



AusNet Electricity Services Pty Ltd

**AER Category Analysis
Regulatory Information Notice**

2014 Regulatory Year Basis of Preparation



Basis of Preparation

2014 Regulatory Year

1. Overview

This Basis of Preparation document supports the preparation and reporting of the 2014 Regulatory Year data presented in AusNet Electricity Services Pty Ltd (“AusNet Electricity Services”) reports entitled ‘2014 AusNet Services category analysis data - Actual Information’, ‘2014 AusNet Services category analysis data - Estimated Information’, ‘2014 AusNet Services category analysis data - Consolidated Information’ and ‘Other Supporting Information’ (“the Reports”). The Reports provide data solely for the use of the Australian Energy Regulator (“AER”) to perform benchmarking activities under the AER’s Better Regulation program.

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

AusNet Electricity Services, AusNet Services (Distribution) Ltd, AusNet Services, AusNet Services (Transmission) Ltd and AusNet Services Finance Trust were formerly known as SPI Electricity Pty Ltd, SP Australia Networks (Distribution) Ltd, SP AusNet, SP Australia Networks (Transmission) Ltd and SP Australia Networks (Finance) Trust respectively up until 4 August 2014.

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 7 March 2014 and other authoritative pronouncements of the AER.

AusNet Electricity Services’ Regulatory Year is the period 1 January to 31 December (“Regulatory Year”). Data included in the Reports has been provided for the 2014 Regulatory Year. All financial data included in the Reports is presented in thousands of Australian dollars, rounded to the nearest thousand 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 quarterly 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.

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The Reports require inputs to be allocated between Standard Control Services and Alternative Control Services.

Standard Control Services are defined as per the National Electricity Rules ("NER"). For clarity, Standard Control Services capture services only available through the network (typically provided to all customers or a broad class of customers) recovered through general network tariffs.

Alternative Control Services are defined in the NER. By way of context, Alternative Control Services are intended to capture electricity distribution services provided at the request of, or for the benefit of, specific customers with regulatory oversight of prices. Alternative control services are electricity distribution services that are a direct control service but not a standard control service.

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

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

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

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 2014 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”) includes all costs that are directly attributable to bringing an asset to the location and condition necessary for it to be capable of operating in the manner intended by management.

Operating Expenditure (“Opex”) reported is the costs of operating and maintaining the network (excluding all Capex).

Table 2.1.1 - Standard control services capex, Table 2.1.2 - Standard control services opex, Table 2.1.3 - Alternative control services capex and Table 2.1.4 - Alternative control services opex

The information reported was prepared using Capex and Opex data extracted from the Financial System. The expenditure reported in Total Capex and Total Opex in Table 2.1.1 to Table 2.1.4 is mutually exclusive and collectively exhaustive.

The expenditure reported for the following categories relate to direct costs only and excludes expenditure on overheads -

- Replacement expenditure;
- Connections;
- Augmentation Expenditure;
- Non-network;
- Vegetation management;
- Emergency Response;
- Metering;
- Public Lighting;
- Fee and Quoted; and
- Maintenance.

Information reported in Tables 2.1.1 to 2.1.4 is estimated information where the corresponding template information is considered estimated information. Total Capex and Opex have been reported on an ‘as incurred’ basis. All expenditure has been presented in nominal dollars.

The sum of each of the Capex and Opex line items in the Tables in 2.1 Expenditure Summary equals the total Capex and Opex in all templates from 2.2 Repex to 2.10 Overheads and Templates 4.1 Public Lighting to 4.4 Quoted Services.

The Overheads reported in the Expenditure Summary Template for Alternative Control Services do not align with the overheads reported in Template 2.10 Overheads. This is due to limitations within Template 2.10 which prevent all overheads being included. In the Expenditure Summary template, Alternative Control Overheads have been classified as Network Overheads where the corresponding operating costs have been disclosed as network operating costs in AusNet Electricity Services’ Annual Regulatory Accounts. All other Alternative Control Services Overheads have been disclosed as Corporate Overheads. This is in accordance with the AER requirements for Template 2.10 Overheads.

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The Capex Alternative Control 'balancing item' line includes capital contributions (which are required to be removed to reconcile to the Annual Regulatory Accounts) and Alternative Control Capex which is double counted within the Alternative Control Services templates.

The Capex Standard Control 'balancing item' line includes capital contributions which are not included within the templates.

The 'balancing items' are considered estimated information due to the estimated financial information included in calculating the templates which are being reconciled.

Amounts reported as capital contributions ("capcons") were extracted from the Annual Regulatory Accounts.

Values reported in Tables 2.1.2 to 2.1.4 in the summary sheet reconcile to the Annual Regulatory Accounts at the total Capex and Opex level. In relation to Table 2.1.1, capcons are required to be removed from the total Capex line in order to reconcile to the Annual Regulatory Accounts.

Table 2.1.5 - Dual function assets capex and Table 2.1.6 - Dual function assets opex

This table has been completed as zero as there are no dual function assets owned by AusNet Electricity Services.

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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.

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

Asset Type	Definition
Poles	Vertically oriented assets that provide load bearing structural support for overhead conductors or other lines assets. This also includes associated pole top structures, such as cross-arms and insulators where these are replaced in conjunction with a pole replacement project. It excludes other pole mounted assets that are included in any other asset group, notably pole mounted substations and pole mounted switchgear such as links, fuses, air break switches etc.
Pole top structures	Horizontally oriented structures and their components that provide support for overhead conductors and related assets to be supported on a pole and provide adequate clearances. This relates to expenditure incurred when a pole top structure is replaced independently of the pole it is located on. This includes cross-arms and insulators. It excludes any pole mounted assets that are included in any other asset group, notably pole mounted substations and pole mounted switchgear such as links, fuses, air break switches etc.
Overhead conductors	These assets have the primary function of distributing power, above ground, within the distribution network. It excludes any pole mounted assets that are included in any other asset group.
Underground cables	These assets have the primary function of distributing power, below ground, within the distribution network. This includes cable ends, joints, terminations and associated hardware and equipment (e.g. surge diverters, etc.), cable tunnels, ducts, pipes, pits and pillars. It excludes any pole mounted assets that are included in any other asset group.
Service lines	Includes assets that provide a physical link and associated assets between the distribution network and a customer's premises.
Transformers	These are assets used to transform between voltage levels within the network. This includes all its components such as the cooling systems and tap changing equipment (where installed). It excludes any pole mounted assets that are included in any other asset group. This does not include instrument transformers as defined in the National Electricity Rules. It also does not include auxiliary transformers.
Switchgear	Used to control, protect and isolate segments of the network. This includes disconnect switches, fuses, circuit breakers, links, reclosers, sectionalisers, ring main units, oil insulated fuses etc.

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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. Protection systems have the meaning prescribed in the National Electricity Rules.
Other	These are assets or refurbishments which are not captured in the AER categories. The additional categories that have been added to "other" since the previous RIN submission are: <ol style="list-style-type: none"> 1. Poles – Other: Rectification works for Towerline support 2. Switchgear – Other: EDO Fuse Replacement program 3. Transformer – Other: Transformer refurbishments such as bushing replacements, etc. 4. Cable refurbishments: defective cable spouting for Zone Substation assets 5. Site repairs refurbishments: air conditioners, fencing, broken windows, etc.

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.

Preparation Methodology:

Asset Replacements (Quantity)

Asset replacement quantities have been derived from the asset age profiles extracted from the Maximo, Q4 and SDME Asset Management Systems. The asset descriptions per the Asset Management Systems data have been aligned as closely as possible with the AER categories (by a subject matter expert) to produce age profiles. The age profile data is used as a basis to populate the asset replacements.

The Asset Management Systems provide information in relation to total quantities installed and do not distinguish Replacement works to Augmentation works. The ratio of Repex to the total of Repex and Augex for 2014 has been applied to the total quantity of assets installed for each template line item to provide an estimate of the quantity of asset replacements¹.

In addition to Template 5.2 Asset Age Profile, financial data and project documentation has also been used to inform the total number of asset replacements for the assets listed below:

Poles	Asset replacements were determined using the project documentation – the project business case.
Other	

¹ For Overhead Conductors, note that Template 5.2 Asset Age Profile reports the date the assets were acquired. However, the asset replacement quantities for this category are still calculated using installed dates.

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	Asset refurbishments summate to 2 projects where parts of towers were replaced.
Overhead Conductor	Age profile less augmentation age profile (per the Augmentation Template data).
Service Lines	Age profile less augmentation age profile (per the Augmentation Template data).
Underground Cable	Age profile less augmentation age profile (per the Augmentation Template data).
Switchgear and Transformers	Age profile less augmentation age profile (per the Augmentation Template data).
> 11 kV & <= 22 kV ; Circuit Breaker	
> 11 kV & <= 22 kV ; Switch	
Kiosk Mounted ; <= 22kV ; > 60 kVA and <= 600 kVA ; Multiple Phase	
Kiosk Mounted ; <= 22kV ; > 600 kVA ; Multiple Phase	
Ground Outdoor / Indoor Chamber Mounted; > 33 kV & <= 66 kV ; > 15 MVA and <= 40 MVA	
Other	EDO Fuse Replacement Program quantity replaced in 2014 as reported to the ESV for specific safety improvement programs.
Other	Asset replacements use financial data only, where the number of line items listed per transaction listings from the Financial System.
Other – Cable Replacement	
Other – Site Repairs	

Replacement Expenditure

Capex and associated non-financial information has been reported against the Regulatory Year on an 'as incurred' basis. Expenditure reported is the costs directly attributable to replacement of the asset and excludes expenditures on overheads. All Capex has been presented in nominal dollars.

The sum of the asset group replacement expenditures is equal to the total replacement expenditure in Template 2.1 Expenditure Summary.

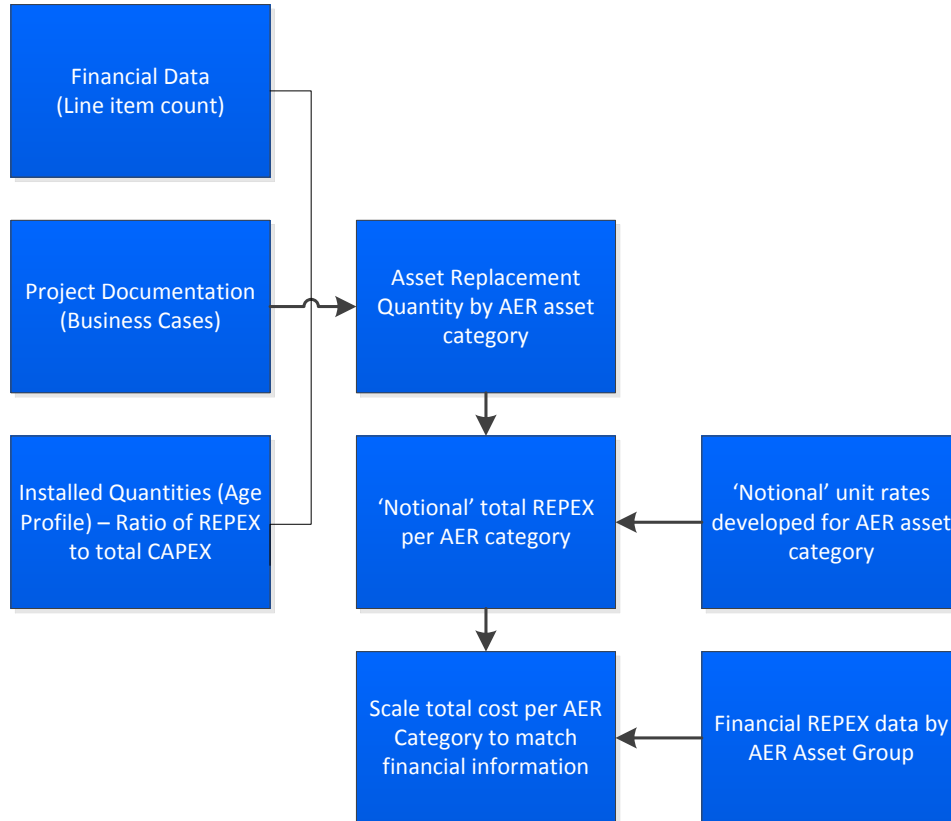
Financial information was sourced from the Financial System. A report was generated for the 2014 Regulatory Year based on the designated replacement expenditure work codes. Additionally, project costs have been included in Repex which were originally included in Augex work codes in the Financial System, based on a project review performed by an appropriate subject matter expert.

The financial data for asset replacements is captured at an aggregated level similar to the Asset Group in Table 2.2.1 (i.e. financial data is not captured at the Asset Category level). Engineering expertise was used to align the expenditure by work code to the prescribed Asset Groups. A methodology to apportion the Asset Group expenditure across the AER Asset Categories was developed as illustrated in Figure 1 below.

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Figure 1: Overview of estimation process for Asset Replacements (Quantity) and Asset Expenditure (\$)



A representative unit cost for each asset category has been multiplied by the estimated quantity of assets replaced, to give a notional total expenditure for each Asset Category. The notional total expenditure for the Asset Categories in each Asset Group was compared to the actual expenditure for the Asset Group (from financial data) and then scaled by a factor in order to apportion the total actual expenditure across the numerous Asset Categories. The scaling is performed by aligning the Financial System work codes to the relevant asset categories and comparing the derived financial data (based on estimated quantities multiplied by the estimated notional rates) to the Financial System data. Any differences are proportionately allocated (on a pro rata basis) across the relevant asset categories to match the Financial System data.

In relation to the SCADA group, the total pool of costs comprises – costs included in IT related work codes (which were allocated into Asset Categories based on volume data and a uniform unit rate (as additional information was not available)) and also costs where, based on transaction analyses performed, the costs were identified as SCADA related. For these additional costs, SCADA assets were classified and allocated directly to the correct AER category i.e. for Field Devices and Communications Network Assets.

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The DNSP Defined group (“Other”) consists of assets that are not captured in the AER categories. The financial data for these assets are listed by actual spend. As mentioned previously, the additional “Other” DNSP Defined categories listed in Template 2.2 Repex, which were not captured in previous years, were cable refurbishments and site repair refurbishments. These categories contain the following types of asset replacements:

Other – Cable refurbishments	<ul style="list-style-type: none"> - Replace defective cable spouting - Replace supply cable.
Other – Site repair refurbishments	<ul style="list-style-type: none"> - Replace air conditioner - Replace fence - Replace broken window - Replace control room stairs - Replace septic tank - Replace pump.

Estimated Information:

All Asset Replacement Quantity and Replacement Expenditure data provided are considered estimated information due to the judgments made to align the AusNet Electricity Services’ asset categories with the categories required by AER.

AusNet Electricity Services’ does not maintain unit rates that correlate with the AER Asset Categories. A single rate for replacement of an asset does not exist within the business as there are variables that impact the replacement cost including:

- whether the work is insourced or outsourced;
- whether the replacement is done in normal time or overtime;
- whether the work is done live line or during an outage; and
- the distance of the asset from the depot.

In order to apply the methodology described above ‘Notional’ unit rates were developed using material cost from recent procurement data added to contract costs for labour and equipment from a current Service Provider contract.

The ‘Notional’ unit rates developed should not be considered representative of unit rates across the business as the contract was negotiated to include an efficient package of work with regard to volume, geographic area, density of network etc. and the conditions of this work package do not represent the balance of the network.

Additionally, a uniform unit rate has been assumed for the categories SCADA and ‘Other DNSP Assets’ due to limitations in the information available.

Data provided in relation to Asset Replacements and Replacement Expenditure is considered management’s best estimate of the information required based on the data available.

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Asset Failures (Quantity)

Preparation Methodology:

Asset Failure 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.

Asset Failures excludes planned interruptions.

The Asset Failure data provided in Table 2.2.1 has been based on a list of work orders (“WO”) extracted from the Q4 and Maximo Asset Management Systems.

Work orders are created in the Asset Management System when action is required to be performed on an asset including routine inspections, maintenance activities, emergency work, unplanned work and corrective action. Each WO is connected to a specific asset in either Q4 or Maximo and WO profiles are based on the WO created date.

Q4 and Maximo allow for a range of codes to be applied to each WO to identify the activities being conducted. The codes do not correlate exactly with the Asset Failure definition provided by AER; however the data has been filtered based on a selection of WO codes that most closely align with the AER definition to derive an estimate of the required Asset Failure data.

WOs have been excluded when associated with animals or vegetation (as per the AER definitions) however, it should be noted that these categories are often used when a failure category is unknown. This will likely lead to a reduction in WOs which should otherwise be included in the failure profiles.

The data provided is based on WO’s directly associated with an asset. These WO’s indicate that there has been a need for maintenance work, but do not indicate whether the asset (or part of the asset) has been replaced or whether some other activity has addressed the issue.

In some cases (e.g. lines assets where the WO may be associated with a span of conductor), the actual maintenance work may have been required on components associated with that span which may not necessarily be the conductor itself however, based on the data available activities have been classified into the closest AER category.

Estimated Information:

For the reasons outlined above, the information provided in relation to Asset Failure quantities is considered estimated information. This data was required to be estimated as the information requested is

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not captured directly in existing systems. Data provided is considered the best estimate of the information required based on the data available.

Table 2.2.2 – Selected Asset Characteristics

'Asset Volumes Currently in Commission' and 'Replacement Volumes' of certain asset groups have been provided by the specified aggregated metrics.

Network Type metric (CBD, Urban, Rural Long, Rural Short)

Preparation Methodology:

AusNet Electricity Services does not capture quantities of replacement of assets in Network Type (CBD, Urban, Rural Long, Rural Short) categories. Because of this, the data provided in this table has been estimated.

Data in relation to 'Asset Volumes Currently in Commission' and 'Asset Replacements' has been sourced from Table 2.2.1 Repex and Template 5.2 Asset Age Profile respectively.

The quantity information included in Table 2.2.1 has been allocated into Feeder Type (Poles, Overhead Conductors and Underground Cables) metrics. These metrics have been split into Network Type (CBD, Urban, Rural Long, Rural Short) on a percentage allocation basis. The percentages applied were derived by calculating the percentage split of feeder lengths into CBD, Urban, Rural Long, Rural Short as per the data included in the AER Economic Benchmarking data submission (Template 3.7 Operating Environment).

'Conductor Length by Material Type' is based on the total quantity of conductor (per Template 5.2 Asset Age Profile) and from material type data extracted from SDME Asset Management System. AusNet Electricity Services owns more material types than as stipulated in this table. Based on this, allocations of unlisted material types was required. All copper conductors have been included in the ACSR material type category and all aluminum conductors have been included in AAC material type (except for LV ABC). To derive asset replacements by material type, the ratio of quantity for each material type (per the above 2 sources) has been applied to the total conductor 'Asset Volumes Currently in Commission' (Template 5.2 Asset Age Profile) and the 'Asset Volumes Currently in Commission' (per Table 2.2.1 Repex).

The total Transformer MVA information is based on an extract from the Maximo Asset Management System. It includes all transformers in the network involved in the final level of transformation, stepping down the voltage used in the distribution lines to the level used by the customer, the total zone substation transformer capacity, and other additional transformation capacity. This extract was used to calculate the total MVA of transformers currently in service which was required to populate the AER Economic Benchmarking Report. The total MVA currently in commission has been extracted from this Maximo data and is equal to that reported for DPA0501, DPA0603, and Table 3.5.2.3 in the AER Economic Benchmarking Report combined.

MVA for replaced distribution transformers has been based on the total kVA of the distribution substation transformers assets installed in 2014 which is calculated based on the data extract from Maximo (DPA0501 as described above). The distribution substation transformer assets installed in 2014 includes

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replacements and augmentation. The quantity of these assets that are replacements has been estimated for the Repex template based on project data and other assumptions. The proportion of the transformers estimated to be replacements has expressed as a percentage of all transformers installed in 2014 and this percentage has been applied to the total kVA of all transformers installed in 2014 to provide the MVA for replaced distribution substation transformers. Added to this is the zone substation transformers installed to replace failed or deteriorated assets these are extracted from the Maximo Asset Management System for 2014 on a line by line basis.

MVA Disposed has been estimated as equal to the MVA installed in each year for the distribution substation assets. This assumes that replacement assets have a rating equal to the new assets installed during the period. This assumption is required as more specific information is not available. Added to this figure are the zone substation transformers that were replaced. These assets are extracted from the Maximo Asset Management System for 2014 on a line by line basis.

Estimated Information:

Information reported is considered estimated information based on the percentage allocation methodologies described above and assumptions applied in deriving MVA Disposed. Data provided is considered management's best estimate of the information required based on the available data.

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2.3 Augex

Projects relating to the augmentation of AusNet Electricity Services' network have been included in Template 2.3 Augex. Augmentation has the meaning prescribed in the National Electricity Rules, and also includes work relating to improving the quality of the network, for example, to meet regulatory obligations. Augmentation expenditure does not include gifted assets.

Data Preparation Methodology

Information was sourced from the Fixed Asset Register based on augmentation work codes. The reports generated provided details of all asset additions (on augmentation projects) in the 2014 Regulatory Year. The asset data was aggregated by project and reviewed by a subject matter expert ("SME") to ensure all material projects met the prescribed augmentation works definition.

The data provided is on an 'asset complete' basis (which includes life to date costs for assets completed in the 2014 Regulatory Year). This has been used as a proxy for 'project complete' information as it provides more accurate and complete data and is considered to better align with when assets are in use.

In the reports generated, assets are assigned a standardised 'profile' and 'segment' code which identifies the asset type. The AusNet Services' Fixed Asset Capitalisation policy was used to translate the 'profile' and 'segment' codes into asset categories.

Engineering expertise was used to allocate each of the asset categories into the assets groupings as required by Tables 2.3.1, 2.3.2 and 2.3.3. This allocation is considered estimated information as the Fixed Asset Register profiles and segments could not be directly assigned to the prescribed AER categories. The category allocations were performed by SMEs based on project knowledge and the AER definitions. Due to the estimates and assumptions applied, data included in Tables 2.3.1, 2.3.2 and 2.3.3 are considered estimated information. The data provided is considered management's best estimate based on the information available.

In completing Tables 2.3.1 and 2.3.2, the asset expenditure was analysed at a project level (based on assets completed in the 2014 Regulatory Year) to determine the material projects required to be separately disclosed (in accordance with the AER requirements).

Table 2.3.1— Augex asset data – Substations

Table 2.3.2 — Augex asset data - Sub-transmission Lines

Table 2.3.1 includes augmentation works on any substation in AusNet Electricity Services' network on a project close basis. Each row represents data for an augmentation project for an individual substation.

Augmentation works on sub-transmission lines includes any lines or cables notionally operating at subtransmission voltages.

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Preparation Methodology - Non-Financial Information:

Information in relation to Substation Type, Project Type and Project trigger was determined by Engineering planning advice (supported by the Augex submission for the 2010 EDPR). Project triggers selected relate to the primary project trigger. Project Types have been selected from the prescribed drop downs.

'Voltage', 'Substation Ratings' and 'MVA/MVAR Added' for Table 2.3.1 were obtained from the internal policy document AMS 20-101 'Zone-Substation Transformer Cyclic Rating'. The 'Rating' or 'MVA added' refers to the equipment's normal cyclic rating (for substations).

The cyclic rating of a transformer is the peak MVA rating of the transformer based on daily loading of the transformer for a prolonged period, considered to be three months for a zone substation transformer. For this rating, the higher than normal loss of life is used.

For substation ratings, 'Pre' refers to the relevant characteristic prior to the augmentation work and 'Post' refers to the relevant characteristic after the augmentation work. Where a metric does not undergo any change, or where the project relates to the establishment of a new substation, only the 'Post' column has been completed.

Voltage and Route Line Length was obtained from the internal policy document AMS 20-24 'Subtransmission Line and Station Data for Planning Purposes'.

'Poles/Towers Added', 'Poles/Towers Upgraded', 'Circuit kms Added', 'Circuit kms Upgraded', 'Units Added' and 'Years Incurred' was obtained from the Fixed Asset Register reports. For material projects, 'Units Added' was reviewed for reasonableness and any required adjustments were made.

In relation to Installation Volumes, these have been determined by the Project Manager as the labour (both internal and external) hours as per the project actuals recorded in the Enterprise Project Portfolio Management system. The total hours were allocated into the Tables 2.3.1 and 2.3.2 in proportion to the percentage of the total project expenditure allocated to these Tables.

Preparation Methodology - Financial information:

Projects have been separately included in these tables where the total cumulative spend on project assets completed in 2014 is greater than or equal to \$5 million (in nominal dollars).

Projects with a total cumulative spend on project assets completed in 2014 less than \$5 million (in nominal dollars) have been grouped and shown as 'non-material projects'.

Costs and project information for augmentation works where the assets have not been completed by 31 December 2014 but expenditure has been incurred prior to 31 December 2014 have not been recorded.

Expenditure has been reported in 'real' (2014) terms. This was derived by applying CPI rates obtained from the Australian Bureau of Statistics website to the project costs reported, based on the years in which costs accumulated on the relevant projects.

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A report was generated from the Financial System showing the years in which material projects incurred costs. The percentage of the total cost incurred each year was calculated. These percentages were applied to the asset complete costs to allocate project expenditure into the years in which costs were incurred. Based on this, the 'real term' asset costs were estimated.

For the 'non-material' projects, the allocation of the total 'asset complete' expenditure into the years incurred was estimated based on the material project cost allocation. This estimate was required as the 'as incurred' data can only be allocated on a total project basis (due to system limitations) and non-material projects are reported across all Augex tables - depending on the assets completed. CPI rates were applied to the estimated allocation of yearly costs to derive an estimate of the 'non-material' costs in real terms.

In accordance with the AER guidance, only direct costs are required to be recorded. This information was estimated due to limitations in relation Financial System reports. A calculation was performed based on material projects disclosed to determine the proportion of overhead costs to total costs (per the 'as incurred' Financial System report). The material project costs were scaled to remove the overhead percentage. This percentage was also applied to the total immaterial expenditure to derive an estimate of the direct costs only on non-material projects. This calculation assumes that the percentage of direct costs for all projects is consistent with the percentage in material projects sampled.

Installation Costs have been determined by the Project Manager as the labour (both internal and external) costs per the project actuals in the Enterprise Project Portfolio Management system. This includes all costs excluding procurement (direct materials), overheads and capital finance charges. The total costs were allocated into the Tables 2.3.1 and 2.3.2 in proportion to the percentage of the total project expenditure allocated to these Tables. The installation costs were converted to 'real terms' using the same approach outlined above for material costs.

Under 'Total Expenditure' for transformers, switchgear, capacitors and other plant items, only the procurement cost of the equipment has been included, not the installation costs. Other plant items are defined as all equipment involved in utilising or transmitting electrical energy that are not transformers, switchgear or capacitors.

'Total Expenditure' for poles/towers includes the procurement costs of the equipment and civil works, but not installation costs. 'Total Expenditure' for civil works does not include civil works expenditure relating to poles/towers. 'Total Expenditure' for lines, cables and 'other plant item' includes procurement costs but not installation costs. 'Other plant items' is defined as all equipment involved in utilising or transmitting electrical energy that are not poles/towers (including pole top or tower structures), lines or cables.

Information reported in relation to Related Party Contracts and Related Party Margins has been extracted directly from the Annual Regulatory Account workings. The costs reported are also included in the Total Direct Expenditure reported.

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Estimated Information:

Based on the information outlined above, all financial data provided is estimated information. This data is considered management's best estimate based on the information available.

Table 2.3.3— Augex data - HV/LV Feeders and Distribution Substations

Table 2.3.3 contains information prepared on an 'asset complete' basis. This has been used as a proxy for 'as incurred' project data. This assumption has been applied as the information required is not available on an 'as incurred' basis. The Asset Management Systems do not record 'Units Added' or 'Units Upgraded' figures until a project is complete. Similarly, financial information is not attributed to a specific asset until a project is complete.

Based on the above, all Descriptor Metrics and Cost Metrics reported in Table 2.3.3 are considered estimated information. The data provided is considered management's best estimate, based on the information available.

2.3.3.1 Descriptor Metrics

'Units Added' and 'Units Upgraded' were obtained directly from Fixed Asset Register reports.

Non-financial measures are included in the column according to the final Regulatory Year in which the augmentation assets on projects were commissioned.

2.3.3.2 Cost Metrics

Expenditure has been recorded on an 'asset complete' basis in nominal dollars.

In accordance with the AER guidance, only direct costs are required to be recorded. This information was estimated due to limitations in relation Financial System reports. A calculation was performed based on material projects disclosed in Table 2.3.1 and 2.3.2 to determine the proportion of overhead costs to total costs (per the 'as incurred' Financial System report). This percentage was applied to the expenditure in Table 2.3.3.2 to derive an estimate of the direct costs only. This calculation assumes that the percentage of direct costs for all projects is consistent with the percentage in the material project sampled.

'HV Feeder Augmentations – Overhead Lines' and 'HV Feeder Augmentations – Underground Cables'

- Financial information was sourced from Fixed Asset Register reports and was prepared in accordance with the 'Data Preparation Methodology' outlined above.
- Data reported in this category is the summation of the costs of all HV feeder augmentation assets, where the assets were completed in the 2014 Regulatory Year and the total project expenditure (on assets completed in the 2014 Regulatory Year) was greater than or equal to \$0.5 million.

Basis of Preparation

2014 Regulatory Year

HV Feeder Non-Material Projects

- Financial information was sourced from Fixed Asset Register reports and was prepared in accordance with the 'Data Preparation Methodology' outlined above.
- Data reported in this category is the summation of the costs of all HV feeder augmentation assets, where the assets were completed in the 2014 Regulatory Year and the total project expenditure (on assets completed in the 2014 Regulatory Year) was less than \$0.5 million.

LV Feeder Augmentations – Overhead Lines & LV Feeder Augmentations – Underground Cables

- Financial information was sourced from Fixed Asset Register reports and was prepared in accordance with the 'Data Preparation Methodology' outlined above.
- Data reported in this category is the summation of the costs of all LV feeder augmentation assets, where the assets were completed in the 2014 Regulatory Year and the total project expenditure (on assets completed in the 2014 Regulatory Year) was greater than or equal to \$50,000.

LV Feeder Non-Material Projects

- Financial information was sourced from Fixed Asset Register reports and was prepared in accordance with the 'Data Preparation Methodology' outlined above.
- Data reported in this category is the summation of the costs of all HV feeder augmentation assets, where the assets were completed in the 2014 Regulatory Year and the total project expenditure (on assets completed in the 2014 Regulatory Year) was less than \$50,000.

Distribution Substation Augmentations – Pole Mounted, Ground Mounted and Indoor

- The information reported is the summation of assets completed on augmentation projects on Distribution Substations (under the 3 specified types) during the 2014 Regulatory Year.
- Financial data was sourced from Fixed Asset Register reports for the Augmentation work codes. Data was obtained at a total distribution substation level. Using information from the GIS System, the annual installed units of Pole Mounted, Ground Mounted and Indoor Distribution Substations was obtained. The unit data was used to allocate the total distribution substation costs into the required categories using a percentage allocation basis. The data provided is considered an estimate due to the allocation approach discussed above. This was required as expenditure into the prescribed categories is not available.

Estimated Information:

Based on the information outlined above, all financial data provided is estimated information. This data is considered management's best estimate based on the information available.

Table 2.3.4 – Augex Data – Total Expenditure

Preparation Methodology:

Total augmentation expenditure has been recorded for each prescribed asset category.

Basis of Preparation

2014 Regulatory Year

Using the Fixed Asset Register report (used to prepare Tables 2.3.1 to 2.3.3), the percentage of total Augex costs allocated into the 'Augmentation Capex' categories was calculated.

An 'as incurred' project report was generated from the Financial System using the augmentation project work codes. This report provided direct costs only. The calculated Augmentation Capex percentages were applied to the 'as incurred' report to derive an estimate of Total Augex Expenditure on an 'as incurred' basis in the required categories.

Table 2.3.4 does not reconcile to the total of Tables 2.3.1 to 2.3.2 as the data is prepared on an 'as incurred' basis (whereas Tables 2.3.1 to 2.3.2 are prepared on a 'project close' basis) and an estimation has been performed to derive direct costs only. Additionally, there are differences in the data as Templates 2.3.1 and 2.3.2 are presented in real terms. This is consistent with the requirements of the RIN.

Estimated Information:

Information reported in Table 2.3.4 is considered estimated information due to the calculations performed to derive the 'as incurred' Augex category allocations. These calculations were performed based on percentages of 'project close' augmentation data which are also considered estimated information.

This data is required to be estimated as system reports generated on an 'as incurred' basis do not provide sufficient augmentation works identifiers to classify the costs into the required categories.

Data provided is considered management's best estimate based on the information available.

Basis of Preparation

2014 Regulatory Year

2.5 Connections

Connections expenditure, connection rating and connection voltage have been reported for all distribution substations installed for complex connection projects. Data provided relates to non-contestable, regulated connection services (as defined in the National Electricity Rules) and includes work performed by third parties on behalf of AusNet Electricity Services. It excludes negotiated connection services and contestable works (including gifted assets in contestable works; gifted assets are not distinguishable in business systems).

All Expenditure has been presented in nominal dollars and has not been distinguished between standard and alternative control services. Expenditure data has been reported as a gross amount (by not subtracting customer contributions from expenditure data).

Data reported in Template 2.5 Connections is distinct from data reported in Template 2.3 Augex.

AusNet Electricity Services records all customer connection costs (including augmentation costs where these are required and paid for by a customer) against specific cost codes (distinct from augmentation works cost codes). In many instances these cost codes do not align with the AER Connection definitions. At the highest level, allocations were undertaken according the following mapping.

AusNet Electricity Services' Code	AER Connection Subcategory
104 MEDIUM DENSITY HOUSING	Subdivision
107 U/GROUND SERVICE INSTALLATION	Residential
108 BUSINESS SUPPLY PROJECTS	Commercial/Industrial
109 PRIVATE ELECTRIC LINE REPLACEMENT	Residential Commercial Industrial
110 LOW DENSITY HOUSING	Residential Subdivision
118 COGENERATION PROJECTS	Embedded Generation
Alternative Control Connections*	Residential Commercial/ Industrial

*A small amount of standard control costs from 112 METERS T/SWITCHES & SERVICES is allocated on the same basis.

Work code 109 contains Connections expenditure relating to the undergrounding of a private line. It includes only the component from the distribution system to the property boundary. The customer is responsible for the entire cost of the undergrounding on their property.

While cost code 110 contained mostly single lot developments (including where an existing single lot is being subdivided) some small number of multi-lot developments are included. Therefore, cost code 110 was allocated using an extract from the connection project estimation database that provided a count and direct cost of single and multi-lot developments for each year. From this extract, an estimated percentage split was generated for both costs (applied to cost data) and volumes (applied to volume data). Splits were sense checked by SMEs.

Small scale solar connections are not included in embedded generation.

Basis of Preparation

2014 Regulatory Year

Alternative control service connections and cost code 109 and 112 were allocated using the ratio of residential to commercial gross connections for each year. This ratio was obtained from an extract of the Customer Information System and the percentage split was applied to both costs and volumes.

2.5.1 Descriptor Metrics

Preparation Methodology:

Underground/Overhead splits have been calculated as follows:

AusNet Electricity Services' Code	AER Connection Subcategory
104 MEDIUM DENSITY HOUSING	Split performed with Overhead/Underground lines asset count in Fixed Asset Register
107 U/GROUND SERVICE INSTALLATION	All underground
108 BUSINESS SUPPLY PROJECTS	Split performed with Overhead/Underground lines asset count in Fixed Asset Register
109 PRIVATE ELECTRIC LINE REPLACEMENT	All underground
110 LOW DENSITY HOUSING	Split performed with Overhead/Underground lines asset count in Fixed Asset Register
118 COGENERATION PROJECTS	Fixed Asset Register project specific analysis
Alternative control connections	Split performed with actual data captured in tariff codes in the billing system

'MVA added' for distribution substations has been estimated for connection services by multiplying the number of substations in each cost code by an assumed standard for the class of customers in the cost code supplied by distribution planning SMEs (1MVA for business supply projects, 0.5MVA for medium density housing and 0.2MVA for low density housing).

The number and cost of substations for each AusNet Electricity Services cost code has been estimated from an extract of the Fixed Asset Register. No other AusNet Services system contains asset data that can be identified as Customer Connection Capex.

For HV and LV augmentation metrics, 'kms added' refers to the net addition of circuit line length resulting from the augmentation work of complex connections. Costs and circuit length was estimated from an extract of the Fixed Asset Register. No other AusNet Services system contains asset data that can be identified as Customer Connection Capex.

Mean days to connect data was estimated from extracts from the Customer Information System.

The data reported in 'Volume of Customer Complaints relating to Connection Services' was extracted directly from the AusNet Electricity Services' Issues Management System data base and is considered actual information.

In relation to the 'Volume of GSL Breaches for residential customers' and 'GSL Payments', data is recorded in AusNet Services' SAP software. Within SAP, the 'Review GSL Products' module holds the relevant information for these metrics. Once data has been entered into SAP, it is manually transferred to GSL spreadsheet maintained by the New Connections team. This spreadsheet is used to populate the

Basis of Preparation

2014 Regulatory Year

'Volume of GSL Breaches for residential customers' and 'GSL Payments'. AusNet Electricity Services' procedure document 'GSL Reporting' contains detailed instructions for these operations.

Cost per lot is estimated by dividing the costs from Table 2.5.2 by the number of lots generated from an extract of the the connection project estimation database system.

Estimated Information:

All information in Table 2.5.1 is considered an estimate except for GSL and customer complaint data. In particular, cost data included in Table 2.5.1 is on an 'as commissioned' basis as it is sourced from the Fixed Asset Register. This is only indicative of the incurred costs.

The information provided is considered management's best estimate of the information required based on the data available.

2.5.2 Cost Metrics by Connection Classification

Connections expenditure is the costs to establish new connection assets and upgrades to existing connections assets necessary to meet customer connection requests. This excludes alterations to existing connection assets.

Preparation Methodology:

Total direct costs (including customer contributions) by cost code have been taken from information supporting the audited Annual Regulatory Accounts. Alternative control connection costs have also been taken from Template 4.3 Fee-based Services.

Total connection volumes were estimated using extracts from the Connection Project Estimation database and alternative control connection volumes from information supporting the audited Annual Regulatory Accounts.

AusNet Electricity Services does not capture costs or volumes in the Simple/Complex categories required. Therefore, an extract from the Fixed Asset Register has been used to estimate the cost (by direct cost) and volume (by number of projects) splits required. The percentage splits estimated have been applied to the 'as incurred' costs extracted from the Annual Regulatory Accounts and the project volumes (projects closed) from the Connection Project Estimation database. The financial asset register filters used for the allocation are set out in the table below.

AusNet Electricity Services' Code	Asset Register filter	AER Connection Classification
		RESIDENTIAL
Alternative Control Residential Connections 107 U/GROUND SERVICE INSTALLATION 109 PRIVATE ELECTRIC LINE REPLACEMENT	* n/a (see section 2.5)	SIMPLE CONNECTIONS
107 U/GROUND SERVICE INSTALLATION 109 PRIVATE ELECTRIC LINE REPLACEMENT	* Projects with just LV costs	COMPLEX CONNECTION LV

Basis of Preparation

2014 Regulatory Year

AusNet Electricity Services' Code	Asset Register filter	AER Connection Classification
110 LOW DENSITY HOUSING		
110 LOW DENSITY HOUSING	Projects with HV costs (projects may or may not also contain LV costs)	COMPLEX CONNECTION HV (NO UPSTREAM ASSET WORKS)
		COMMERCIAL/INDUSTRIAL
Alternative Control Commercial Connections 109 PRIVATE ELECTRIC LINE REPLACEMENT	* n/a (see section 2.5)	SIMPLE CONNECTIONS
109 PRIVATE ELECTRIC LINE REPLACEMENT 108 BUSINESS SUPPLY PROJECTS	* Projects with just LV costs	COMPLEX CONNECTION HV (CUSTOMER CONNECTED AT LV, MINOR HV WORKS) (\$000'S)
108 BUSINESS SUPPLY PROJECTS	Projects with HV and LV costs	COMPLEX CONNECTION HV (CUSTOMER CONNECTED AT LV, UPSTREAM ASSET WORKS) (\$000'S)
108 BUSINESS SUPPLY PROJECTS	Projects with just HV costs	COMPLEX CONNECTION HV (CUSTOMER CONNECTED AT HV) (\$000'S)
	Projects with just ST costs	COMPLEX CONNECTION SUB-TRANSMISSION (\$000'S)
		SUBDIVISION
104 MEDIUM DENSITY HOUSING 110 LOW DENSITY HOUSING	Projects with just LV costs	COMPLEX CONNECTION LV
104 MEDIUM DENSITY HOUSING 110 LOW DENSITY HOUSING	Projects with HV costs (projects may or may not also contain LV costs)	COMPLEX CONNECTION HV (NO UPSTREAM ASSET WORKS)
	No data available to distinguish so included above	COMPLEX CONNECTION HV (WITH UPSTREAM ASSET WORKS)
		EMBEDDED GENERATION
	No new customer connected	SIMPLE CONNECTION LV
118 COGENERATION PROJECTS	Projects with HV and LV costs	COMPLEX CONNECTION HV (SMALL CAPACITY)
	No new customer connected	COMPLEX CONNECTION HV (LARGE CAPACITY)

*The exception was the split of cost codes 107 and 109. Half the projects were considered residential SIMPLE CONNECTIONS and half residential COMPLEX CONNECTION LV on the basis that undergrounding on one side of the street does not have to cross the road (simple) while connections on the other side of the street have to be connected under the street (complex). The cost split was assumed that a complex job cost 25% more than a simple job based on SME advice underpinned by contractor rates.

Estimated Information:

All information in Table 2.5.2 is considered an estimate. Estimates have been provided as the information requested is not separately captured by AusNet Electricity Services and therefore requires judgment by management on how information should be obtained and presented.

Basis of Preparation

2014 Regulatory Year

The information provided is considered management's best estimate of the information required based on the data available.

Basis of Preparation

2014 Regulatory Year

2.6 Non-network

Non-network expenditure reported relates to direct Opex and direct Capex costs only. Capex and associated non-financial information has been reported on an 'as incurred' basis. All Capex and Opex have been presented in nominal dollars.

Table 2.6.1 Non-network Expenditure

ICT 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 has been reported. All costs associated with SCADA and Network Control Expenditure that exist beyond gateway devices has been excluded.

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

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 classified as recurrent expenditure.

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

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

Preparation Methodology:

Opex:

Using data extracted from the Financial System for the preparation of the Annual Regulatory Accounts, the total direct costs for IT and Communications Expenditure was calculated. The total expenditure included costs for both the Electricity Distribution business and Gas Distribution business. Based on information obtained in Activity Based Costing ("ABC") surveys, the total Electricity Distribution IT and Communications Expenditure was calculated for the 2014 Regulatory Year.

The total IT cost pool was then split between recurrent and non-recurrent operating costs based on an assessment of the nature of expenditure (for example Consultancy costs are considered non-recurrent in nature).. This assessment was performed by a suitable SME.

Basis of Preparation

2014 Regulatory Year

Capex:

A list of projects and the associated financial information relating to Standard Control Services (“SCS”) (excluding overheads) was extracted from the workings to the Annual Regulatory Accounts and from the Financial System. An appropriate expert 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.

Estimated Information:

Opex and Capex:

The allocation of Total IT and Communications expenditure between recurrent and non-recurrent expenditure was estimated based on the judgment of a SME, as this information is not separately captured in the Financial System. The information provided is management’s best estimate based on the data available.

Motor Vehicles

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

<i>Car</i>	Cars are Motor Vehicles other than those that comply with the definition of Light commercial vehicle, Heavy commercial vehicle, or Elevated Work Platform. 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).
<i>Heavy Commercial Vehicle (HCV)</i>	Heavy commercial vehicles (HCVs) are Motor Vehicles that are registered for use on public roads excluding Elevated Work Platform (HCVs) that: <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>	Light commercial vehicles (LCVs) are Motor Vehicles that are registered for use on public roads excluding Elevated Work Platforms that: <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 Platform (EWP - HCV)</i>	Elevated Work Platform (EWP - HCV) are HCV’s that have permanently attached 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.

Basis of Preparation

2014 Regulatory Year

Preparation Methodology:

Opex:

A report was generated from the Fleet System showing the total Motor Vehicle expenditure for the 2014 Regulatory Year. 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. Motor Vehicle expenditure by vehicle type incorporated costs related to both the Electricity Distribution business and the Gas Distribution Business combined. Information from ABC surveys was used to derive an estimate of the motor vehicle expenditure (by vehicle type) in the Electricity Distribution business.

The resultant information was scaled by the SCS use percentage. This was calculated based on information contained in the Annual Regulatory Accounts. The percentage applied was calculated based on the amount of Operating Costs relating to SCS divided by the total Operating Costs for the 2014 Regulatory Year less AMI Costs. AMI costs have been excluded from this calculation as the AMI program does not incur significant motor vehicle expenditure.

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 2014 Regulatory Year. A motor vehicle report was generated from the Fleet System which provided additional information as to 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 Electricity Distribution business were included.

The capex data was then scaled by the SCS use percentage. This was calculated based on information contained in the Annual Regulatory Accounts. The percentage applied was calculated based on the amount of Operating Costs relating to SCS divided by the total Operating Costs for the 2014 Regulatory Year less AMI Costs. AMI costs have been excluded from this calculation as the AMI program does not incur significant motor vehicle expenditure.

Estimated Information:

Opex and Capex:

Data reported for Motor Vehicle Capex and Opex is considered estimated information due to the estimation of the percentage of expenditure relating to SCS use. This is required to be estimated as the data is not separately captured in the Financial or Fleet Systems.

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 to personal chattels (e.g. furniture).

Basis of Preparation

2014 Regulatory Year

Total Buildings and Property expenditure has been reported split between Capex and Opex.

Preparation Methodology:

Opex:

A detailed Income Statement report was extracted from the Financial System for the 2014 Regulatory Year's 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 and reported in Table 2.6.1.

Capex:

A project report was generated in the Financial System using the relevant Buildings and Property work codes and cost codes. The project report was reviewed to determine whether any projects met the definition of Buildings and Property expenditure. Projects which did not meet the definition were included in the 'Other Expenditure' section as per below.

Information presented for both Capex and Opex was extracted from financial records. As such, there is no estimated information in relation to Buildings and Property non-network expenditure.

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 real chattels (e.g. interests in land such as a lease); and
- Other general assets.

Preparation Methodology:

When determining the Motor Vehicle expenditure which meets the AER prescribed definitions, 'other' motor vehicle expenditure was identified. Expenditure reported relates to direct costs only.

When determining the Buildings and Property expenditure which meets the AER prescribed definitions, 'other' building and property expenditure was identified. Expenditure reported relates to direct costs only.

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

Basis of Preparation

2014 Regulatory Year

Estimated Information:

All information is considered actual information except information relating to Motor Vehicles is considered estimated information due to the estimation of the percentage of SCS use - used to derive an estimate of the motor vehicle expenditure.

Other Expenditure – Buildings and Property and General Equipment and Furniture

As \$1 million or more (nominal) in capital expenditure has been incurred during the 2014 Regulatory Year for 'General Equipment and Furniture' and 'Buildings and Property' respectively, these expenditures have been disclosed separately.

Preparation Methodology:

Using data extracted from the Financial System for the preparation of the Annual Regulatory Accounts, Total 'General Equipment and Furniture' expenditure and 'Total Buildings and Property' expenditure was calculated. Data reported relates to direct costs only.

Estimated Information:

Information presented was extracted from financial records. As such, there is no estimated information.

Table 2.6.2 Annual Descriptor Metrics – IT & Communications Expenditure

Employee Numbers

Employee numbers are the average number of employees engaged in SCS work over the year scaled for time spent on SCS 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 and a simple average was calculated. This report included Employee Numbers in total across all AusNet Service businesses for the 2014 calendar year.

Using ABC surveys, the headcount report was allocated between the Distribution (Electricity, Gas and Unregulated) businesses and the Transmission business. The ABC Survey information captures data relating to employees who do not work directly on projects. 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 Electricity Distribution business headcount was further allocated into employees involved in SCS related work using an estimated percentage allocation. The SCS percentage allocation was calculated as the amount of Operating Costs relating to SCS divided by the Total Operating Costs. Information for the calculation was obtained from the Annual Regulatory Accounts.

Basis of Preparation

2014 Regulatory Year

Estimated Information:

The data reported is considered estimated information due to the assumptions involved in the percentage allocations as described above. The information provided is considered management's best estimate of the data required based on the information available.

User Numbers

User numbers are defined as active IT system log in accounts used for SCS scaled for SCS use.

Preparation Methodology:

The Total User Numbers (across the AusNet Services businesses) was extracted from the domain IT system on the 23 January 2015. The system is 'live' and as such, the data as at 31 December was unable to be generated. Using percentages calculated based on employee numbers, the User Numbers were split between the Distribution and Transmission businesses and between the Gas Distribution, Electricity Distribution and Unregulated businesses.

The SCS percentage was then applied to the User Numbers to derive an estimate of the variables to be reported. The SCS percentage allocation was calculated as the amount of Operating Costs relating to SCS divided by the Total Operating Costs. Information for the calculation was obtained from the Annual Regulatory Accounts.

Estimated Information:

This information is considered estimated information as data extracted on 23 January 2015 has been used as a proxy for the information required. Also, approximate percentages were applied to derive an estimate of the devices owned by AusNet Electricity Services in relation to SCS. 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 used to provide standard control services scaled for standard control services use. Client Devices are hardware devices that accesses services made available by a server.

Preparation Methodology:

Information in relation to the number of laptops and desktop computers was obtained from the IT Service Portal as at 10 December 2014. 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 spreadsheet database maintained by AusNet Services' Telecommunications Coordinator and the Fixed Assets Register as at 16 January 2015.

The spreadsheet database was not designed for external reporting purposes and therefore has no built in reconciliations or consistency checks (because these are not required for the spreadsheet's current

Basis of Preparation

2014 Regulatory Year

purpose). Whilst the methodology used is the best available, the smartphone and tablet numbers obtained are still considered an estimate due to uncertainty about the accuracy of the data relied upon.

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', average Client Devices were split between the Distribution and Transmission businesses and between the Gas Distribution, Electricity Distribution and Unregulated businesses. The SCS percentage was then applied to the Electricity Distribution Client Devices to derive an estimate of the variables to be reported. The SCS percentage allocation was calculated as the amount of Operating Costs relating to SCS divided by the Total Operating Costs. Information for the calculation was obtained from the Annual Regulatory Accounts.

Estimated Information:

Client device information is considered estimated information due to estimates involved in deriving handheld devices and the smartphone numbers. Also, approximate percentages were applied to derive an estimate of the devices owned by AusNet Electricity Services in relation to SCS.

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.

Table 2.6.3 Annual Descriptor Metrics – Motor Vehicles

Average Kilometres Travelled

Preparation Methodology:

Information was sourced from a report generated in the Fleet System. This report provided the kilometres travelled for each vehicle (owned and leased) for the 9 month period from 1 April 2014 to 31 December 2014. The report was unable to be generated on a calendar year basis as the data required is only tracked on an AusNet Services Financial Year basis. The report was filtered to exclude Transmission business vehicles and to exclude vehicles which did not meet the motor vehicle definitions prescribed by the AER.

The information extracted was extrapolated over 12 months to derive an estimate of the kilometres travelled in the 2014 Regulatory Year. The average kilometres per vehicle was then calculated as the total (extrapolated) kilometres for all vehicles in each category, divided by the number of leased and owned vehicles in each category.

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

Basis of Preparation

2014 Regulatory Year

Estimated Information:

This information provided is considered estimated information due to the approximation of SCS use and the extrapolation of odometer data. The data provided is considered management's best estimate of the information required.

Number Purchased, Number Leased and Number in Fleet

Preparation Methodology:

Information was sourced from a motor vehicle report generated from the Fleet System. The system report was analysed and Transmission business vehicles and also vehicles which did not meet the prescribed Motor Vehicle definition were excluded.

The 'Number Purchased' was determined based on the Fleet System report, sorted for any company owned vehicles delivered from 01/01/2014 – 31/12/2014

For the average 'Number Leased' and average 'Number in Fleet', the Fleet System report was used to derive the total number leased and total number in fleet as at 31 December 2014. Using data compiled in the 2013 Category Analysis submission (sourced from the Fleet System) the total number leased and total number in fleet as at 31 December 2013 was extracted. A simple average was calculated to determine the average number leased and average number in fleet.

The number of vehicles in the fleet purchased, the average number of vehicles leased and the average number of vehicles in the fleet were scaled for SCS use. The percentage of SCS 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 SCS use. The data provided is considered management's best estimate of the information required.

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 SCS divided by the total Operating Costs for the 2014 Regulatory Year less AMI Costs. AMI costs have been excluded from this calculation as the AMI program does not incur significant motor vehicle expenditure.

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. The data provided is considered management's best estimate of the information required.

Basis of Preparation

2014 Regulatory Year

2.7 Vegetation management

Vegetation management zones are segments of the distribution 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. Based on this, two vegetation management zones were identified in AusNet Electricity Services' network - high bush fire risk areas ("HBRA") and low bushfire risk areas ("LBRA").

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 Services' Vegetation Management program.

Table 2.7.1 – Descriptor Metrics by Zone

Route Line Length within Zone

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

Preparation Methodology:

For the 2014 Regulatory Year, total line length data was extracted from the Asset Management System.

The split of total route line length between the HBRA and LBRA vegetation management zones was performed on a percentage allocation basis. The percentage applied was derived using line length information (split between HBRA 81% and LBRA 19%) from the Regulatory Impact Statement. The Short and Long Rural and Urban split (98% and 2% respectively) was also calculated based on line length information from the Regulatory Impact Statement.

Estimated Information:

The system does not distinguish route line length between the HBRA and LBRA zones; therefore an estimate is required. Using the percentage split from the Regulatory Impact Statement is considered the best allocation method available.

Using this methodology to perform the allocation between zones is considered management's best estimate available.

Basis of Preparation

2014 Regulatory Year

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 relevant Regulatory Year.

Preparation Methodology:

Maintenance span is the network span that is subject to active vegetation management practices in the relevant year. Active vegetation management practices do not include inspection of vegetation maintenance spans where 'inspection' is only for the purpose of identifying trees or other vegetation that require trimming or removal and include vegetation scoping works.

Urban and CBD maintenance spans refers to CBD and urban areas that are subject to vegetation management practices in the relevant Regulatory Year. CBD and urban areas are consistent with CBD and urban customer classifications.

Rural maintenance spans refer to spans in rural areas that are subject to vegetation management practices in the relevant year. Rural spans include spans in short rural and long rural feeders.

Urban and Rural maintenance spans were determined using information extracted from the Vegetation Management system which was split into zone (HBRA and LBRA) and area category (Urban and Rural) using feeder data. The information is further disaggregated into maintenance spans and spans clear of vegetation. Maintenance spans were determined as PT1 to PT365 per the system data (which denotes spans where vegetation maintenance is required in the next 365 days). The maintenance spans reported include only spans subject to action/cutting rather than inspection or assessment only.

Estimated Information:

This is considered actual information.

Total Length of Maintenance Spans

Preparation Methodology:

HBRA: The 'Total Length of Maintenance Spans' was calculated by dividing the total line length in kilometres for HBRA (sourced from the GIS system) by the total number of towers in HBRA (per the Vegetation Management System) to derive an estimate of the average kilometre line length for each tower in a HBRA. This average was multiplied by the number of HBRA maintenance spans (in Urban and CBD areas and rural areas respectively per the Vegetation Management System) to derive an estimate of 'Total Length of Maintenance Spans' in Urban and CBD areas and Rural areas in the 2014 Regulatory Year.

LBRA: The 'Total Length of Maintenance Spans' was calculated by dividing the total line length in kilometres for LBRA (per the GIS System) by the total number of towers in LBRA (per the Vegetation Management System) to derive an estimate of the average kilometre line length for each tower in a LBRA. This average was multiplied by the number of LBRA maintenance spans (in Urban and CBD areas and rural areas respectively per the Vegetation Management System) to derive an estimate of 'Total Length of Maintenance Spans' in Urban and CBD areas and Rural areas in the 2014 Regulatory Year.

Basis of Preparation

2014 Regulatory Year

Estimated Information:

Data provided is considered estimated information as it is not separately captured in the Vegetation Management System. The calculation performed assumes that there is one tower per maintenance span. The calculations performed are considered management's best estimate of the data requested based on the information available.

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 calculated by using information from the Vegetation Management System.

HBRA: For the 2014 Regulatory Year, the total number of urban and rural PT720 and RE (reassess) vegetation maintenance spans were obtained (which represent maintenance spans which require vegetation maintenance in the next 2 years and spans which need to be reassessed). This total was multiplied by the average length of a maintenance span (as derived in the calculation of 'Total Length of Maintenance Spans') to provide an estimate of the 'Length of Vegetation Corridors'.

LBRA: For the 2014 Regulatory Year, the total number of urban and rural PT720 and RE (reassess) vegetation maintenance spans was obtained (which represent maintenance spans which require vegetation maintenance in the next 12 months). This total was multiplied by the average length of a maintenance span (as derived in the calculation of 'Total Length of Maintenance Spans') to provide an estimate of the 'Length of Vegetation Corridors'.

Estimated Information:

The data provided is considered estimated information as it is not separately captured in the Vegetation Management System. This is considered management's best estimate of the information requested.

Average Number of Trees per Maintenance Span

The '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 required to comply with AusNet Electricity Services' vegetation management obligations.

Preparation Methodology:

The average number of trees per urban and rural vegetation maintenance spans was estimated. In 2009, a random sample (across the network) was performed of the total trees being maintained to preserve regulatory clearance space. Based on the sample results, a percentage of trees being maintained relative

Basis of Preparation

2014 Regulatory Year

to spans were calculated. This percentage was applied to the total number of vegetation maintenance spans (for the Central, North and East regions) in 2014 to derive an estimate of the average number of trees in the 2014 Regulatory Year.

It has been assumed that the average number of trees in urban vegetation maintenance spans is consistent with the average number of trees in rural vegetation maintenance spans as the random sample did not distinguish between urban and rural data. Additionally, it has also been assumed that the average number of trees is consistent in HBRAs and LBRAs.

Estimated Information:

This data is not readily available from the Vegetation Management System; therefore this data is required to be estimated. The analysis performed in 2009 was the most recent analysis performed, and considered to be the most appropriate basis to estimate the 2014 figures. Also as the analysis did not distinguish between urban and rural spans there is no other basis to distinguish any differences; therefore the amounts reported are the same.

Management considers the above estimates to be the best estimates of the information required based on available data.

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).

Preparation Methodology:

Information in relation to the average vegetation maintenance span cycles was obtained from the Vegetation Management system and also per the vegetation management plan. The cycle data provided was available in the HBRA and LBRA cutting frequencies. As such, no estimation was required.

Table 2.7.2 – Expenditure Metrics by Zone

Table 2.7.2 has been completed based on the two vegetation management zones identified above. Expenditure provided relates to direct costs; it excludes overhead expenditure and has been presented in nominal dollars. Annual vegetation management expenditure across all categories and zones sums to the total Vegetation Management expenditure in the 2014 Regulatory Year.

Preparation Methodology:

Expenditure recorded on Vegetation Management in the Distribution business is coded to specific project codes that align to different vegetation management functions. This data is posted to one work code in AusNet Electricity Services' general ledger and projects ledger.

To populate Table 2.7.2, expenditure on each project in the Vegetation Management work code was extracted from the Financial System. This data extract was then subject to further analysis.

Basis of Preparation

2014 Regulatory Year

'Tree Trimming' and 'Inspection' project codes allow for a direct one-for-one allocation from the Financial System extract and the categories in Table 2.7.2 (both function and zone).

'Hazard Tree Cutting', 'Ground Clearance' and 'Vegetation Corridor Clearance' can be allocated directly to functions from the project codes, but not to the two Vegetation Management zones (HBRA and LBRA). Expenditure was allocated to the zones based on the 'Tree Trimming' and 'Inspection' proportions (for 'Ground Clearance' and 'Vegetation Corridor Clearance') and the number of hazard trees attended to (for 'Hazard Tree Cutting').

'Audit' and 'Contractor Liaison' expenditure is not separately identifiable in the Vegetation Management work code. To derive these amounts, the 2014 actual expenditure was estimated based on the number of staff in each role, multiplied by an average annual salary.

The costs included in the category 'Other Vegetation Management Costs not Specified in the Sheet' reflect the balance of costs between the above categories and the total expenditure derived from the Vegetation Management work code Financial System extract. Other costs reflect activities such as trouble orders, bark patrol and track maintenance.

Differences in total between the above determined costs and the Annual Regulatory Accounts were calculated and the resulting amount was scaled on a proportional basis to ensure data reported aligns with the Annual Regulatory Accounts. The differences reflect any unregulated costs or any emergency vegetation management costs (which are separately reported in Template 2.9 Emergency Response).

Estimated Information:

All Vegetation Management expenditure reported is considered estimated information as the financial system does not capture costs into the required categories. Estimations were required for category allocations of total costs, deriving the HBRA and LBRA zone splits (for all categories except 'Tree Trimming' and 'Inspection') and for calculating 'Audit' and 'Contractor liaison' costs. Data provided is considered management's best estimate based on the information available.

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.

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

Preparation Methodology:

A review of information contained in the Incident Management System was performed for the 2014 Regulatory Year. Based on this review, Fire Starts were identified. There was insufficient data in the system to determine the cause of the fire starts (grow-ins, blow-ins or fall-ins) or the responsibility. As such, it has been assumed that all Fire Starts relate to Blow-Ins and Fall-Ins are AusNet Electricity Services' responsibility.

Basis of Preparation

2014 Regulatory Year

Number of Fire Starts Caused by Vegetation Grow-Ins has been reported as zero as prescribed clearances are maintained.

Estimated Information:

Given the system limitations as noted above, the information provided for Number of Fire Starts Caused by Blow-Ins and Fall-Ins (NSP Responsibility) is considered estimated information. This is considered management's best estimate based on the information available.

Basis of Preparation

2014 Regulatory Year

2.8 Maintenance

Maintenance relates to operational repairs and maintenance of the distribution 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 2014 Regulatory Year (for each asset category) and the number of assets inspected or maintained during the 2014 Regulatory Year (for each asset category).

Public Lighting has not been included in Template 2.8 Maintenance as it is an Alternative Control Service.

Asset Quantity at Year End

Preparation Methodology:

In relation to the asset categories listed below in Table A, data reported for 'Asset Quantity at Year End' was sourced from Template 5.2 Asset Age Profile.

Table A.

Maintenance Activity	Maintenance Asset	Unit of Measure – Asset Quantity	Relevant categories in Template 5.2
POLE TOP, OVERHEAD LINE & SERVICE LINE MAINTENANCE	POLE TOPS AND OVERHEAD LINES	NUMBER OF POLES (000'S)	Asset Type: Poles Asset Category: Other cross arm assets
POLE INSPECTION AND TREATMENT	ALL POLES	NUMBER OF POLES (000'S)	Asset Type: Poles Asset Category: All poles, excluding cross arm assets
NETWORK UNDERGROUND CABLE MAINTENANCE: BY VOLTAGE	LV - 11 TO 22 KV	LENGTH (KM) (000'S)	Asset Type: Underground Cables Asset Category: < = 1 kV to > 11 kV & < = 22 kV
	33 KV AND ABOVE	LENGTH (KM) (000'S)	Asset Type: Underground Cables Asset Category: < = 1 kV to > 11 kV & < = 22 kV
DISTRIBUTION EQUIPMENT & SUBSTATION PROPERTY MAINTENANCE	DISTRIBUTION SUBSTATION TRANSFORMERS	NUMBER OF INSTALLED TRANSFORMERS (000'S)	Asset Type: Transformers Asset Category: POLE MOUNTED ; < = 22kV ; < = 60 kVA ; SINGLE PHASE to GROUND OUTDOOR / INDOOR CHAMBER MOUNTED ; > = 22 kV & < = 33 kV ; > 40 MVA
DISTRIBUTION EQUIPMENT & SUBSTATION PROPERTY MAINTENANCE	DISTRIBUTION SUBSTATION SWITCHGEAR (WITHIN-SUBSTATIONS AND STAND-	NUMBER OF SWITCHES (000'S)	Asset Type: Switchgear Asset Category: All

Basis of Preparation

2014 Regulatory Year

Maintenance Activity	Maintenance Asset	Unit of Measure – Asset Quantity	Relevant categories in Template 5.2
	ALONE SWITCHGEAR)		
SCADA & NETWORK CONTROL MAINTENANCE	SCADA & NETWORK CONTROL MAINTENANCE	NUMBER OF SYSTEMS	Asset Type: Scada, Network Control & Protection Systems Asset Category: Field devices to Communications Network Assets
PROTECTION MAINTENANCE SYSTEMS	PROTECTION MAINTENANCE SYSTEMS	NUMBER OF SYSTEMS	Asset Type: Scada, Network Control & Protection Systems Asset Category: Relays and Batteries

For the 2014 Regulatory Year, 'Asset Quantity' was calculated as the cumulative sum of the relevant categories (as listed in Table A above) in Template 5.2 Asset Age Profile.

Table B.

Maintenance Activity	Maintenance Asset	Unit of Measure – Asset Quantity
NETWORK UNDERGROUND CABLE MAINTENANCE: BY LOCATION	CBD	LENGTH (KM) (000'S)
	NON-CBD	LENGTH (KM) (000'S)

In relation to Table B above, the total Underground Cable length in kilometers (the sum of 'LV - 11 to 22 KV' and '33 KV and above') has been reported in the Non-CBD category as AusNet Electricity Services does not own underground cable in CBD areas.

Table C.

Maintenance Activity	Maintenance Asset	Unit of Measure – Asset Quantity
POLE TOP, OVERHEAD LINE & SERVICE LINE MAINTENANCE	SERVICE LINES	NUMBER OF CUSTOMERS (000'S)

The 'number of customers' in relation to Service Lines (refer to Table C above) has been calculated based on the total number of customers reported in the 2013 Regulatory Year escalated based on the number of overhead new connections in the 2014 Regulatory Year per data compiled for Template 2.5 Connections.

Table D.

Maintenance Activity	Maintenance Asset	Unit of Measure – Asset Quantity
OVERHEAD ASSET INSPECTION	ALL OVERHEAD ASSETS	LINE PATROLLED (ROUTE KM) (000'S)

Basis of Preparation

2014 Regulatory Year

The Overhead Asset Inspection 'Line Patrolled' (as shown in Table D above) has been disclosed as the route line length. The route line length is the aggregated length in kilometers of lines, measured as the length of each span between poles and/or towers, and where the length of each span is considered only once irrespective of how many circuits it contains. This is the distance between line segments and does not include vertical components such as line sag.

For the 2014 Regulatory Year, line length data was extracted from the Asset Management System. This is considered actual information.

Table E.

Maintenance Activity	Maintenance Asset	Unit of Measure – Asset Quantity
DISTRIBUTION SUBSTATION EQUIPMENT & PROPERTY MAINTENANCE	DISTRIBUTION SUBSTATION - PROPERTY	NUMBER OF DISTRIBUTION SUBSTATION PROPERTIES MAINTAINED (000'S)

The Number of Distribution Substation Properties Maintained was calculated using information sourced from the GIS System. The number calculated included kiosk substations, pad mounted substations, indoor substations and ground substations. The year on year change in Distribution Substation Properties is consistent with data included in Template 2.3 Augex.

Table F.

Maintenance Activity	Maintenance Asset	Unit of Measure – Asset Quantity
ZONE SUBSTATION EQUIPMENT MAINTENANCE	TRANSFORMERS - ZONE SUBSTATION	NUMBER OF ZONE SUBSTATION TRANSFORMERS (000'S)
	TRANSFORMERS - DISTRIBUTION	NUMBER OF DISTRIBUTION TRANSFORMERS WITHIN ZONE SUBSTATIONS (000'S)
	TRANSFORMERS - HV	NUMBER OF HV TRANSFORMERS (000'S)
	ZONE SUBSTATION - OTHER EQUIPMENT	OTHER
	ALL ZONE SUBSTATION PROPERTIES	NUMBER OF ZONE SUBSTATION PROPERTIES MAINTAINED (000'S)

For the 2014 Regulatory Year, the number of Zone Substation Transformers was extracted from the Asset Management System and current internal document 'Asset Condition Data Sheet for ZSS transformers', collated for the Electricity Distribution Pricing Review ("EDPR") submission (using data from the Asset Management System). The Asset Quantity and Asset Quantity Inspected/Maintained, Inspection and Maintenance Cycle for Number of distribution transformers within zone substations and Number of HV transformers is reported as zero as AusNet Electricity Services does not own any distribution transformers and HV transformers within a zone substation.

The number of Zone Substation - Other Equipment assets has been estimated based on the number of circuit breakers plus an escalation factor (of 163%) to estimate other assets including 66kv isolators/disconnectors and 66kv instrument transformers (CTs and VTs) only, which are maintained on a regular

Basis of Preparation

2014 Regulatory Year

basis. The percentage estimate was performed by a relevant SME. The number of circuit breakers was obtained from the Asset Management System and the EDPR Asset Condition Data Sheet (which uses data from the Asset Management System).

Information in relation to the number of Zone Substation Properties was obtained from the AusNet Electricity Services' internal document 'PGI 67-01-01 List of Transmission and subtransmission Stations and communication sites', the EDPR Asset Condition Data Sheet and the Asset Management System for the 2014 Regulatory Year. Each Zone Substation is assumed to be one property including buildings, fences, drainage, switchyard surfaces/access roads, metallic structures etc.

Estimated Information:

The data provided as listed under Table A above is considered estimated information, based on assumptions and estimates included in preparing Template 5.2 Asset Age Profile.

The 'number of customers' (in relation to Service Lines) is estimated information as the required data was not available in AusNet Electricity Services' systems. The calculation methodology and assumptions applied have been outlined above.

The number of distribution substation properties was estimated for the 2014 Regulatory Year using data extracted from the Asset Management System. The information extracted from the Asset Management Systems is current data as at February 2015. This is due to the Asset Management Systems being 'live' databases. System limitations prevent asset reports being run as at specific (historic) points in time. The quantity of Zone Substation - Other Equipment assets has been estimated using information from the Asset Management System and assumptions of an SME.

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

Average Age of Asset Group

Preparation Methodology:

For the categories listed in Table G below, the 'Average Age of Asset Group' was sourced from the Replacement Expenditure model (model template provided by the AER in 2012).

Table G.

MAINTENANCE ACTIVITY	MAINTENANCE ASSET CATEGORY
POLE TOP, OVERHEAD LINE & SERVICE LINE MAINTENANCE	POLE TOPS AND OVERHEAD LINES
	SERVICE LINES
POLE INSPECTION AND TREATMENT	ALL POLES
OVERHEAD ASSET INSPECTION	ALL OVERHEAD ASSETS
NETWORK UNDERGROUND CABLE MAINTENANCE	LV - 11 TO 22 KV
	33 KV AND ABOVE
	NON-CBD
DISTRIBUTION SUBSTATION EQUIPMENT & PROPERTY MAINTENANCE	DISTRIBUTION SUBSTATION TRANSFORMERS

Basis of Preparation

2014 Regulatory Year

MAINTENANCE ACTIVITY	MAINTENANCE ASSET CATEGORY
	DISTRIBUTION SUBSTATION SWITCHGEAR
ZONE SUBSTATION EQUIPMENT MAINTENANCE	TRANSFORMERS - ZONE SUBSTATION
	ZONE SUBSTATION - OTHER EQUIPMENT
SCADA & NETWORK CONTROL MAINTENANCE	SCADA & NETWORK CONTROL MAINTENANCE
PROTECTION SYSTEMS MAINTENANCE	PROTECTION SYSTEMS MAINTENANCE

The Replacement Expenditure model was populated with current data extracted from the Asset Management System in February 2015. The asset life data in the model was developed based on engineering judgment from SMEs within the business. The asset categories in the Replacement Expenditure model have been aligned with the AER asset categories outlined above.

The 'Average Age of Asset Group' was calculated as the calculated Weighted Average Life (per the Repex Model) less the calculated Weighted Average Remaining Life (per the Repex Model) for the assets included in the prescribed categories.

In relation to Overhead Asset Inspection – All Overhead Assets, the calculation was performed based on Overhead Conductor.

AusNet Electricity Services does not keep individual records for properties including the age of buildings, fences, drainage, switchyard surfaces/access roads, metallic structures and etc. The average ages of Distribution substation-property and all zone substation properties are therefore based on engineering estimates, which are the same values as per the Category Analysis submission for the 2013 Regulatory Year.

Estimated Information

As outlined above, all information provided is considered estimated information. Information is considered management's best estimate, based on the data available.

Asset Quantity Inspected/Maintained

Preparation Methodology:

For the maintenance activities listed in Table H below, the number of assets inspected or maintained was obtained from the Asset Management System based on work orders. The relevant work order data was extracted by selecting the relevant system classifications and work specs. The data was summed to derive the 'Asset Quantity Inspected/Maintained' for the 2014 Regulatory Year. The knowledge of a SME was applied to determine the allocation of work orders into prescribed Maintenance Asset Category. The data extracted was based on an AusNet Electricity Services' financial year basis, not a calendar year basis (due to system limitations).

Basis of Preparation

2014 Regulatory Year

Table H.

MAINTENANCE ACTIVITY	MAINTENANCE ASSET CATEGORY
POLE TOP, OVERHEAD LINE & SERVICE LINE MAINTENANCE	POLE TOPS AND OVERHEAD LINES
	SERVICE LINES
POLE INSPECTION AND TREATMENT	ALL POLES
OVERHEAD ASSET INSPECTION	ALL OVERHEAD ASSETS
DISTRIBUTION SUBSTATION EQUIPMENT & PROPERTY MAINTENANCE	DISTRIBUTION SUBSTATION TRANSFORMERS
	DISTRIBUTION SUBSTATION SWITCHGEAR (WITHIN-SUBSTATIONS AND STAND-ALONE SWITCHGEAR)
	DISTRIBUTION SUBSTATION - PROPERTY

In relation to Distribution Substation Equipment and Property Maintenance, a report of work orders was extracted from the Asset Management system. Where the WO descriptions could be aligned to Transformers and Switchgear categories, the count of these work orders has been reported as the Asset Quantity Inspected/Maintained for these asset categories. The remaining population of work orders has been disclosed as the Quantity Inspected/Maintained for Distribution Substation Property.

As Underground cable assets are not routinely inspected or maintained, 'Asset Quantity Inspected/Maintained' has been reported as zero for the 2014 Regulatory Year.

Table I.

MAINTENANCE ACTIVITY	MAINTENANCE ASSET CATEGORY
ZONE SUBSTATION EQUIPMENT MAINTENANCE	TRANSFORMERS - ZONE SUBSTATION
	TRANSFORMERS - DISTRIBUTION
	TRANSFORMERS - HV
	ZONE SUBSTATION - OTHER EQUIPMENT
	ALL ZONE SUBSTATION PROPERTIES
SCADA & NETWORK CONTROL MAINTENANCE	SCADA & NETWORK CONTROL MAINTENANCE
PROTECTION SYSTEMS MAINTENANCE	RELAYS AND BATTERIES

Information provided has been calculated as the sum of the 'Asset Quantity at Year End' divided by the 'Inspection Cycle' in years and 'Asset Quantity at Year End' divided by the 'Maintenance Cycle' in years.

Basis of Preparation

2014 Regulatory Year

For these maintenance categories, the calculation performed is considered to be more indicative of the quantity inspected and maintained than information from other sources.

The information provided in relation to 'Asset Quantity Inspected/Maintained' is considered estimated information as it has been assumed that actual maintenance performed is aligned with the policy (and no non-routine maintenance is required).

Estimated Information:

As outlined above, all information provided is considered estimated information. Information provided is considered management's best estimate, based on the data available.

Inspection Cycle and Maintenance Cycle

Preparation Methodology:

Table J.

MAINTENANCE ACTIVITY	MAINTENANCE ASSET CATEGORY
POLE TOP, OVERHEAD LINE & SERVICE LINE MAINTENANCE	POLE TOPS AND OVERHEAD LINES
POLE TOP, OVERHEAD LINE & SERVICE LINE MAINTENANCE	SERVICE LINES
POLE INSPECTION AND TREATMENT	ALL POLES
OVERHEAD ASSET INSPECTION	ALL OVERHEAD ASSETS

The inspection cycles in relation to the above asset categories was estimated based on cycles contained in the AusNet Electricity Services' internal policy document 'Asset Inspection Manual'. The estimation was performed by a relevant SME. The Inspection Cycle for Service lines is 3.5 years, which is a proxy for the inspection cycle that aligns with the requirement for Overhead line inspection. In practice, physical inspection and maintenance results from regular analysis of network data that identified through faulty service connections and reports from customers of electricity supply interruption.

In relation to the Maintenance Cycle, the above listed assets are subject to 'condition based' maintenance only. No planned maintenance is undertaken. Based on this, the maintenance cycle has been populated as zero.

Table K.

MAINTENANCE ACTIVITY	MAINTENANCE ASSET CATEGORY
NETWORK UNDERGROUND CABLE MAINTENANCE: BY VOLTAGE	LV - 11 TO 22 KV
	33 KV AND ABOVE

As Underground cable assets are not routinely inspected or maintained, 'Inspection Cycles' and 'Maintenance Cycles' of zero have been reported.

Basis of Preparation

2014 Regulatory Year

Table L.

MAINTENANCE ACTIVITY	MAINTENANCE ASSET CATEGORY
DISTRIBUTION SUBSTATION EQUIPMENT & PROPERTY MAINTENANCE	DISTRIBUTION SUBSTATION TRANSFORMERS
	DISTRIBUTION SUBSTATION SWITCHGEAR (WITHIN-SUBSTATIONS AND STAND-ALONE SWITCHGEAR)
	DISTRIBUTION SUBSTATION - PROPERTY

In relation to Distribution Substation Transformers, the 'Inspection Cycle' reported is based on the inspection cycle of pole mounted transformers as ground mounted transformers are not routinely inspected (unless they are at a key switch location). Pole mounted transformers are inspected as part of the overhead line routine patrol which is performed based on a 3.5 year cycle. The inspection cycle reported is considered management's best estimate of the required data.

Distribution Substation Transformers are not subject to a routine maintenance cycle. Generally, distribution transformers assets are run to failure (failures are pre-empted by load profile review etc). This is supported by the minimal number of work orders for Transformer maintenance. Based on this, the 'Maintenance Cycle' has been reported as zero.

Distribution Substation Switchgear is not routinely inspected. Based on this, the inspection cycle has been reported as zero. Maintenance is conducted on switches that have been identified as 'key switches' according to various timescales. The frequency for gas switch, ring main units maintenance is approximately 10 years based on information sourced from the Q4 Asset Management System. As such, this has been used as the basis for the 'Maintenance Cycle' reported.

The Inspection Cycle of Distribution substation property has been reported as 3.5 years. This is based on the inspection cycle of ground type distribution substations which are inspected as part of the bundled line patrol. They are not subject to a routine maintenance cycle.

Other Equipment is not subject to routine maintenance. Based on this, the Maintenance Cycles have been reported as zero. Inspections are on an ad hoc basis.

Table M.

MAINTENANCE ACTIVITY	MAINTENANCE ASSET CATEGORY
ZONE SUBSTATION EQUIPMENT MAINTENANCE	TRANSFORMERS - ZONE SUBSTATION

The Maintenance Cycle of Transformers was calculated as the average maintenance cycle based on the age of the transformer assets. A 2 year routine maintenance cycle is required for older transformers, newer transformers require a 4 year maintenance cycle and very new transformers require minor maintenance work every two years but major work every 12 years. This information was extracted from the AusNet Electricity Services' internal policy document 'PGI 02-01-04 Summary of Maintenance Intervals Distribution Zone Substations' and is also based on the knowledge of SMEs, asset conditions and manufacturer recommendations. The average cycle has been reported as data is unavailable to determine the cycle with the highest cost activity.

Basis of Preparation

2014 Regulatory Year

The inspection cycles reported for Transformers was based on the frequency of oil sampling which is performed on an annual basis for all transformers. This is based on the knowledge of SMEs, asset conditions and manufacturer recommendations.

Table N.

MAINTENANCE ACTIVITY	MAINTENANCE ASSET CATEGORY
ZONE SUBSTATION EQUIPMENT MAINTENANCE	ZONE SUBSTATION - OTHER EQUIPMENT

The Maintenance Cycle of Zone Substation - Other Equipment has been estimated as the number of routine maintenance performed on circuit breakers and isolators/disconnectors. The majority of the older circuit breakers are on a 4 year maintenance cycle with the remaining circuit breakers on an 8 year cycle. All isolator/disconnector maintenances are on an 8 year cycle. This information was extracted from the AusNet Electricity Services' internal policy document 'PGI 02-01-04 Summary of Maintenance Intervals Distribution Zone Substations' and is also based on the knowledge of SMEs, asset conditions and manufacturer recommendations. The average cycle has been reported as data is unavailable to determine the cycle with the highest cost activity

The inspection cycles reported for Other Equipment is inspected on an annual basis based on information in AusNet Electricity Services' policy 'PGI 02-01-04 Summary of Maintenance Intervals Distribution Zone Substations', the knowledge of SMEs, asset conditions and manufacturer recommendations.

Table O.

MAINTENANCE ACTIVITY	MAINTENANCE ASSET CATEGORY
ZONE SUBSTATION EQUIPMENT MAINTENANCE	ALL ZONE SUBSTATION PROPERTIES

Zone Substation civil inspections are conducted every month/three months, in general, based on information contained in internal policy 'PGI 67-01-01' and the site risk associated with stations. Also the inspections intervals are adjusted based on locations and criticality of the zone substation. The interval could vary from monthly to three monthly and even six monthly in some cases. The average has been estimated as three monthly for every zone substation. The average cycle has been reported as data is unavailable to determine the cycle with the highest cost activity

Maintenance is performed on a 'condition-basis' only. For the purposes of complying with the RIN requirements, the template has been completed as 0.5 years which was calculated as the quantity of assets in age group and expected maintenance works generated due to identified defects during each inspection for each age group.

Table P.

MAINTENANCE ACTIVITY	MAINTENANCE ASSET CATEGORY
SCADA & NETWORK CONTROL MAINTENANCE	SCADA & NETWORK CONTROL MAINTENANCE
PROTECTION SYSTEMS MAINTENANCE	PROTECTION SYSTEMS MAINTENANCE

Data provided was extracted from the AusNet Electricity Services' internal policy document 'PGI-MTCE INTERVALS-DISTN - Summary of Maintenance Intervals – Distribution Zone Substations' as the

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maintenance interval for Protection Schemes. The inspection and maintenance cycles are the same for Protection System assets as inspection and maintenance is performed simultaneously.

Estimated Information:

The data provided are considered management's best estimate, based on the information available.

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

Maintenance expenditure has been provided for each of the prescribed maintenance categories and has been presented in nominal dollars. Expenditure reported relates to Direct Costs only and excludes expenditures on Overheads.

Expenditure incurred for the simultaneous inspection of assets and vegetation has been included in Template 2.7 Vegetation Management and not in Template 2.8 Maintenance. Expenditure has been classified as Routine and Non-routine Maintenance Costs.

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.

Activities to maintain asset condition and/or to maintain the capacity of the distribution system to distribute electricity, and where the activities are:

- routine in nature; and
- 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 the costs of activities that are designed to increase or improve the capacity of the distribution system to distribute electricity, except where the increase or improvement is incidental to the maintenance of the distribution 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 (excluding emergency call-outs). 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 distribution system to distribute 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 distribution system to distribute electricity, except where the increase or improvement is incidental to the maintenance of the distribution system. It also excludes costs associated with asset removal, asset replacement, new asset installation, vegetation management and emergency response.

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Preparation Methodology:

Expenditure on maintenance works (and other non-maintenance costs) is coded to work codes and recorded in AusNet Electricity Services' general ledger and projects ledger. These costs do not include overheads. Expenditure by work code was extracted from the Financial System for the 2014 Regulatory Year. The maintenance work codes were segregated from the non-maintenance work codes.

These maintenance work codes were then subject to review by SMEs and allocated into the prescribed categories. Where necessary, work codes were split into 'task codes', which is a further disaggregation available within work codes (i.e. work codes are comprised of task codes).

It is important to note that the costs presented in the various rows of Table 2.8.2 are not necessarily mutually exclusive of other rows in the same table. For example, 'Network Underground Cable Maintenance' is reported both by voltage and by location, in the same table. To sum these amounts together would double count these maintenance costs. In accordance with guidance from the AER, an additional row ('Duplications') has been included in Table 2.8.2 to remove these duplications.

Estimated Information:

All data provided is considered estimated information.

AusNet Electricity Services does not internally report on Routine and Non-Routine Maintenance costs separately. Based on this, work codes are not set up to provide this level of detail. The allocation between Routine and Non-Routine Maintenance was based on the judgment of subject matter experts familiar with the work codes and consistent with those reported in the Annual Regulatory Accounts.

A degree of judgment was also required to allocate expenditure in each work code to the categories required in the templates. SMEs were again engaged to derive these allocations.

Information provided is considered management's best estimate of the information required, based on the data available.

Basis of Preparation

2014 Regulatory Year

2.9 Emergency Response

Emergency response expenditure relates to costs incurred to restore a failed component to an operational state including all expenditure relating to the work incurred where supply has been interrupted or assets damaged or rendered unsafe by a breakdown, making immediate operations and/or repairs necessary.

Emergency response includes costs of activities primarily directed at maintaining network functionality and for which immediate rectification is necessary. These activities are primarily due to network failure caused by weather events, vandalism, traffic accidents or other physical interference by non-related entities.

Table 2.9.1 - Emergency response expenditure (Opex)

Total Emergency Response Expenditure

Preparation Methodology:

For the 2014 Regulatory Year, Total Emergency Response expenditure was extracted from the Annual Regulatory Accounts. Amounts included in the Annual Regulatory Accounts were based on information sourced from the Financial System. A suitable expert reviewed the data by ledger cost code to determine the percentage to be allocated to Emergency Response expenditure for the 2014 Regulatory Year.

Major Events O&M Expenditure (Major Storm)

A major storm is a tropical cyclone of Category 1 or above as classified by the Australian Bureau of Meteorology. There are no tropical cyclone occurrences in AusNet Electricity Services' network.

Major Event Days O&M Expenditure

Major Event Days ("MEDs") are defined as per the meaning specified in the service target performance incentive scheme ("STPIS").

Preparation Methodology:

The MEDs reported are consistent with the MED days identified for Template 6.3 Sustained Interruptions.

The MED threshold was calculated for the 2014 Regulatory Year from the daily Unplanned System Average Interruption Duration Index ("SAIDI") data between Regulatory Years 2008 and 2012 (5 years) using the annual AER RIN Template MED calculator (most recent applicable). Calculations performed were in accordance with the requirements of the STPIS. The calculated MED threshold was then applied as the threshold for the 2014 Regulatory Year for the purpose of identifying MEDs.

Emergency response expenditure attributable to MEDs is not separately captured in the Financial System. Expenditure for the MEDs 9 February 2014, 24 June 2014, 31 July 2014, and 30 September 2014 has been calculated by reviewing data in the relevant work codes and supporting information from contractor invoices. This process was undertaken for the purpose of collating data for the Annual Regulatory Accounts.

Basis of Preparation

2014 Regulatory Year

Estimated Information:

All financial information provided under 'Major Event Days O&M Expenditure' is considered actual information.

Basis of Preparation

2014 Regulatory Year

2.10 Overheads Expenditure

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

Overhead Expenditure has been disaggregated as Network Overheads and Corporate Overheads.

Overheads in relation to Alternative Control Services have been reported as zero in the Template. This is due to template limitations which preclude Capitalised Alternative Control Services being reported. Without reporting the capitalised component, the Total Alternative Control Services Overhead Expenditure would be inconsistent with the presentation of Standard Control Services Overheads.

Table 2.10.1 – Network Overheads Expenditure

Overhead expenditure has been reported in Table 2.10.1 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 includes expenditure for Network Management, Network Planning, Network Control & Operational Switching, Quality and Standard Functions, Project Governance & Related Functions and Other network operating costs. These expenditure categories are defined below.

- Network Management – expenditure not directly related to any of the functions listed below.
- Network Planning - includes all costs associated with developing visions, strategies, or plans for the development of the network. This includes functions such as demand forecasting, network analysis, preparation of planning documentation, area plans, and the like, as well as management directly associated with these functions.
- Network Control & Operational Switching- includes all costs associated with network control (system operations). This includes functions such as planning and scheduling of switching activities, control room staff, management of field crews, dispatch operators, associated support staff, as well as management directly associated with these functions.
- Quality and Standard Functions - including standards & manuals, asset strategy (other than network planning), compliance, quality of supply, reliability, and network records (e.g. geographical information systems).
- Project Governance & Related Functions - includes all costs associated with the approval and management control of network projects or programs. This includes the cost of functions such as project management offices, works management, project accounting, or project control groups where these costs are not directly charged to specific projects or programs.
- Other network operating costs - including training, OH&S functions, training, network billing and customer service & call centre.

Capitalised overhead is overhead expenditure recognised as part of the cost of an asset, i.e. as capital expenditure.

Basis of Preparation

2014 Regulatory Year

Preparation Methodology:

Using information from the Financial System 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 System by cost ledger code and by division. Where there was a requirement to disaggregate the expenditure categories presented in the Annual Regulatory Accounts into the prescribed categories in Table 2.10.1, an assessment was made by an appropriate expert to determine the categorisations.

In Table 2.10.1, 'Overhead Expenditure before Allocation' (Standard Control Services, Negotiated Services and Unregulated Services) is presented on a gross basis (inclusive of amounts capitalised).

AusNet Electricity Services capitalises Overhead expenditure that is directly attributable to bringing an asset to its intended in-service state. 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. Amounts capitalised have been separately presented under 'Capitalised Overheads' in Table 2.10.1.

Estimated Information:

The data included in Table 2.10.1 is considered estimated information as judgment was made to determine the categorisation of Network Overheads Expenditure. This is deemed management's best estimate based on the data available.

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 Expenditure refers to the provision of corporate support and management services by the corporate office that cannot be directly identified with specific operational activity. Corporate overhead costs include those for executive management, legal and secretariat, human resources, finance, bushfire and Royal Commission costs, Non-network IT support costs and regulatory costs.

Preparation Methodology:

Overheads Expenditure was classified into the prescribed categories in Table 2.10.2 using information used to prepare the Annual Regulatory Accounts (ultimately sourced from the Financial System). In order to perform this allocation, expenditure information was extracted from the Financial System by cost ledger code and by division. Where there was a requirement to disaggregate the expenditure categories presented in the Annual Regulatory Accounts into the prescribed categories in Table 2.10.2, an assessment was made, by an appropriate expert, to determine the categorisations.

In Table 2.10.2, Overhead Expenditure before Allocation (Standard Control Services, Negotiated Services and Unregulated Services) is presented on a gross basis (inclusive of amounts capitalised).

Basis of Preparation

2014 Regulatory Year

AusNet Electricity Services 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.

Amounts capitalised have been separately presented under 'Capitalised Overheads' in Table 2.10.2.

Estimated Information:

The data included in Table 2.10.2 is considered estimated information as judgment was made to determine the categorisation of Corporate Overheads Expenditure. This is deemed management's best estimate based on the data available.

Basis of Preparation

2014 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. Where applicable, labour has been split between tables - for example, one worker may have half of their time allocated to corporate overheads and half of their time to network overheads.

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. For the 2014 Regulatory Year, during January to March the Executive managers were employed by a related party entity. The associated labour costs incurred during this period are reflected as a related party cost and are not a direct labour cost of AusNet Electricity Services. From 1 April 2014, Executive managers were employed by AusNet Electricity Services and the associated labour costs have been

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	reported in Template 2.11.
Senior Manager	<p>A manager responsible for managing multiple managers who each manage work teams and projects within the organisation.</p> <p>For the 2014 Regulatory Year, during January to March, some Senior Managers were employed by a related party entity. The associated labour costs incurred during this period are reflected as a related party cost and are not a direct labour cost of AusNet Electricity Services. From 1 April 2014, these Senior managers were employed by AusNet Electricity Services and the associated labour costs have been reported in Template 2.11.</p>
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. draftsperson, bookkeeper etc.).
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

A report was generated from the Payroll and Timesheeting Systems which provided information in relation to all distribution business employees required to submit timesheets and who charged time to Electricity Distribution 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 ABC surveys, the data was allocated into the Electricity Distribution and Gas Distribution businesses and

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scaled to reflect hours and costs relating to SCS work only (based on the SCS percentage calculated in the Non-Network template). This compiled report is referred to hereafter as “Report 1”.

A report was also generated from the Financial System 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 overheads when the relevant purchase order is receipted. 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 SCS costs only. This report is referred to hereafter as “Report 2”.

Therefore 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 appropriate expert 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.

In relation to 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.

Based on judgments made, all data presented in Table 2.11.1 and 2.11.2 is considered estimated information. All information reported in these tables is considered management’s best estimate, based on the information available.

Average Staffing Level (“ASL”)

One ASL is a full-time equivalent employee undertaking SCS 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 SCS 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 Report 1, the total SCS 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.

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.

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Estimated Information:

For 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 standard hourly rates used. Data provided is management's best estimate of the information required based on the information 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, and 2, after SCS percentages were applied.

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 information contained in Reports 1 and 2 were based on project data whereas the labour information in Template 2.12 was based on Payroll system data (which also had no labour hire data). The adjustment was calculated as the difference between these data sources and was allocated on a pro-rata basis to all employee classifications in Table 2.11.1.

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Given the need to reconcile the Labour template to the Input Tables template, data reported in the Labour template is a combination of SCS and alternative control services.

Estimated Information:

Based on the above, the information provided is considered estimated information. Data provided is management's best estimate of the information required based on the information 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.
- 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 Report 1, information in relation to Productive work hours was included in the report data. 'Average Productive Work Hours per ASL' was calculated as Total Productive (SCS) hours divided by ASLs (engaged in SCS work).

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

Estimated Information:

For labour hire employees, 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). Data provided is management's best estimate of the information required based on the information available.

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).

Basis of Preparation

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Data reported was obtained from the Payroll and Timesheeting Systems based on hours recorded against a stand down time code. Data is considered actual information.

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 SCS work that are 'Ordinary time earnings'.

Preparation Methodology:

For Report 1, 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 Report 2, 'Average productive work hours per ASL – ordinary time' was calculated as 'Total labour cost' divided by the standard rates.

Estimated Information:

For labour hire employees, 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). Data provided is management's best estimate of the information required based on the data available.

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 SCS) 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.

Analysis was performed over the calculated rates. Based on this analysis, instances were noted where adjustments to timesheets were made, however, there were no corresponding adjustments to labour hours. For these instances, the impacts of the timesheet adjustments were removed in order to calculate a reasonable hourly rate. For these instances only, the calculations utilised data on a financial year basis, not a calendar year basis.

Preparation Methodology:

For Report 1, 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 2014 percentage applicable to Victorian employees (where the majority of employees are based). The percentage applied was obtained from the Payroll System.

Basis of Preparation

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For Report 2, 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 is considered 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 standard control services. Overtime hours are paid productive work hours that are not 'Ordinary time earnings'.

Preparation Methodology:

For Report 1, 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 Report 2 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 Report 2, it has been assumed that all labour costs incurred relate to ordinary time only. This is considered management's best estimate based on the data available.

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 SCS) 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.

Analysis was performed over the calculated rates. Based on this analysis, instances were noted where adjustments to timesheets were made, however, there were no corresponding adjustments to labour hours. For these instances, the impacts of the timesheet adjustments were removed in order to calculate a reasonable hourly rate. For these instances only, the calculations utilised data on a financial year basis; not a calendar year basis.

Basis of Preparation

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Preparation Methodology:

For Report 1, this metric was calculated as the productive, overtime labour cost divided by the productive overtime hours. This was then reduced by the 2014 on-cost percentage of on-costs for Victorian employees. The percentage used was extracted from the Payroll System.

For Report 2 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 Report 2), it has been assumed that all labour costs incurred relate to ordinary time only.

The information provided is 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 Standard Control and Alternative Control Services. Data reported excludes overheads and is presented on an 'as incurred' basis. 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.

Direct Costs

Preparation Methodology:

Vegetation Management

The information was sourced from the Financial System. A direct costing report was run based on work codes which provided a split of costs into Direct Materials, Direct Labour, Contract Costs and Other Costs. Work codes do not directly align with the costs included in Template 2.7 Vegetation Management. Based on this, the report generated was used as a proxy for the information required and was proportionately scaled to align with the total Vegetation Management costs reported.

The total Direct Materials, Direct Labour, Contract Costs and Other Costs was split between HBRA and LBRA based on the proportion of total costs in Template 2.7 Vegetation Management allocated to HBRA and LBRA.

Routine and Non-Routine Maintenance

The information was sourced from the Financial System. A report was generated which allocated the costs reported in Template 2.8 Maintenance into the cost categories required.

The total Direct Materials, Direct Labour, Contract Costs and Other Costs were allocated across the prescribed maintenance categories based on the cost profile of the same categories reported in Template 2.8 Maintenance.

Overheads

The information was sourced from the Financial System and the Annual Regulatory Accounts working files. A report was generated which allocated the costs reported in Template 2.10 Overheads into the cost categories required.

Augmentation

A report was generated from the Financial System which provided the cost category breakdown required (at a total Augex level). To populate Template 2.12 Input Tables, this report was required to be allocated

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into the prescribed asset categories. The percentage of costs incurred for each asset category was calculated based on information reported in Table 2.3.4 in Template 2.3 Augex. This percentage was applied to the total cost category report to derive an estimate of the data required.

Connections

The information was sourced from the Financial System. A report was generated which allocated the work codes reported in Template 2.5 Connections into the cost categories required.

A report was unable to be generated from the Financial System for a portion of the costs reported in Template 2.5 Connections as they could not be directly associated with one work code. For these costs, the allocation into Direct Materials, Direct Labour, Contract Costs and Other Costs was determined based on a percentage allocation method using the work code report generated for the other portion of Connection expenditure.

Emergency Response

The information was sourced from the Financial System. A report was generated by the cost categories required for the Emergency Response work codes. As noted in section 2.9 above, a suitable expert reviewed the data by work codes to determine the percentage to be allocated to Emergency Response. The data reported in Template 2.12 Input Tables agrees to the total Emergency Response expenditure reported in Template 2.9 Emergency Response.

Public Lighting

The information was sourced from the Financial System. A report was generated which allocated the costs reported in Template 4.1 Public Lighting into the cost categories required. This is considered actual information.

Metering

In relation to Metering Capex, information was sourced from the Financial System and working files of the Annual Regulatory Accounts. A report was generated which allocated metering project costs into the required cost categories (Direct Materials, Direct Labour, Contract Costs and Other Costs). The percentage allocation of the project costs into the cost categories was applied to total metering Capex.

In relation to Metering Opex, information was sourced from the Financial System. A report was generated which allocated the majority of Opex costs reported in Template 4.2 Metering into the cost categories required. A portion of the Metering Opex costs could not be directly aligned with a system report. For these costs, the judgment of a SME was applied to determine the split of the costs into Direct Materials, Direct Labour, Contract Costs and Other Costs.

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Fee-based Services

The information was sourced from the Financial System. The costs reported in Template 4.3 Fee-based Services were unable to be directly allocated into the required cost categories (Direct Materials, Direct Labour, Contract Costs and Other Costs) due to system limitations. Based on this, a related work code (which is considered a reasonable proxy) was identified and a report was generated in the system which allocated the work code costs into the required cost categories. The percentage allocation of these costs was calculated and applied to the total costs reported in Template 4.3 Fee-based Services to derive an estimate of the required cost category allocations.

Quoted Services

The information was sourced from the Financial System. The costs reported in Template 4.4 Quoted Services were unable to be directly allocated into the required cost categories (Direct Materials, Direct Labour, Contract Costs and Other Costs) due to system limitations. Based on this, a related work code (which is considered a reasonable proxy) was identified and a report was generated in the system which allocated the work code costs into the required cost categories. The percentage allocation of these costs was calculated and applied to the total costs reported in Template 4.4 Quoted Services to derive an estimate of the required cost category allocations.

Replacement

The required information was extracted from the Financial System for direct costs only. Reports were run from the Financial System on an 'as incurred' basis and provided the total cost categories for the 2014 Regulatory Year.

The allocation of the total costs into the Repex asset group categories was determined based on the percentage allocation of costs in Template 2.1 Repex.

Non-Network Expenditure

The information was sourced from the Financial System and working files of the Annual Regulatory Accounts and Template 2.5 Non-Network.

For IT and Communications, Motor Vehicle and Other Non-Network Capex respectively, reports were run from the Financial System which allocated the total relevant workcode costs into the required cost categories. The percentage allocation of these costs were calculated and applied to the total costs reported in Template 2.6 Non-Network to derive an estimate of the required cost category allocations.

For IT and Communications and Motor Vehicle Opex respectively, costs were allocated into cost categories based on reports generated from the Financial System.

Total Property costs were allocated into cost categories based on a report generated from the Financial System. This is considered actual information.

Basis of Preparation

2014 Regulatory Year

Other Non-Network Expenditure, Other Non-Network – Building and Property and Other Non-Network – General Equipment and Furniture categories have been combined and disclosed as ‘Other’ in Template 2.12 Input Tables (as per template requirements).

Estimated Information:

Data provided for Vegetation Management is considered estimated information as the system generated report was used as a proxy for the information required and was proportionately scaled to provide the information required. An allocation of costs was also made to split between HBRA and LBRA.

The Routine and Non-Routine Maintenance information is estimated information based on judgments made to allocate expenditure between Routine and Non-Routine Maintenance in Template 2.8 Maintenance.

The Emergency Response and Overheads information is considered estimated information due to the judgment made to categorise some of the data.

The information provided in relation to Augmentation, Connections, Metering, Fee-based Services, Quoted Services, Replacement, Non-Network - IT and Communications, Non-Network – Motor Vehicles and Other Non-Network Expenditure is considered estimated information due to the percentage allocation applied to categorise the data.

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

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 Electricity Services and a Related Party for the provision of goods and/or 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 Electricity Services.

Related Party Costs (both Opex and Capex) were obtained from the Annual Regulatory Accounts. Using the workings to the Annual Regulatory Accounts, Related Party Costs were allocated into the categories required by a SME. The allocation was based on the nature of the expenses and the counterparty.

In relation to Augmentation and Replacement, the Related Party Costs were allocated across the various Augmentation and Replacement sub-categories based on the percentage allocations applied to the total direct costs.

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

Basis of Preparation

2014 Regulatory Year

Estimated Information:

The allocation of Related Party costs for the Augmentation and Replacement sub-categories was estimated using the same percentage applied to allocate the direct costs.

All Related Party Margin information provided is considered estimated information due to the judgments made in relation to counter party margins. The information provided is considered management's best estimate, based on the data available.

Basis of Preparation

2014 Regulatory Year

4.1 Public lighting

Public lighting information relates to non-contestable, regulated public lighting services only and excludes contestable services and negotiated public lighting services.

Table 4.1.1 – Descriptor Metrics over Current Year

Information contained in the Asset Management Systems as well as the Fixed Asset Register does not distinguish between gifted assets and non-gifted assets. Based on this, the data reported is an estimate of the non-gifted asset information required.

Preparation Methodology:

Information in relation to the 'Current Population of Lights' was obtained from the SDME Asset Management System. System reports as at 26 December 2013 and as at 25 December 2014 were generated providing total light quantities by watts and light type. Based on the knowledge of an SME, the year on year movement in lights is considered to represent gifted assets (e.g. the annual growth in light population is attributable to gifted assets only). On this basis, the 'Current Population of Lights' as at 26 December 2013 is deemed to provide a reasonable estimate of the non-gifted light population as at 31 December 2014.

Estimated Information:

This is considered management's best estimate of the data required based on the information available.

Table 4.1.2 – Descriptor Metrics Annually

Gross public lighting expenditure (before subtracting customer contributions) has been reported, on an 'as incurred' basis, in nominal terms. Work performed by third parties on behalf of AusNet Electricity Services has been included in the metrics reported. Expenditure on public lighting has not been distinguished between standard and alternative control services in this template.

Light Installation – Volume of Works and Expenditure

Light Installation is an installation on a major or minor road for the purpose of establishing new luminaires, including associated components such as bracket and lamp. The installation may also include poles dedicated to public lighting services and underground or overhead cabling dedicated to public lighting services.

Preparation Methodology:

The total of 'Major Road Light Installation Volume' and 'Minor Road Light Installation Volume' was obtained from the AER Economic Benchmarking Report (as the yearly movement in 'Public Lighting Luminaries'). Data reported was ultimately sourced from the SDME system.

The Economic Benchmarking data included both gifted and non-gifted assets. To derive an estimate of the volumes of non-gifted assets, an analysis of the 2014 Regulatory Year public lighting installation costs was performed. The percentage of direct costs without customer contributions as a proportion of total

Basis of Preparation

2014 Regulatory Year

installation costs was calculated. This percentage was applied to the total volumes to estimate non-gifted light installations.

The split of light volumes between Major Road and Minor Road categories was obtained using the 'Current Population of Lights' data used in Table 4.1.1. The increase in lights on a major road and lights on a minor road was calculated based on the 26 December 2013 and 25 December 2014 system reports.

'Number of Poles Installed' has been reported as zero in the 2014 Regulatory Year. Using data obtained from the AER Economic Benchmarking Report (extracted from the SDME system), the yearly movement in 'Public lighting poles' was calculated. Based on the system data, the number of Public Lighting Poles decreased between the 2013 and 2014 Regulatory Years. This decrease is attributed to data cleansing and updating which has occurred in the Asset Systems since the prior Regulatory Year.

'Total Cost' was sourced from information in the Financial System. A report was generated from the system for the 2014 Regulatory Year, using the relevant Public Lighting work code. Costs reported are direct costs only (gross of capital contributions) and are on an 'as incurred' basis.

Estimated Information:

Installation volumes provided is considered estimated information due to the assumptions applied in excluding gifted assets. An estimate was required as gifted assets are not separately captured. The information provided is considered management's best estimate of public lighting pole numbers based on the information available.

Light Replacement - Volume of Works and Expenditure

Preparation Methodology:

The 'Major Road Light Installation Volume' and 'Minor Road Light Installation Volume' (for Light Replacement) data for the 2014 Regulatory Year was obtained from an internal report. This report was compiled using information obtained from the external contractor who manages AusNet Electricity Services' Public Lighting assets.

The 'Number of Poles Installed' was obtained from a report compiled using information obtained from the external contractor who manages AusNet Electricity Services' Public Lighting assets.

'Total Cost' was sourced from information in the Financial System. A report was generated for the 2014 Regulatory Year, using the relevant Public Lighting work code. Costs reported are direct costs only and are on an 'as incurred' basis.

Estimated Information:

Data reported is considered actual information.

Basis of Preparation

2014 Regulatory Year

Light Maintenance - Volume of Works and Expenditure

Preparation Methodology:

The 'Major Road Light Installation Volume' and 'Minor Road Light Installation Volume' – Light Maintenance data for the 2014 Regulatory Year was obtained from an internal report. This report was compiled using information obtained from the external contractor who manages AusNet Electricity Services' Public Lighting assets.

The 'Number of Poles Installed' has been reported as zero as poles are not installed or replaced under maintenance works.

'Total Cost' was obtained from the Financial System for the 2014 Regulatory Year on a work code basis. Costs reported are direct costs only and are on an 'as incurred' basis.

Estimated Information:

Data reported is considered actual information.

Quality of Supply

Preparation Methodology:

Data in relation to the 'Volume of Customer Complaints' was obtained from a report generated in the Issues Management System (IMS). A customer complaint is considered a written or verbal expression of dissatisfaction about an action, or failure to act, or in respect of a product or service offered or provided by an electricity network distributor.

'Mean days to Rectify/Replace Public Lighting Assets' was obtained from data reported in the Annual Regulatory Accounts (Non-Financial RIN) for the 2014 Regulatory Year. The data reported in the Non-Financial RIN is ultimately sourced from the PowerOn System and reflects the mean business days to rectify/replace public lights.

The 'Volume of GSL Breaches' and 'GSL Payments' was obtained from data reported in the Annual Regulatory Accounts (Non-Financial RIN) for the 2014 Regulatory Year. The data reported in the Non-Financial RIN is ultimately sourced from the PowerOn System. In relation to GSLs, data has not been reported where a GSL scheme does not exist for a public lighting service.

Table 4.1.3 – Cost Metrics

Preparation Methodology:

Information reported in relation to the 'Average Unit Cost for Public Lighting Services' was based on data obtained from contract rate schedules. The rate schedules provided the unit rates of light types for each region in AusNet Electricity Services' distribution network.

For Major Lights, the contract rate schedules contain one rate for each of the 3 regions in AusNet Electricity Services' distribution network. The average of the 3 region rates was calculated and assumed to be consistent across all major light types.

Basis of Preparation

2014 Regulatory Year

For Minor lights, contract rate data was available for 3 light types. The average contract rate across the 3 regions for each of these 3 light types was calculated. For the remaining Minor light types in which contract rate data was not available, the average contract rate of the 3 Minor light types was used as proxy and reported as 'Other Minor'.

Note – the average unit costs for Light Installation on major and minor roads does not include the cost of the installation of brackets.

Estimated Information:

For all major road categories, the 'Average Unit Cost' metric is considered estimated information, as one rate has been assumed to reflect the 'Average Unit Cost' for major road light types. This estimation has been used as information in relation to the 'Average Unit Cost' of all major road light types is not available in the contract rate schedules.

For all minor road categories, an 'Other Minor' light type has been included which estimates the 'Average Unit Cost' for all light types where specific rate information was not available in contract rate schedules. This is considered estimated information.

Data provided is management's best estimate, based on the information available.

Basis of Preparation

2014 Regulatory Year

4.2 Metering

Data reported relates to non-contestable, regulated metering services only. This includes work performed by third parties on behalf of AusNet Electricity Services. Data in relation to contestable metering services has not been provided.

Meter type 4 is defined as a remotely read interval meter with communications functionality that is:

- designed to transmit metering data to a remote location for data collection; and
- does not, at any time, require the presence of a person at, or near, the meter for the purposes of data collection or data verification (whether this occurs manually as a walk-by reading or through the use of a vehicle as a close proximity drive-by reading), including, but not limited to, an interval meter that transmits metering data via direct dialup, satellite, the internet, general packet radio service, power line carrier, or any other equivalent technology.

Meter type 4 includes metering assets and services introduced with the Advanced Metering Infrastructure (“AMI”) rollout.

Meter type 5 is defined as a manually read interval meter that records interval energy data, which is not a remotely read interval meter.

Meter type 6 is defined as a manually read accumulation meter which measures and records electrical energy in periods in excess of a trading interval.

Table 4.2.1 – Metering Descriptor Metric

Preparation Methodology:

Information was sourced from the Annual Regulatory Accounts (which was ultimately obtained from SAP). Information reported in the 2014 Regulatory Year is the cumulative population of meters. It is noted that in the 2009 to 2013 Category Analysis RIN, data reported in Table 4.2.1 was the number of meters installed (in the respective Regulatory Years) not the cumulative population of meters.

Data from the Annual Regulatory Accounts was classified into the prescribed categories in Table 4.2.1. ‘Current Transformer Connected’ meters, in the Meter Volume Schedules in the Annual Regulatory Accounts, have been categorised as ‘Current Transformer Connected Meter Population’ in this table. All other meters are classified ‘direct connected’ per the categorisations in Table 4.2.1.

Estimated Information:

No estimation required.

Table 4.2.2 – Cost Metrics (Volume)

Preparation Methodology:

For the Meter Purchase, Meter Replacement and Remote Meter Reading metrics, volume data was obtained from the information in the workings to the Annual Regulatory Accounts (which was ultimately sourced from information contained in SAP).

Basis of Preparation

2014 Regulatory Year

No volumes have been reported in New meter installations, as these are an Alternative Control Service as per the 'Victorian AMI 2012 – 15 Budget and Charges Determination', and thus are reported in Template 4.3 'Fee-based services' as new connections.

In relation to the Scheduled Meter Readings, Special Meter Reading, Meter Maintenance, Meter Testing and Meter Investigations metrics, information was obtained from reports generated in the SAP, PowerOn and Evolution systems. The total volumes of meters were known in the above categories; however the allocation between meter types was required to be estimated for the meter volumes relating to Meter Testing, Meter Investigation, Special Meter Reading and Meter Maintenance. This estimation was performed based on the overall percentage of type 4, 5 and 6 meter volumes.

Estimated Information:

The volume information provided in relation to Meter Testing, Meter Investigation, Special Meter Reading and Meter Maintenance is considered estimated information based on the methodology applied to derive the required information. Estimation was required because the current system does not distinguish between Types 4, 5 and 6 for these categories. Data provided is considered management's best estimate, based on the information available.

Table 4.2.2 – Cost Metrics (Expenditure)

Preparation Methodology:

Meter Operating Expenditure:

In relation to Meter Opex, the total expenditure and the cost per meter type was determined for each of the required service subcategories (based on the process outlined below). Using this information, an estimate of the expenditure by meter type was derived. Amounts are shown exclusive of overheads.

Meter Testing, Meter Investigation, Scheduled Meter Reading, Special Meter Reading, Meter Maintenance and Remote Meter Reading

Meter Operating Expenditure - Total Cost Calculations:

An analysis of cost data extracted from the Financial System was performed to calculate the respective total cost of each service subcategory.

Meter Operating Expenditure - Costs per Meter Type:

Costs were reported across the Meter Types based on a pro rata allocation of the volumes reported for each type.

Other Metering Opex

Other Metering relates to other Opex costs associated with metering which are not separately disclosed in Table 4.2.2. This includes costs for activities in scope as per the AMI Order in Council including program management costs and support costs. As such these costs have been reported

Basis of Preparation

2014 Regulatory Year

against Meter Type 4 and are considered 'actual information' as no estimates were required. Costs were sourced from the workings to the Annual Regulatory Accounts (based on information obtained from the Financial System).

IT Infrastructure Opex

IT Infrastructure Opex relates to costs associated with the AMI rollout. Costs were sourced from the workings to the Annual Regulatory Accounts (based on information obtained from the Financial System).

Communications Infrastructure Opex

Communications Infrastructure Opex relates to costs associated with the AMI rollout. Costs were sourced from the workings to the Annual Regulatory Accounts (based on information obtained from the Financial System).

Estimated Information – Operating Expenditure:

The total costs in relation to Meter Testing, Meter Investigations, Scheduled Meter Reading, Special Meter Reading and Meter Maintenance is considered actual information. However the derived allocation of these costs into the prescribed meter types results in the information provided being estimated information.

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

Meter Capital Expenditure:

Preparation Methodology:

In relation to Meter Capex, the total expenditure and the cost per meter type was determined for each of the required service subcategories (based on the process outlined below). Using this information, an estimate of the expenditure by meter type was derived. Amounts are shown exclusive of overheads.

Meter Purchase

Meter purchase relates to the direct material cost of purchasing the meter for installation or replacement. This includes the cost of delivery to AusNet Electricity Services' store, including testing of equipment and inclusion of spare parts. All meters purchased were in relation to meter type 4. Costs of meters are separately identifiable from installation costs from the Financial System.

Meter purchase costs were all in relation to Type 4 meters. No corresponding volumes are reported as these costs are in relation to the purchase of communication cards and antennas which form part of an overall functioning meter and the purchase of the associated actual meters occurred pre 1 January 2014.

Meter Replacement

Basis of Preparation

2014 Regulatory Year

Meter replacement relates to the replacement cost of a meter and associated equipment at a site with existing metering infrastructure. Meter replacement only includes the installation cost to replace an existing meter as the cost of the replacement meter is disclosed under Meter Purchase. The installation costs were obtained from the Financial System.

IT Infrastructure Capex

IT Infrastructure Capex relates to costs associated with the AMI rollout. Costs were sourced from the workings to the Annual Regulatory Accounts (based on information obtained from the Financial System).

Communications Infrastructure Capex

Communications Infrastructure Capex relates to costs associated with the AMI rollout. Costs were sourced from the workings to the Annual Regulatory Accounts (based on information obtained from the Financial System).

Estimated Information – Capital Expenditure:

No estimation required.

Basis of Preparation

2014 Regulatory Year

4.3 Fee-based Services

Fee-based services are provided for the benefit of individual customers rather than uniformly supplied to all network customers. Some services of this type are homogenous in nature and scope. This means that these services are provided on a fixed fee basis.

The following are the fee-based services that were listed in AusNet Services' annual tariff proposal:

Field Officer Visits

Field Officer visits are provided to customers, retailers and other parties seeking the following range of Services:

- Reconnection (Fuse Insertion New Customer);
- Customer Transfer;
- Fuse Removal (for any purpose as requested by the customer, the customer's retailer, or electrical contractor); and
- General information on the nature of a customer's usage (e.g.: residential, small commercial).

New Connections

AusNet Services provides connection services to customers making connection of a new premise to the network. This service includes the provision of a service cable in areas with overhead supply and making a connection in a pit for customers in underground supply areas or where a customer requests an underground connection in an overhead supply area.

Service Truck Visits

Service Truck visits are provided to customers, retailers and other parties seeking services such as, but not limited to, the following:

- Supply alterations, additions and upgrades to service and installation assets;
- Fuse removal/insertion where supply is greater than 100 amps; and
- Dropping of service lines for safety reasons while work such as the removal of tree limbs is carried out.

Meter Equipment Test

Where metering data is in dispute AusNet Services will conduct an "in situ" test of the meter. Where the meter is found to be faulty, the prepaid charge will be refunded and a replacement meter installed at no charge to the customer. This service also includes the conversion of a standard meter to a solar meter as well as anti-islanding tests for embedded generators.

Expenditure on Fee-based Services has not been distinguished between standard and alternative control service or between Capex and Opex. Direct costs (excluding overheads) have been reported in nominal terms and are presented on an 'as incurred' basis.

Basis of Preparation

2014 Regulatory Year

Table 4.3.1 – Cost Metrics for Fee-based Services

Preparation Methodology:

The financial information was sourced from the Annual Regulatory Accounts and grouped in the categories reported (as listed above) by an appropriate SME.

Information in relation to the volumes of Field Officer Visits, New Connections and Service Truck Visits was calculated using the billing information contained in the workings to the Annual Regulatory Accounts. The reported data was derived by calculating the number of sales invoices and other sales transactions for each of the above fee-based categories in the 2014 Regulatory Year. It has been assumed that one sales invoice/transaction is equal to one fee-based service volume and cost.

In relation to Meter Equipment, the definition includes Meter Tests, Meter Conversions and Embedded Generator Services. Volume data for Meter Tests includes was sourced from the billing information report (contained in the workings to the Annual Regulatory Accounts). It has been assumed that one sales invoice/transaction is equal to one fee-based service volume and cost. For Meter Conversion services, the volume data has been estimated as the number of solar installations in the 2014 Regulatory Year. Information in relation to solar installations was obtained from the SAP system, which is the main inventory and customer management system. It has been assumed that all solar installations relate to Meter Conversions. This is considered a reasonable assumption given that solar panel installations by customers are the main driver for meter conversions. The volume of Embedded Generator fee-based services was estimated as the total number of sales invoices included in the relevant general ledger account in the Financial System. It has been assumed that one sales invoice/transaction is equal to one fee-based service volume.

Estimated Information:

The financial information is considered estimated information in accordance with the process to calculate the figure in the Annual Regulatory Accounts, as it is not separately captured in the Financial System. The exception is New Connections, which is directly obtained from the Financial System, therefore considered actual information.

The non-financial information presented in Table 4.3.1 is considered estimated information based on the preparation approach outlined above. This is considered management's best estimate of the required data based on the information available.

Basis of Preparation

2014 Regulatory Year

4.4 Quoted Services

Quoted Services are services for which costs are recovered through quoted prices as the nature and scope of these services are specific to individual customers' needs and vary from customer to customer.

AusNet Services provides various Quoted Services including emergency works where customer is at fault and immediate action needs to be taken by the Distribution Network Service Provider, supply enhancement at the customer's request, auditing of design and construction, and specification and design enquiry.

Expenditure on Quoted Services has not been distinguished between standard and alternative control services or between Capex and Opex. Direct costs (excluding overheads) have been reported in nominal terms and are presented on an 'as incurred' basis.

Table 4.4.1 – Cost Metrics for Quoted Services

Preparation Methodology:

The financial information was sourced directly from the Annual Regulatory Accounts.

Information in relation to volumes of quoted services was obtained from the workings to the Annual Regulatory Accounts (based on information sourced from the Financial System). The reported data was derived by calculating the number of sales invoices and other sales transactions for recoverable works in the 2014 Regulatory Year. It has been assumed that one sales invoice/transaction is equal to one quoted service volume and cost.

Estimated Information:

The financial information is considered estimated information in accordance with the process to calculate the figure in the Annual Regulatory Accounts, as it is not separately captured in the Financial System.

The non-financial information presented in Table 4.4.1 is considered estimated information based on the preparation approach outlined above. This is considered management's best estimate of the required data based on the information available.

Basis of Preparation

2014 Regulatory Year

5.2 Asset age profile

The age profile for assets currently in commission has been provided for each prescribed asset category. Data reported corresponds with the 2014 historical replacement volumes and cost data in Template 2.2 Repex.

Economic life is the estimated period after installation of the new asset during which the asset will be capable of delivering the equivalent effective service as it intended to 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.

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

Table 5.2.1 – Asset Age Profile

Preparation Methodology:

Information was sourced from the Asset Management Systems. The information extracted from the Asset Management Systems is current data as at February 2015. This is due to the Asset Management Systems being 'live' databases. System limitations prevent asset reports being run as at specific (historic) points in time. Additionally, it should be noted that the Asset Management system data has been subject to data cleansing and updating since the prior Regulatory Year and is subject to continuing reviews. Based on this, the age profile extracted is an improved data set, compared with the previous Category Analysis submission.

AusNet Electricity Services' asset categories do not directly align with the prescribed AER asset categories. In order to populate Table 5.2.1, engineering judgment has been applied to align assets in the required categorisations. Where AusNet Electricity Services identified assets that are significantly different to the asset categories prescribed by AER, 'Other' categories have been included in Table 5.2.1 with a suitable description.

The quantity of assets included in age profile for each year is the number of assets with an installation date in that year. Assets with no installation date in the Maximo, Q4 and SDME Asset Management Systems or an installation date of 1901 (which is a default for an unknown installation date) have been included in the age profile in the year (1923/24) in Table 5.2.1. It is noted that timing issues with updates of asset data may result in assets that were installed in 2014 not being updated to the system until 2015 and therefore may not be included in the asset quantities reported in this RIN.

In relation to the Overhead Conductors asset group, the installation dates per the system were deemed unreliable as they did not provide a reasonable age profile of the asset group. Based on this, the 'Date Acquired' (as per the Asset Management System) has been used as a proxy for the installation date for all Regulatory Years - except the 2013/14 Regulatory Year (per the Template classification) and the 1923/24 Regulatory Year. Following a review of the system data by a SME, it was identified that not all Overhead Conductor installations in the 2014 Regulatory Year had not been assigned a 'Date Acquired' in the Asset Management System. Based on this, the 'Date Installed' quantities for the 2013/14

Basis of Preparation

2014 Regulatory Year

Regulatory Year were used as a proxy for the data required and a corresponding quantity was removed from the 1923/24 Regulatory Year. This is a management estimate and is considered to provide the best estimate of the data required, given the information available.

The Economic Life and Standard Deviation for each asset has been based on asset lives included in the 2012 Replacement Expenditure model (model template provided by the AER). The asset life data in the 2012 Replacement Expenditure Model were developed based on engineering judgment from SMEs within the business. The asset categories in the 2012 Repex model have been aligned with the AER asset categories to populate the required Economic Life information.

For the Overhead Conductors asset category, the Economic Life was obtained from the internal AusNet Electricity Services policy document Asset Management Strategy Document 'AMS 20-52 Conductor' due to limitations in the system data for Overhead Conductors (as outlined above).

In relation to data provided for the Service Lines Asset Group, a different preparation methodology was performed due to limitations in data availability. For the 2014 Regulatory Year, Service Lines comprise two components - Overhead Service Lines and Underground Service Lines. It is noted that in the previous Category Analysis submission, this categorisation did not include Underground Service Lines.

Overhead Service Lines data is currently collected in two Asset Management Systems (SDME and Q4). Q4 contains the total number of Overhead Service Connections but does not include installation dates. SDME contains installation dates and average total length of Overhead Service Cable but currently does not include all of the assets in this category. To derive an estimate of the Overhead Service Lines age profile, total quantity of Service Connections was extracted from Q4. This was multiplied by the total quantity by the 'Average length per Service' based on data from SDME. This provided a total length of service cable in kilometres. Using the installation dates from SDME, an asset age profile was created with a total length to match the amount calculated above.

For Underground Service Lines, the age profile was extracted from SDME, which is an Asset Management System. The summation of Overhead Service Lines and Underground Service Lines age profiles (per year) has been reported in the Service Lines age profile.

Within the total Service Lines category, the '< = 11 kV ; Residential; Simple Type' and '< = 11 kV; Commercial & Industrial; Simple Type' asset categories were calculated based on a percentage split in accordance with the number of customers in the respective asset categories described.

It is noted that in the 2013 AER Category Analysis submission, additional rows were inserted by AusNet Services in the Poles asset grouping to capture data in relation to cross arms. Due to limitations in the 2014 Category Analysis template, corresponding additional rows are unable to be added. Based on this, the Cross Arm data has been summed and reported as 'Other' in the Poles asset grouping category. For this 'Other' asset category, the Installed Assets is the total quantity of pole top structures, whereas the Economic Life and Standard Deviation are the weighted average values of all pole top structures associated with its voltage levels.

In relation to the Switchgear asset grouping, in the prior year, asset categories were included to separately capture '> 11 kV & < = 22 kV; FUSE' and '> 33 kV & < = 66 kV; FUSE'. These categories are

Basis of Preparation

2014 Regulatory Year

not available in the 2014 Asset Age Template. Due to this, AusNet Services has grouped the data as '> 11 kV & < = 22 kV; SWITCH' and '> 33 kV & < = 66 kV; SWITCH' respectively.

Similarly, in relation to the 'SCADA, Network Control and Protection Systems' asset group, in the prior year asset categories were included to separately capture 'Relays' and 'Batteries'. In the 2014 Regulatory Year, these assets have been grouped in Field Devices.

Estimated Information:

Data provided in Table 5.2.1 is considered estimated information.

The information extracted from the Asset Management Systems is current data as at February 2015. This is due to the Asset Management Systems being 'live' databases. System limitations prevent asset reports being run as at specific (historic) points in time.

As outlined above, estimates and assumptions have been applied to align the AusNet Electricity Services asset categories (per the Asset Management Systems) with the prescribed AER asset categories. Additionally, the Economic Life for each asset was estimated based on information in the 2012 Replacement Expenditure model (model template provided by the AER). Assumptions were applied to align the categories in this model into the prescribed categories.

The information provided in Table 5.2.1 is considered management's best estimate of the data required based on the information available.

Basis of Preparation

2014 Regulatory Year

5.3 MD - Network level

Table 5.3.1 – Raw and Weather Corrected Coincident Maximum Demand at Network Level (Summed at Transmission Connection Point)

Raw Network Coincident Maximum Demand, Date MD Occurred, Half Hour Time Period MD Occurred, Winter/ Summer Peaking and Embedded Generation

Maximum demand has the meaning prescribed in the National Electricity Rules. Maximum demand refers to 30 minute demand unless otherwise indicated.

Preparation Methodology:

Information was sourced from the National Energy Market Meters (Terminal Station, Boundary and Generator Meters) by Network Level. The network meters have been reconciled with AEMO and AusNet Protection department to ensure all applicable meters are accounted for in calculating the Maximum Demand on the network.

Daily coincidental maximum demand data was extracted for the network for all days in the 2014 Regulatory Year. Using this information, the maximum demand day was identified. Embedded Generation was also calculated using market meters and is the measure of generation into the network coincidental to the Network Peak, embedded generators include all sub transmission and distribution connected market meters (i.e. does not include small solar customers).

Using information described above, the yearly attributes at the time of peak (MW, MVA, Date, Time, Peak) was identified. This information was reported in Table 5.3.1.

Estimated Information:

Information provided is considered actual information, no estimates or assumptions have been applied.

Weather Corrected Coincident Maximum Demand

AusNet Electricity Services does not calculate or maintain historical weather corrected coincident maximum demand data. On this basis the 'Weather Corrected' data cells have been left blank.

Basis of Preparation

2014 Regulatory Year

5.4 MD & utilisation - spatial

Table 5.4.1 – Non-coincident Maximum Demand

Sub-transmission Substations

Non-coincident maximum demand has not been reported at the sub-transmission substation level as AusNet Electricity Services does not own any sub-transmission substations above 33kv. This is consistent with the definition in the RIN which defines subtransmission substations as “A substation on a distribution network that transforms any voltage to levels above 33 kV.”

Zone Substation

Non-coincident maximum demand has been reported at the zone substation level.

Substation Rating

Substation rating refers to normal summer cyclic rating (“SCR”).

Preparation Methodology:

Substation rating information was sourced from AusNet Services’ Asset Management System and internal document number AMS 20-101 (Zone Substation Transformer Cyclic Ratings), last updated in July 2014. Substation output ratings are derived by using an excel-based program which takes into account the transformers’ cyclic rating, impedance, minimum tap, load power factor and available capacitor bank in the station.

Estimated Information:

Information provided is considered actual information, no estimates or assumptions have been applied.

Raw Adjusted Maximum Demand (MW), Raw Adjusted Maximum Demand (MVA), Date MD Occurred, Half Hour Time Period MD Occurred, and Winter/ Summer Peaking

Preparation Methodology:

Information was sourced from the OSI Pi (Scada) system.

A list of all zone substations and feeders was compiled based on a combination of the latest round of zone substation forecasts (2014) and the 2011-15 EDPR submission, to ensure all zone substations in the reporting period were accounted for. Data reported at the zone substation level excludes 22kV Feeders that are supplied from Terminal Stations, all Embedded Generation and 66kV connected customers.

Daily non-coincidental MVA maximum demand data was extracted from Scada for each site for the entire period. Using this information, the maximum demand day at each substation was identified. The coincidental attributes at the time of peak (MW, MVA, Date, Time) were determined for each zone substation.

Basis of Preparation

2014 Regulatory Year

30 minute maximum demand data was extracted from Scada for each zone substation, providing daily coincidental maximum demand information (date, time). Daily coincidental maximum demand data was extracted from Scada for each site for the entire period. Using this information, the maximum MVA and the attributes at the time of peak (MW, MVA) were determined for each zone substation.

Estimated Information:

Information provided is considered actual information, no estimates or assumptions have been applied.

Weather Corrected Coincident Maximum Demand

AusNet Electricity Services does not calculate weather corrected maximum demand. On this basis the 'Weather Corrected' data cells have been left blank for all zone substations.

Basis of Preparation

2014 Regulatory Year

6.3 Sustained Interruptions

A sustained interruption is any loss of electricity supply to a customer associated with an outage of any part of the electricity supply network, including generation facilities and transmission networks, of more than 0.5 seconds, including outages affecting a single premise. The customer interruption starts when it is recorded by equipment such as SCADA or, where such equipment does not exist, at the time of the first customer call relating to the network outage. An interruption may be planned or unplanned, momentary or sustained. It does not include subsequent interruptions caused by network switching during fault finding. An interruption ends when supply is again generally available to the customer.

Both planned and unplanned interruptions to supply have been reported. A planned supply interruption is where AusNet Electricity Services planned the interruption to supply and customers were notified in advance.

An unplanned interruption is an interruption due to an unplanned event. An unplanned event is an event that causes an interruption where the customer has not been given the required notice of the interruption or where the customer has not requested the outage.

The following events may be excluded when calculating the revenue increment or decrement under the service target performance incentive scheme (“STPIS”) when an interruption on the distribution network has not already occurred or is concurrently occurring at the same time:

- a) load shedding due to a generation shortfall
- b) automatic load shedding due to the operation of under frequency relays following the occurrence of a power system under-frequency condition
- c) load shedding at the direction of the Australian Energy Market Operator (“AEMO”) or a system operator
- d) load interruptions caused by a failure of the shared transmission network
- e) load interruptions caused by a failure of transmission connection assets except where the interruptions were due to inadequate planning of transmission connections and the DNSP is responsible for transmission connection planning
- f) load interruptions caused by the exercise of any obligation, right or discretion imposed upon or provided for under jurisdictional electricity legislation or national electricity legislation.

An event may also be excluded where daily unplanned SAIDI for AusNet Electricity Services’ distribution network exceeds the major event day boundary, as set out in the STPIS scheme, when the event has not been excluded under clause 3.3(a) of the AER STPIS guidelines.

For the purpose of completing Table 6.3.1 Sustained Interruptions to Supply, the following definitions were applied:

Feeder Classification	<p>CBD feeder: a feeder supplying predominantly commercial, high-rise buildings, supplied by a predominantly underground distribution network containing significant interconnection and redundancy when compared to urban areas.</p> <p>Urban feeder: a feeder, which is not a CBD feeder, with actual maximum demand over the reporting period per total feeder route length greater than</p>
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Basis of Preparation

2014 Regulatory Year

	0.3 MVA/km. Short rural feeder: a feeder which is not a CBD or urban feeder with a total feeder route length less than 200 km. Long rural feeder: a feeder which is not a CBD or urban feeder with a total feeder route length greater than 200 km.
Effect on unplanned SAIDI (by feeder classification)	The sum of the duration of each unplanned sustained customer Interruption in minutes divided by the total number of distribution customers. USAIDI excludes momentary interruptions (one minute or less).
Effect on unplanned SAIFI (by feeder classification)	The total number of unplanned sustained customer interruptions divided by the total number of distribution customers. Unplanned SAIFI excludes momentary interruptions (one minute or less). SAIFI is expressed per 0.01 interruptions.
MED ("Major Event Days")	Has the same meaning as specified in the STPIS scheme.

Table 6.3.1 - Sustained interruptions to supplyPreparation Methodology:

The Network Outage Summary report was extracted from the Poweron Fusion system. From this report, Unplanned outage data was obtained by Incident Reference Number.

For each unique Incident Reference Number, the Minutes-Off Supply ("MOS") and Number of Customers Interrupted ("Cust-Int") were aggregated. Each record identifies the feeder name and outage cause.

Using the feeder name, and with reference to the 2014 AER RIN Annual Reliability Reports, the feeder classification information was added to each outage record. Feeder classification information is maintained in the Poweron Fusion reports.

For each record, the outage cause (per the system data) was aligned with the options in Table 6.3.1 'Reason for Interruption' and 'Detailed Reason for Interruption'. Where the 'Reason for Interruption' was unknown, this has been identified and the 'Detailed Reason for Interruption' has been listed as 'Unknown'. In relation to interruptions caused by vegetation, the 'Detailed Reason for Interruption' is not known as this level of information was not captured in the system and has not been previously reported. Based on this, the 'Detailed Reason for Interruption' has been 'black out' (as '-') for vegetation related interruptions to supply. All other 'black outs' under 'Detailed Reason for Interruption' are in accordance with the template guidelines prescribed by the AER.

Using the data described above, the following calculations were performed for each outage record -

- Average Duration = MOS / Cust-Int
- USAIDI = MOS / Number of Customers by Feeder Classification
- USAIFI = Cust-Int / Number of Customers by Feeder Classification

The 'Number of Customers' by feeder classification was obtained from the AER RIN Annual Performance Reports and was calculated as (January 2014 count + January 2015 count)/2.

Basis of Preparation

2014 Regulatory Year

In relation to MEDs, the MED threshold was calculated for the 2014 Regulatory Year from the daily Unplanned SAIDI data between Regulatory Years 2009 and 2013 (5 years) using the annual AER RIN Template MED calculator. Calculations performed were in accordance with the requirements of the STPIS. The calculated MED threshold was then applied as the threshold for the 2014 Regulatory Year for the purpose of identifying MEDs.

Estimated Information:

Information reported is considered actual information. No estimates were required.