-Ins (Other Party Responsibility);
Number of Outages Caused by Vegetation Grow-Ins (Other Party Responsibility); and
Number of Outages Caused by Blow-Ins and Fall-Ins (Other Party Responsibility)***

Preparation Methodology:

AusNet Transmission is responsible for all vegetation clearing in its network. Based on this, the above variables are not applicable and have been disclosed as zero.

Estimated Information:

The information provided is considered 'Actual information'.

Basis of Preparation – Category Analysis

2016 Regulatory Year

2.8 Maintenance

Maintenance relates to operational repairs and maintenance of the transmission system, including testing, investigation, validation and correction costs not involving capital expenditure.

Table 2.8.1 – Descriptor Metrics for Routine and Non-Routine Maintenance

A ‘Maintenance cycle’ is the planned or actual duration between two consecutive maintenance works on an asset. An ‘Inspection cycle’ is the planned or actual duration between two consecutive inspections of an asset.

The ‘Inspection cycle’ and the ‘Maintenance cycle’ for each maintenance subcategory have been expressed as the number of years in the respective cycles. Where there are multiple inspection and maintenance activities, the cycle that reflects the highest cost activity has been reported.

Asset quantity information has been provided for the total number of assets (population) at the end of the 2016 Regulatory Year (for each asset category) and the number of assets inspected or maintained during the 2016 Regulatory Year (for each asset category).

Preparation Methodology:

In the 2016 Regulatory Year, ‘Asset Quantity’ was calculated as the cumulative sum of installed assets (the quantity currently in commission).

	Asset Quantity at year end	Asset Quantity inspected/ maintained
Transmission towers	Data reported was sourced from Template 5.2 Asset Age Profile. Data is considered ‘Actual Information’.	The number of assets inspected or maintained was obtained from the SAP Asset Management System based on work order information.
Transmission cables	Data reported was sourced from the SDME and Maximo 5 Asset Management Systems. Data is considered ‘Actual Information’.	
Substation switchbays (incl. Reactive plant)	Data reported was sourced from Template 5.2 Asset Age Profile. Quantity data was calculated as the cumulative sum of installed assets in the asset categories - ‘Substation switchbays Air insulated circuit breakers and GIS modules.’ This is considered ‘Estimated Information’ as there is not a direct relationship between circuit breakers and switchbays.	The data extracted from SAP was for an 11 month period (due to new ERP system implementation) and has been extrapolated over 12 months. The data extracted provided project number, project description, assembly code, ‘floc’ (functional location), ‘equipment’ and ‘notification’ (item of work performed) details. Assembly codes represent type of asset and type of work being performed (the
Substation power transformers	Data reported was sourced from Template 5.2 Asset Age Profile. Data is considered ‘Actual Information’.	

Basis of Preparation – Category Analysis

2016 Regulatory Year

	Asset Quantity at year end	Asset Quantity inspected/maintained
Substation property	<p>The number of 'Substation Properties' has not changed since 2014 and therefore the same quantity has been included in Table 2.4.1 for the 2016 Regulatory Year.</p> <ul style="list-style-type: none"> For the 2014 submission, the number of 'Substation - Properties' was based on data contained in: AusNet Services internal document 'PGI 67-01-01 List of Transmission and Sub-transmission Stations and Communication Sites'; Asset Management Strategy 'AMS 20-55: Civil Infrastructures'; Asset Management Strategy 'AMS 10-55 Civil Infrastructure, Terminal Stations'; and Site information. <p>Information provided for 'Substation – Property' is considered 'Estimated Information' as all civil infrastructure properties at one terminal station or zone substation have been assumed as one property. This assumption has been made as the AER's definition of 'Substation – Property' is not separately captured.</p> <p>For AusNet Services purposes, civil infrastructure properties include a large number of assets, such as buildings, environmental systems, fire protection systems etc. Therefore management's best estimate of 'Substation – Property' is to consider all civil infrastructure properties at one terminal station or zone substation to be classified as one property.</p>	<p>equivalent of work specs in the previous Asset Management System). A notification represents an item of work.</p> <p>Notification data was grouped to the relevant Maintenance Activity ("RIN Category") and Maintenance Asset Category using the work order assembly code. If the work order assembly code was unavailable, the notification assembly code was used. The knowledge of an SME was used to translate the assembly codes into the prescribed Maintenance Activities and Maintenance Asset Categories.</p> <p>To derive the 'Asset Quantity Inspected/Maintained' a count was performed of all distinct notifications in each Maintenance Asset Category.</p> <p>Data provided is considered actual information. The extrapolation of the 11 month data to cover the full 2016 Regulatory Year is not considered to constitute 'Estimated Information' on the basis of materiality.</p>
SCADA & network control maintenance	<p>Data reported was sourced from Template 5.2 Asset Age Profile. Quantity data was calculated as the cumulative sum of installed assets in the asset categories in all asset categories under SCADA, Network Control and Protection systems except Protection schemes/systems. Data is considered 'Actual Information'.</p>	<p>Information provided has been calculated as 'Asset Quantity at Year End' divided by the 'Inspection Cycle' in years plus 'Asset Quantity at Year End' divided by the 'Maintenance Cycle' in years.</p> <p>This approach provides an estimate</p>

Basis of Preparation – Category Analysis

2016 Regulatory Year

	Asset Quantity at year end	Asset Quantity inspected/ maintained
Protection systems maintenance	Data reported was sourced from Template 5.2 Asset Age Profile. Quantity data was calculated as the cumulative sum of installed assets in the asset category Protection schemes/systems. Data is considered 'Actual Information'.	of the number of inspection and maintenance activities conducted. It is not possible to use work order data to count these activities as each work order covers multiple assets. For the category 'SCADA & network control maintenance', the assets on hand which are run to failure were excluded from the calculation performed.
Transmission support structures	Data reported was sourced from Template 5.2 Asset Age Profile. Data is considered 'Estimated Information' as the Asset Management System does not contain the attributes required to meet the definition of Transmission support structures. The asset quantity reported is the volume of insulators (which form part of the Transmission support structure).	The information provided is considered to be management's best estimate, as it is assumed that actual maintenance performed is aligned with company policies (and no non-routine maintenance was required).
Conductors	Data reported was sourced from the SDME Asset Management System. Data is considered 'Actual Information'.	

	Maintenance Cycle (Years) and Inspection Cycle (Years)
Transmission towers	Maintenance cycle and inspection cycle data was obtained from 'BFM 10-02 BFM Plan Transmission v17 Final' and 'LPP 09-06 – Condition Assessment of Overhead Lines – Lines Practices & Procedures'. Data provided is considered 'Actual Information'.
Transmission support structures	
Conductors	
Transmission cables	As Conductors are not routinely maintained, 'Maintenance Cycles' of zero have been reported.
Substation switchbays (incl. Reactive plant)	'Average maintenance cycle' is based on Class 1 (minor) maintenance works and 'Average inspection cycle' is based on the comprehensive yearly inspection of equipment (including scanning). This is considered 'Actual Information'.
Substation power transformers	Maintenance and inspection cycles have not changed since the 2015 submission. Data provided in 2015 was based on the AusNet Services' internal policy document 'PG 02-01-02 Summary of Maintenance Intervals – Transmission Plant Guidance and Information PGI-MTCE INTERVALS-T'. 'Average maintenance cycle' is based on major maintenance works (Class 2

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2016 Regulatory Year

	Maintenance Cycle (Years) and Inspection Cycle (Years)
	tap changer maintenance) and not minor maintenance (Class 1). Routine maintenance of all auxiliaries is scheduled every four years. 'Average inspection cycle' is based on the comprehensive yearly inspection of equipment (including scanning and oil testing). This is considered 'Actual Information'.
Substation property	<p>Inspection cycles have not changed since the 2015 submission.</p> <p>Data provided in 2015 was based on the AusNet Services' internal policy document 'PG 02-01-02 Summary of Maintenance Intervals – Transmission Plant Guidance and Information PGI-MTCE INTERVALS-T'. This is considered 'Actual Information'.</p>
SCADA & network control maintenance	<p>Information reported for 'Maintenance cycles' and 'Inspection cycles' was obtained from internal policies and the Asset Management System.</p> <p>It is noted that SCADA and Network Control assets are subjected to either the reported cycles or no cycles, as certain asset classes obtain no benefit from inspections or maintenance and use a 'run to failure' and 'life cycle' strategy. These are usually implicitly monitored via the availability of the end service; therefore do not require routine inspection or maintenance cycles. As per the RIN requirements, as there are multiple inspection and maintenance activities, the cycle that reflects the highest cost activity has been reported. This is considered 'Actual Information'.</p>
Protection systems maintenance	<p>Data provided was extracted from AusNet Services' internal policy document 'Summary of Maintenance Intervals – Transmission: Plant Guidance and Information PGI-MTCE INTERVALS-T' as the maintenance interval for Protection Schemes. Conventional technology is maintained on a 3 year cycle and newer (digital) technology is maintained on a 6 year cycle. Certain asset classes obtain no benefit from inspections or maintenance and use a 'run to failure' and 'life cycle' strategy.</p> <p>A 3 year cycle has been reported based on the highest cost of the maintenance cycles. The inspection and maintenance cycles are the same for Protection System assets as inspection and maintenance is performed simultaneously. This is considered 'Actual Information'.</p>

Average Age of Asset Group

The Average Age of each group of assets has been calculated based on the age profile, and asset lives from Template 5.2 Asset Age profile, except for Substation property. The age of each asset is determined from the current year and the year of installation. The average age is a simple average of all the asset ages for all the assets in each group. No weighting has been applied to this average to account for differences in cost or type of asset. The data provided is considered 'Actual Information' based on the approach outlined above.

Basis of Preparation – Category Analysis

2016 Regulatory Year

For Substation Property, the Average Age has been calculated from the age of each station and the age of each station is determined from the year each station was constructed. This is considered management's best estimate of the data required.

Estimated Information:

Any estimates required in Table 2.8.1 have been outlined above. Estimated Information has been provided in circumstances where the Asset Management System does not capture the maintenance information needed. The data provided is considered management's best estimate of the information required.

Table 2.8.2 – Cost Metrics for Routine and Non-Routine Maintenance

Maintenance expenditure has been provided for each of the prescribed maintenance categories. The financial information is reported in nominal dollars.

Routine maintenance costs are costs of recurrent/programmed activities undertaken to maintain assets, performed regardless of the condition of the asset. Costs of activities are predominantly directed at discovering information on asset condition and often undertaken at intervals that can be predicted. Routine maintenance is activities to maintain asset condition and/or to maintain the capacity of the transmission system to transmit electricity, and where the activities are:

- routine in nature;
- indiscriminately carried out for a pre-defined set of assets; and
- scheduled to occur at pre-defined intervals.

Routine maintenance may include activities to inspect, survey, audit, test, repair, alter, or reconfigure assets.

Routine maintenance expenditure excludes costs of activities that are designed to increase or improve the capacity of the transmission system to transmit electricity, except where the increase or improvement is incidental to the maintenance of the transmission system. It also excludes costs associated with asset removal, asset replacement, new asset installation, vegetation management, and emergency response.

Non-routine maintenance costs are costs of activities predominantly directed at managing asset condition or rectifying defects. The timing of these activities depends on asset condition and decisions on when to maintain or replace the asset, which may vary over time. Non-routine maintenance is activities to maintain asset condition and/or to maintain the capacity of the transmission system to transmit electricity, and where the activities are not routine in nature.

Non-routine maintenance expenditure excludes activities that are designed to increase or improve the capacity of the transmission system to transmit electricity, except where the increase or improvement is incidental to the maintenance of the transmission system.

Preparation Methodology:

For the period May 2015 to March 2016 (11 months), data was sourced from SAP based on the Maintenance work codes. The data sourced from SAP is the same information used in preparing the Asset Quantities Inspected/Maintained. As such, the same categorisations were applied to the corresponding financial information to determine the Maintenance Asset Category.

Basis of Preparation – Category Analysis

2016 Regulatory Year

Cost information is captured based on work orders. This includes details of the underlying assembly codes. In order to assign work order costs to the relevant Maintenance Asset Subcategory, work order data was extracted from the Financial System and mapped to a relevant Maintenance Asset Subcategory and also Routine vs Non-Routine classifications using the assembly codes. In some instances, additional information was needed from the work order (e.g. floc description, floc type and work code) in order to classify the work order into the Maintenance Asset Subcategory and the Routine vs Non-Routine split.

For the month of April 2015, information was extracted from Oracle based on the Maintenance Task Codes. The Task Codes provide a split between Routine and Non Routine. The data was then allocated into Maintenance Asset Categories using a percentage allocation - derived based on the categorised costs (for the 11 month period) from SAP.

Estimated Information:

All data provided is considered 'Actual Information'. The pro rata allocation of 1 month of financial data is not considered to constitute 'Estimated Information' on the basis of materiality.

Basis of Preparation – Category Analysis

2016 Regulatory Year

2.10 Overheads

Overhead Expenditure is expenditure that cannot be directly attributed to a work activity, project or work order. It consists of labour, materials, contract costs and other costs.

Overheads have been disaggregated as Network Overheads and Corporate Overheads.

Table 2.10.1 – Network Overheads Expenditure

Overhead expenditure in Table 2.10.1 has been reported before it is allocated to services or direct expenditure and before any part of it is capitalised.

Network Overhead costs refer to the provision of management services and other related operational, network planning, asset management and compliance functions that cannot be directly associated with any specific operational activity (such as routine maintenance, vegetation management, etc.).

Network Overhead is the sum of expenditure for Maintenance Support, Network Monitoring & Control, and Asset Management Support.

- Maintenance Support expenditure relates to expenditure on activities and services that directly support field maintenance activities but are not directly attributable to working on an item of plant or equipment and aligns with the reported maintenance support expenditure in AusNet Transmission's Annual Regulatory Accounts.
- Network Monitoring & Control expenditure is expenditure associated with activities in operating and monitoring assets in the field and the control centre and aligns with the reported maintenance support expenditure in AusNet Transmission's Annual Regulatory Accounts.
- Asset Management Support expenditure is expenditure on operational activities and services associated with managing and developing the transmission network, and supporting the strategic development of the network, but not directly attributable to maintaining or operating the network. This expenditure aligns with the reported maintenance support expenditure in AusNet Transmission's Annual Regulatory Accounts.

Preparation Methodology:

Using information from the Financial Systems that was used to prepare the Annual Regulatory Accounts, Overheads Expenditure was classified into the prescribed categories in Table 2.10.1. In order to perform this allocation, expenditure information was extracted from the Financial Systems by cost ledger code and by division.

Expenditure presented in Table 2.10.1 is on a gross basis (inclusive of amounts capitalised). AusNet Transmission capitalises overhead expenditure that is directly attributable to bringing an asset to its intended in-service state. These indirect costs (to bring the asset to its intended in-service state) include labour costs of employees who do not complete timesheets. The amount of capitalised overheads was allocated to the prescribed categories based on the ABC Survey process undertaken in accordance with the Cost Allocation Methodology. The capitalisation policy applied in the 2016 Regulatory Year has not materially changed compared to any of the Regulatory Years previously reported.

Basis of Preparation – Category Analysis

2016 Regulatory Year

Estimated Information:

The information provided is considered 'Actual Information'.

Table 2.10.2 – Corporate Overheads Expenditure

Overhead expenditure in Table 2.10.2 has been reported before it is allocated to services or direct expenditure and before any part of it is capitalised.

Corporate Overhead costs refer to the provision of corporate support and management services by the corporate office that cannot be directly identified with specific operational activity. Corporate Overhead expenditure aligns with the reported expenditure in AusNet Transmission's Annual Regulatory Accounts.

Preparation Methodology:

Using information from the Financial Systems that was used to prepare the Annual Regulatory Accounts, Overheads Expenditure was classified into the prescribed categories in Table 2.10.2. In order to perform this allocation, expenditure information was extracted from the Financial Systems by cost ledger code and by division.

Expenditure presented in Table 2.10.2 is on a gross basis (inclusive of amounts capitalised). AusNet Transmission capitalises overhead expenditure that is directly attributable to bringing an asset to its intended in-service state. These indirect costs (to bring the asset to its intended in-service state) include labour costs of employees who do not complete timesheets. The amount of capitalised overheads was allocated to the prescribed categories based on the ABC Survey process undertaken in accordance with the Cost Allocation Methodology. The capitalisation policy applied in the 2016 Regulatory Year has not materially changed compared to any of the Regulatory Years previously reported.

Estimated Information:

The information provided is considered 'Actual Information'.

Basis of Preparation – Category Analysis

2016 Regulatory Year

2.11 Labour

The total cost of labour reported is equal to the total labour costs reported against the Capex and Opex categories listed in Template 2.12 Input Tables.

Labour costs relating to labour hire contracts have been included within the classification levels. Labour used in the provision of contracts for both goods and services, other than contracts for the provision of labour (e.g. labour hire contracts) have not been reported.

Quantities of labour, expenditure, or stand down periods have not been reported multiple times across the labour categories.

The following 3 categorisations have been applied -

1. Corporate Overhead costs - refer to the provision of corporate support and management services by the corporate office that cannot be directly identified with specific operational activity.
2. Network Overhead costs - refer to the provision of management services and other related operational, network planning, asset management and compliance functions that cannot be directly associated with any specific operational activity.
3. Direct Network Labour - includes workers who primarily undertake field work in their job. This includes:
 - Field tradespeople including workers working in field depots (e.g. fitters and turners and mechanics working in depots).
 - Apprentices training for work that would primarily be field work (i.e. irrespective of whether most of their current work or training is not undertaken in the field).

It is noted that a broader definition of overheads is prescribed for the completion of the Labour Template than in Template 2.10 Overheads. In the Labour Template there are only four categories of 'Direct Labour' (Skilled electrical worker, Skilled non electrical worker, Apprentice and Unskilled worker). All other labour costs are treated as Overheads costs, even though the employees might directly work on projects.

The below definitions have been applied in the preparation of Tables 2.11.1 and 2.11.2.

Labour Classification Level	
Executive manager	A manager responsible for managing multiple senior managers. For example CEO, General Manager People and Safety, Finance & Treasury and Legal.
Senior Manager	A manager responsible for managing multiple managers who each manage work teams and projects within the organisation.
Manager	A manager responsible for managing teams of staff.
Professional	Professional workers who do not have a primary role as staff managers. These may include lawyers, accountants, economists etc.
Semi professional	Workers with some specialist training supporting fully trained professionals (e.g. draftsman, bookkeeper etc.).

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Support staff	Non-professional support staff not undertaking field work (e.g. clerical support, secretaries).
Intern, junior staff, nonfield work apprentice	Interns, junior staff and apprentices undertaking non field work. All apprentices undertaking or training to undertake field work are reported under Labour Classification Level – Apprentice.
Skilled electrical worker	Fully qualified/trained electrical workers. This will include line workers, cable jointers, electrical technicians and electricians who have completed an apprenticeship.
Skilled non electrical worker	Skilled non electrical worker employed for their skill set. Examples are tradesmen who have completed an apprenticeship such as carpenters, mechanic, painters and arborists.
Apprentice	A field worker employed as part of a government accredited apprenticeship program. This includes all apprentices who will not primarily be working in offices once fully trained (e.g. apprentices training to become electrical workers, fitters and turners, plumbers, painters, mechanics and arborists).
Unskilled worker	Field workers with limited specialist training. This includes workers who have completed short courses with no other qualifications (e.g. labourer, arborist's assistant, traffic controller, meter reader).

Table 2.11.1 – Cost Metrics per Annum

For the month of April, a report was generated from the Payroll and Timesheeting Systems (TM1) which provided information in relation to all transmission business employees required submitting timesheets and who charged time to Transmission business projects. The report included details of labour costs, productive and non-productive hours, normal time/overtime/allowances and cost centre information. Using data obtained from the ABC surveys, the data was allocated into the Transmission business and scaled to reflect hours and costs relating to PTS work only (based on the PTS percentage calculated in the Non-Network template). This compiled report is referred to as “Report 1”.

For month of April, a report was also generated from the Financial System (TM1) showing the labour hire employee costs and the labour costs for employees who are not required to submit timesheets. The report included a number of credit balances representing the allocation of labour hire costs to projects. To accurately reflect total labour hire costs, only debit entries were accounted for (before reallocations). Based on cost centres, the report was scaled to reflect PTS costs only. This report is referred to as “Report 2”.

For the period May to March, a report was generated from SAP which provided information in relation to all transmission business employees required to submit timesheets and who charged time to Transmission business projects. The report included details of labour costs, productive and non-productive hours, normal time/overtime/allowances and employee identification information. The data was scaled to reflect hours and costs relating to PTS work only (percentage of Transmission timesheet costs charged to a prescribed project). This compiled report is referred to as “Report 3”.

For the period May to March, a General Ledger report was also generated from SAP (BI) showing the total Transmission labour costs in the Transmission business. Report 3 was subtracted from this report to

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derive the labour costs for employees who are not required to submit timesheets. The parameters of this report were set to also capture Labour Hire costs. The report was scaled to reflect PTS costs only. This report is referred to as “Report 4”.

Using Report 1, the appropriate labour categorisation levels were derived based on a combination of job titles, cost centres and the AusNet Services organisational chart. Judgments were made by an SME when determining the appropriate labour categorisation levels. This was performed using positions held for each employee and the date the positions changed, with the labour classification level being updated in the month in which the change occurred. The labour categorisation level was determined based on each employee’s position and cost centre.

For Report 2, labour hire resources were assigned to an appropriate labour classification level as well as a labour category based on the cost centres used to code the labour expenditure. For cost centres with various employee classifications, the labour classification level and labour category selected were based on the employee and labour category assigned to the majority of staff in that cost centre.

For Report 3, the data extracted from SAP included employee identification numbers, which were used as a basis to categorise the data in the required labour classifications. Judgments were made by a SME when determining the appropriate labour categorisation levels.

For Report 4, a portion of the data extracted from SAP could be allocated using employee identification numbers. Where this data was available, it was used as a basis to categorise the data into the required labour classifications. This data included labour hours (productive and non-productive). Non-productive hours were based on an assumption of 150 hours per employee. For the Labour Hire portion of the report, the percentage categorisations from Report 2 were used to allocate the data into the required labour categories. Judgments were made by a SME when determining the appropriate labour categorisation levels.

Given the requirement to reconcile Total Direct Labour Costs reported in Template 2.12 Input Tables to Template 2.11 Labour, an adjustment was made. The adjustment was calculated as the difference between Total Direct Labour Costs reported in Template 2.12 Input Tables and Reports 1, 2 and 3. This adjustment was included in Report 4 and was allocated on a pro-rata basis to all employee classifications in Table 2.11.1. The Labour template reported reconciles to the Direct Labour Costs reported in the Input Tables.

Average Staffing Level (“ASL”)

One ASL is a full-time equivalent employee undertaking PTS work receiving salary or wages over the entire year. For avoidance of doubt, a full time employee equating to one full-time equivalent (“FTE”) over the course of the year that spends 50% of their time on PTS work is 0.5 ASL.

FTEs include all active full-time and part-time, ongoing and non-ongoing employees engaged for a specified term or task who are paid through payroll (part-time employees are converted to full-time equivalent based on the hours they work) and workers engaged under labour hire contracts.

Preparation Methodology:

For Reports 1 and 3, the total PTS hours were divided by 1800 (reflecting the average annual hours worked - based on 48 weeks at 37.5 hours per week) to derive the number of ASLs.

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For Report 2, the total cost was also divided by 1800 and by the average unit rate (per employee classification) to derive ASLs. The rates applied were the standard hourly rate based on employee classifications in the Payroll System. One standard rate has been applied per employee classification.

For Report 4, the total cost was also divided by 1800 and by a unit rate (per employee classification) to derive ASLs. The rates applied were based on the unit rates calculated for Report 3. One rate has been applied per employee classification.

Estimated Information:

This is considered estimated as all FTEs, ASLs were derived using an estimation of the total annual hours worked. For labour hire employees and non-timesheet employees, further judgments were made in relation to the hourly rates used. This estimation was required as the data needed is not captured in the Financial Systems. This is considered to be management's best estimate based on the data available.

Total Labour Cost

'Total labour cost' is the total labour costs associated with the total ASLs in a given classification level. Labour costs are the costs of Labour hire, Ordinary time earnings, Other earnings, on-costs and taxes and superannuation.

'Ordinary time earnings' means expenditure that was required under contracts of employment with AusNet Electricity Services and which constitutes ordinary time salaries and wages. It excludes expenditure required under contracts other than employment contracts, irrespective of whether or not the contract includes a labour component.

Other earnings, on-costs, and taxes means expenditure:

- that was required under contracts of employment with AusNet Services; and
- which does not constitute employer superannuation contributions; and
- which constitutes:
 - overtime; and/or
 - staff allowances, including allowances for expenses incurred (e.g. meal allowances) and allowances for nature of work performed (e.g. special skills allowance, or living away from home allowance); and/or
 - bonuses, incentive payments, and awards; and/or
 - benefits in kind and corresponding compensation payments (e.g. housing, electricity or gas subsidies); and/or
 - termination and redundancy payments; and/or
 - workers compensation; and/or
 - purchase of protective clothing for use by employees; and/or
 - training and study assistance provided to employees; and/or
 - taxes (payroll tax, fringe benefits etc.)

Preparation Methodology:

Information reported in relation to 'Total labour costs' was obtained from Reports 1, 2, 3 and 4, after PTS percentages were applied.

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Estimated Information:

Based on the above, the information provided is considered 'Estimated Information'. Whilst the Total PTS Labour Cost is considered 'Actual information' in aggregate, the methodology used to split the total cost into Labour Classification Levels required assumptions and estimation techniques. Estimation was needed as the Financial System does not capture the information in the prescribed categories. This is considered to be management's best estimate based on the data available.

Average Productive Work Hours per ASL

Productive work hours are hours worked undertaken by the employee/labour hire person's substantive job. Productive work hours include:

- Supervised on the job training including supervision of apprentices, mentoring and normal employee feedback and development; and
- All normal work involved in undertaking the person's substantive job including time spent on meetings and travel between different work areas.

Non-productive work hours are work hours that are non-productive such as annual leave, sick leave, training course and sessions (that are more than supervised on the job training, mentoring and normal employee feedback and development) and other non-productive work hours.

Preparation Methodology:

For Reports 1 and 3, information in relation to Productive work hours was included in the report data. 'Average Productive Work Hours per ASL' was calculated as Total Productive (PTS) hours divided by ASLs (engaged in PTS work).

For Reports 2 and 4, 'Average Productive Work Hours per ASL' was calculated as the Productive labour cost divided by hourly rates and ASLs.

Estimated Information:

This is considered estimated as for labour hire employees (Report 2), it has been assumed that all labour costs incurred relate to productive work only. Further assumptions were applied in relation to the standard hourly rates applied (as discussed above). This is considered management's best estimate based on the data available.

For Report 4, it has been assumed that all costs and hours for employees classified as Corporate Overheads and Network Overheads are productive hours and costs. All costs and hours for employees classified as Direct Network are non-productive hours and costs. This is considered to be management's best estimate based on the data available.

The above estimations were required as the information needed was not directly captured in the Financial Systems.

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Stand Down Occurrences per ASL

Preparation Methodology:

‘Stand down occurrences per ASL’ is the average number of stand down periods per ASL in each labour classification level over the year.

A stand down period is where an employee, or worker employed under a labour hire contract, can’t start a scheduled shift that would involve standard control services work at normal ordinary time wages due to prior work at the organisation (for example, due to not having sufficient time off between work shifts).

Based on information extracted from TM1, there was no stand down occurrences in the month of April 2015. For the remaining 11 months of the Regulatory Year, no stand down occurrences have been captured in AusNet Transmission’s SAP timesheet system. Based on the nature of operations, stand down occurrences are considered rare and not material to the business.

Table 2.11.2 – Extra Descriptor Metrics for Current Year

Average Productive Work Hours per ASL – Ordinary Time

‘Average Productive Work Hours per ASL – Ordinary Time’ is the average productive work hours per Regulatory Year per ASL in each classification level spent on PTS work that are ‘Ordinary time earnings’.

Preparation Methodology:

For Reports 1 and 3, information in relation to normal (ordinary) time is available. ‘Average productive work hours per ASL – ordinary time’ was calculated as total normal time divided by ASLs.

For labour hire employees included on Reports 2 and 4, ‘Average productive work hours per ASL – ordinary time’ was calculated as ‘Total labour cost’ divided by the unit rates.

Estimated Information:

For labour hire employees (Report 2), it has been assumed that labour costs incurred relate to ordinary time only. Further assumptions were applied in relation to the standard hourly rates used (as discussed previously above).

For Report 4, it has been assumed that labour costs incurred relate to ordinary time only. Further assumptions were applied to derive hourly rates used (as discussed previously above). This is considered to be management’s best estimate based on the data available.

The above estimations were required as the information needed was not directly captured in the Financial Systems.

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Average Productive Work Hours Hourly Rate per ASL – Ordinary Time

‘Average Productive Work Hours Hourly Rate per ASL – Ordinary Time’ is the Regulatory Year’s average productive work hours (spent on PTS) hourly rate per ASL for each Classification level including labour costs that are direct on costs related to ‘Ordinary time earnings’.

The average hourly rate for each year is calculated by reference to the average number of hours paid as ‘Ordinary time earnings’ for each year and includes costs that are ordinary time salaries and wages in the year.

Preparation Methodology:

For Reports 1 and 3, this metric was calculated as the productive, normal labour cost divided by productive normal hours. This was then reduced by an estimated percentage of on-costs. The on-cost percentage used was the Financial Year 2016 percentage applicable to Victorian employees (where the majority of employees are based). The percentage applied was obtained from the Payroll System.

For Reports 2 and 4, this metric was calculated as the ‘Total Labour cost’ divided by average productive hours. This was then reduced by the percentage of on-costs (as discussed above).

Estimated Information:

The on-cost percentage applied was estimated based on payroll information for Victorian employees. One standard percentage has been applied across all employees. This estimation was required as the information needed was not directly captured in the Financial Systems. This is considered to be management’s best estimate based on the data available.

Average Productive Work Hours per ASL – Overtime

‘Average productive work hours per ASL – Overtime’ is the average overtime hours for the Regulatory Year paid per ASL for each classification level per year spent on PTS. Overtime hours are paid productive work hours that are not ‘Ordinary time earnings’.

Preparation Methodology:

For Reports 1 and 3, information in relation to overtime is available. The ‘Average productive work hours per ASL – overtime’ was calculated as total productive overtime hours divided by ASLs.

For Reports 2 and 4 all labour hire employees’ and non-timesheet employees’ time is considered ordinary time. Based on this, no ‘Average productive hours per ASL – Overtime’ calculation was performed.

Estimated Information:

For labour hire employees included in Reports 2 and 4, it has been assumed that all labour costs incurred relate to ordinary time only. This estimation was required as the information needed was not directly captured in the Financial Systems. This is considered to be management’s best estimate based on the data available.

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Average Productive Work Hours Hourly Rate per ASL – Overtime

‘Average Productive Work Hours Hourly Rate per ASL’ is the Regulatory Year’s average productive work hours (spent on PTS) hourly rate per ASL for each classification level including labour costs that are direct on costs related to productive overtime hours that are not ‘Labour Costs – ordinary time earnings’.

The average hourly rate is calculated by reference to the average number of productive work hours paid as overtime and includes costs that are overtime salaries and wages in the year.

Preparation Methodology:

For Reports 1 and 3, this metric was calculated as the productive, overtime labour cost divided by the productive overtime hours. This was then reduced by the 2016 on-cost percentage of on-costs for Victorian employees. The percentage used was extracted from the Payroll System.

For Reports 2 and 4 all labour hire employees’ time is considered ordinary time. Based on this, no ‘Average Productive Work Hours Hourly Rate per ASL – Overtime’ calculation was performed.

Estimated Information:

The on-cost percentage applied was estimated based on payroll information for Victorian employees. One standard percentage has been applied across all employees.

For labour hire employees and non-timesheet employees (included in Reports 2 and 4), it has been assumed that all labour costs incurred relate to ordinary time only.

The above estimations were required as the information needed was not directly captured in the Financial Systems. This is considered to be management’s best estimate based on the data available.

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2.12 Input tables

Information reported in Template 2.12 Input Tables relates to direct costs for Prescribed Transmission Services. Data reported excludes overheads and is presented on an 'as incurred' basis in accordance with the response to issue number 125 on the AER Issues Register. Contract Costs are presented inclusive of any applicable Related Party Contract Cost and Related Party Contract Margin.

The summation of Direct Materials, Direct Labour, Contract Costs and Other Costs for each category reconcile to total expenditure amounts reported in each of the respective templates (with the exception of Template 2.2 Repex and Template 2.5 Connections, due to these templates being on a 'project close' basis).

Direct Costs

Preparation Methodology:

All information was sourced from the Financial Systems.

Vegetation Management

The GL accounts used to prepare Template 2.7 Vegetation Management were mapped into the cost categories required based on information from the Financial Systems.

Routine and Non-Routine Maintenance

The information was sourced from the Financial Systems and underlying workings to Template 2.8 Maintenance. A report was generated from SAP (covering an 11 month period) which allocated the costs reported in Template 2.8 Maintenance into the cost categories required.

For the 1 month period (April 2015), the total Maintenance Cost by Direct Materials, Direct Labour, Contract and Other was extracted from the Financial System. The Total Routine and Non Routine split and the Total Cost for each Maintenance Category was extracted from the workings to the Template 2.8. This data was then allocated across the prescribed Maintenance Activities by Labour, Materials, Contacts and Other using percentage allocations. The approach taken to categorise the April Maintenance data is not considered to result in the Maintenance information (as reported in the Input Tables) constituting 'Estimated Information' on the basis of materiality.

Overheads

The General Ledger accounts in the Reports used to prepare Template 2.10 Overheads were mapped into the cost categories required based on information from the Financial Systems.

Augmentation

Data in the Augmentation category is blank as the required network augmentation information is captured by AEMO. This is consistent with Template 2.3 Augex.

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Connections

Costs incurred for all Connection projects for the 2016 Regulatory Year were extracted from Financial System Reports. These costs were mapped into the cost categories required based on information from the Financial System.

Template 2.5 Connections captures expenditure for projects which were closed during the 2016 Regulatory Year; and expenditure reported per project is the total of all expenditure incurred over the entire project life. However, the input tables capture all costs incurred in the 2016 Regulatory Year, regardless of whether a project has closed during the Regulatory Year. Therefore, the total expenditure between the two templates does not directly reconcile.

Replacement

Costs incurred for all Replacement (“Repex”) projects for the 2016 Regulatory Year were extracted from Financial System Reports. The allocation of the total costs into the Repex categories was based on an assessment performed by an SME having due consideration to the predominant nature of each project. The subsequent allocation of each project between the input cost categories was based on the general ledger accounts in the financial system.

Template 2.2 Repex captures expenditure for projects which were closed during the 2016 Regulatory Year and expenditure reported is the total expenditure incurred over the project life. The input tables capture all costs incurred in the 2016 Regulatory Year, regardless of whether a project has closed during the Year. Therefore, the total expenditure between the two templates does not directly reconcile.

Non-Network Expenditure

Information was sourced from the Financial Systems and underlying workings to Template 2.6 Non-Network.

Estimated Information:

The information provided in relation to Replacement is considered ‘Estimated Information’ due to the SME assessment of each project’s allocation across the Repex categories. This allocation approach was required as the information needed was not directly captured by the Financial System.

In relation to Motor Vehicle Expenditure, costs allocated to ‘Other’ comprise Motor Vehicle Opex and are considered ‘Estimated Information’. As outlined in Table 2.6.1 above, the Financial System does not separately capture the Motor Vehicle Opex which is directly related to the Transmission business’ PTS related activities. An estimated PTS expenditure percentage was applied to the total Motor Vehicle Opex. The PTS percentage utilised was derived from the 2016 Regulatory Accounts. The Motor Vehicle costs allocated to ‘Materials’ represent Capex costs and are considered ‘Actual Information’ as the data was extracted from the financial system.

Related Party Costs and Margin

Preparation Methodology:

For the purpose of completing Template 2.12 Input Tables, a ‘Related Party Contract’ is defined as a finalised contract between AusNet Transmission and a Related Party for the provision of goods and/or

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Services. A Related Party is defined within the RIN instructions. Based on this definition, SGSP (Australia) Assets Pty Ltd (“SGSPAA”), which includes both Jemena and Zinfra, is identified as a related party which provides the provision of services to AusNet Transmission Group.

Related Party Costs were obtained from the Financial System for the 2016 Regulatory Year. Using the workings to the Annual Regulatory Accounts, Related Party Costs were allocated into the categories required.

In relation to each Replacement capex project, the Related Party Cost was allocated across the various Replacement sub-categories on the same basis as that applied to that project’s total direct cost per SME’s assessment.

Related Party Margins have been estimated based on an analysis of contracts currently in place with Related Parties. The judgements and resulting estimates were made by an appropriate SME.

Estimated Information:

The allocation of Related Party costs and margins for the Replacement sub-categories was estimated using the same percentage applied to allocate the direct costs as the information needed is not directly captured in the Financial System.

The information provided is considered management’s best estimate, based on the data available.

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5.2 Asset age profile

For each prescribed asset category, the age profile for assets currently in commission has been provided. Data reported corresponds with the replacement volumes and cost data in Template 2.2 Repex. Where required, additional rows have been added to Table 5.2.1 to ensure all assets are reported and asset refurbishments are captured.

‘Installed assets – quantity currently in commission by year’ is the number of assets currently in commission and the year they were installed.

Economic life is the estimated period after installation of the new asset during which the asset will be capable of delivering the same effective service as it could at its installation date. The period of effective service considers the life cycle costs between keeping the asset in commission and replacing it with its modern equivalent. Life cycle costs of the asset include those associated with the design, implementation, operations, maintenance, renewal and rehabilitation, depreciation and cost of finance.

Table 5.2.1 – Asset Age Profile

Preparation Methodology:

Information was sourced from SAP and Maximo 5.

It is noted that the Asset Management System data has been subject to data cleansing over the Regulatory Years and is subject to continuing reviews and data migration.

The AusNet Transmission asset categories do not directly align with the prescribed AER asset categories. In order to populate Table 5.2.1, engineering judgement has been applied to align assets in the required categorisations. If AusNet Transmission identified assets that cannot be aligned to the asset categories prescribed by AER, the ‘Other’ categories are populated.

The quantity of assets included in age profile for each year has been determined based on the month and year of installation to provide the number of assets installed by financial year. Assets with no installation date in the Asset Management System or with an installation year of 1901 (which is a default for an unknown installation date) have been included in the age profile in the final year (1910/11) in Table 5.2.1.

In April 2015, asset information was migrated from the legacy Asset Management System (Maximo 5) to SAP. Some asset specifications held in the legacy Asset Management System were not transferred in the migration process. A re-mapping process was taken to link the specification from the legacy system to the equipment recorded in SAP.

A number of classification changes have been made to the data reported in the 2016 Regulatory Year compared to the 2015 Regulatory Year, to better align the asset function to the asset group:

Asset	Previous Reporting Category	2016 Regulatory Category
Transmission Line Racks	Substation Switchbays - Other'	Transmission Towers
Masts	Transmission Tower Support Structures	Substation Switchbays – Other

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Asset	Previous Reporting Category	2016 Regulatory Category
Insulators	Not included in previous regulatory submissions	Transmission Tower Support Structures
OPGW	Conductors - Other	SCADA Network Control and Protection Systems - OPGW
10,808 SCADA assets	SCADA, Network Control and Protection Systems - Infrastructure: protection and control	SCADA, Network Control and Protection Systems - SCADA Protection Network System

It was found that some 'GIS switchgears' were incorrectly classified as 'Air Insulated switchgear' in the previous Regulatory submission. In the 2016 Regulatory Year, these GIS switchgears were identified and re-categorised to the 'GIS modules' category. A correction was also made in relation to Oil Filled Reactors which were incorrectly reported in the 'Substation Reactive Plant' asset group in 2015. In the 2016 Regulatory Year, these assets are reported in the 'Substation Reactive Plant – Other' category.

In the 2015 Regulatory Year, meters were recorded in the 'Other – Metering' asset group. This data has been re-categorised in the 'Metering System' category, under 'SCADA, Network Control and Protection Systems' asset group in the 2016 Regulatory Year. It was found that some 'metering systems' were grouped in the 'Infrastructure: protection and control' category in the 2015 submission. These 'metering system' are now shown in the 'Metering System' category. Hence, increased counts of 'metering system' are now observed in the 2016 Regulatory report.

For the Surge Diverters, it was found that the '> 33 kV & < = 66 kV' sub-category was split into 2 lines in the 2015 Regulatory Year. This data has been combined in the 2016 Regulatory Year Asset Age Profile template.

The asset quantity reported in the Transmission Tower Support Structures category is the volume of insulators (which form part of the Transmission support structure) as the Asset Management System does not contain the attributes required to meet the definition of Transmission support structures.

Data provided in relation to Installed Asset Quantities is considered 'Actual Information' as it was extracted from the Asset Management Systems. The exception is the asset quantities reported for Transmission Tower Support Structures. This data is considered 'Estimated Information' based on the preparation methodology outlined above.

The Economic Life for each asset has been based on the 'Asset Life Evaluation' contained in AusNet Services' 'Asset Management Strategy AMS 10-101'. The AER asset categories have been aligned with AusNet Transmission's asset categories to populate the required Economic Life information. Refer to Table 1 below.

AMS 10-101 includes a range around the Expected Asset Life. For the purposes of populating Table 5.2.1, it has been assumed that the asset life can be represented by a Normal distribution and that the range between 'Earliest Life' and 'Latest Life' in AMS 10-101 represents two standard deviations around the mean. To calculate one standard deviation the 'Earliest Life' has been deducted from the 'Latest Life' and the result divided by 2.

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It has been assumed that the Economic Life of Refurbished assets mirrors the Economic Life and Standard Deviation provided for the corresponding AER Replacement asset category. This is an estimate as it is not possible to provide an accurate Economic Life for the collection of refurbishment projects included.

Economic Life and Standard Deviation data is considered 'Estimated Information' based on the approach and assumptions outlined above. The information required is not separately captured in Asset Management Systems. The data provided is considered management's best estimate of the data required based on the information available.

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Table 1: Expected Life and Standard Deviation Match to AMS 10-101

Asset Category	Asset Type	Asset Age Profile Category	Earliest	Expected	Latest	One Standard Deviation
AIS Switchbay SF6 CB	Average of All SF6 CB	Other: BUS, Other: Surge Diverters	35	40	45	5
	500kV HPL		35	40	45	5
	500kV FA4		35	40	45	5
	500kV 3AT5		35	40	45	5
	330kV LTB		35	40	45	5
	330kV HPL		35	40	45	5
	275kV FXT15		35	40	45	5
	220kV 3AQ1EE		35	40	45	5
	220kV 3AS2		35	40	45	5
	220kV 3AQ2E1		35	40	45	5
	220kV LTB		35	40	45	5
	220kV HPL		35	40	45	5
	220kV FL245		35	40	45	5
	220kV FXT14		35	40	45	5
	66kV EDF SKF		35	40	45	5
66kV S1-72.5		35	40	45	5	
66kV HGF		35	40	45	5	
Metal Enclosed Switchgear	22kV 22L42T Bulk Oil Indoor		50	53	55	2.5
	220kV SF6 Dead Tank Outdoor	Substation Switchbays - Air Insulated Isolators /Earth Switch	40	45	50	5
GIS Bays	500kV Outdoor[1]	Substation Switchbays - GIS Module 330-500 kv, Switchbays - Other	35	40	45	5
	220kV Indoor	Substation Switchbays - GIS Module 0 <330 kv	45	50	55	5
Current Transformers – single phase, oil insulated	Average	Transformers, Substation Switchbays CT, Substation Switchbays VT		40		6
	Tyree		27	33	39	6
	Brown Boveri		36	42	48	6
	ASEA		40	47	54	7
	ABB		24	30	37	6.5
	Other		38	44	50	6
Capacitor Bank	Pre 1970	Reactive Plant (SVCS, Capacitors, Oil Filled Reactors)	35	40	45	5
	Post 1970		30	35	40	5
Synchronous Condenser	Machine w/o refurbishment	Reactive Plant: Other	32	34	35	1.5
	Auxiliary Equipment		32	34	35	1.5
	Refurbished (rotor, auxiliaries and stator re-wedge)		45	47	50	2.5
Power Transformers	Individual transformers have an assessed life within this range	Power Transformers	40	50	60	10
Station Infrastructure	Bench and general civil works		60	70	80	10
	AC Supplies		40	45	50	5
	Buildings	Other - Station Property & Civil Infrastructure	40	45	50	5
	Other Infrastructure		40	45	50	5
ACSR Conductor (& ground wire)		Other Infrastructure: Earth Grid	35	60	70	17.5
Towers		Transmission Towers, Transmission Tower Support Structures	60	70	85	12.5
HV and EHV Power Cable		Conductors, Conductors - Other, Transmission Cables	40	60	70	15
Protection & Control Scheme	Average - Protection and Control, SCADA, Control Centre, DC Supplies	Used for SCADA - Control Equipment, Infrastructure, Metering, Total Secondary, Generator and Motors, Infrastructure Compressor, OTHER: NEUTRAL EARTH COMPENSATORS/RESISTORS		20		5
	Average of Protection and Control Scheme	Protection schemes		25		5
	(A1) Electro-mechanical with continuous moving parts e.g. RI		22	29	34	6
	(A2) Electro-mechanical with occasionally moving parts		26	32	36	5
	(A3) Electro-mechanical with electro-magnetic operation		29	35	39	5
	(B2) Analogue electronic based mainly on solid state discrete components		18	24	28	5
	(B3) Analogue electronic device using discrete components & integrated circuits		17	23	27	5
	(C1) Hybrid analogue/digital device (analogue measuring and signal comparators and digital logic), no serial connectivity minimal self monitoring		12	19	23	5.5
(C2) Hybrid analogue/digital device (analogue measuring and signal comparators and digital logic) with serial connectivity and comprehensive self monitoring		13	21	25	6	
(D1) Digital device incoming signals converted to digital form		13	19	23	5	
SCADA	Station RTUs (B2) Analogue electronic based mainly on solid state discrete components	Communications Network Assets	18	24	28	5
	Station RTUs (B3) Analogue electronic device using discrete components & integrated circuits		19	23	29	5
	Station RTUs (D1) Digital device incoming signals converted to digital form		13	19	23	5
Control Centre	Master SCADA system	Station SCADA and Control Systems	10	12	15	2.5
	Host computer equipment		2	3	5	1.5
DC Supplies	Batteries (pasted plate)		13	15	16	1.5
	Home lighting		4	5	7	5
	Battery Chargers (Early Analogue)		20	24	30	5
	Battery Chargers (Digital Control)		10	15	20	5

Basis of Preparation – Category Analysis
2016 Regulatory Year

5.3 Maximum Demand at Network Level

Table 5.3.1 — Raw and Weather Corrected Coincident Maximum Demand at Network Level

The above table has not been completed as the required information is owned and maintained by AEMO.

Basis of Preparation – Category Analysis

2016 Regulatory Year

5.4 Maximum Demand and Utilisation at Spatial Level

Table 5.4.1 — Non-Coincident and Coincident Maximum Demand

The above table has not been completed as the required information is owned and maintained by AEMO.