Annual Information Order 2024-25

Basis of Preparation

November 2025

Essential Energy

essentialenergy.com.au

Worksheet: 2.1 Expenditure Summary

Table 2.1.1 - Standard Control Services Capex by Purpose

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

There is no use of estimates.

The data is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

This table is a summary of Capex as shown in AR RIO Tables but separates overhead components using resource categories. Data has been sourced from Oracle ERP, including the GL module, project sub-ledger and the Asset Management module. It is categorised by regulatory segment. Refer to the BOP for the AR RIO Capex schedules 8.2.1 for further details.

METHODOLOGY [SECTION 5.2.1 (B)]

The data model used for overall capex reporting has been applied with capitalised overhead costs separated, based on the resource categories included in the transactional data. Refer to the BOP for the AR RIO Capex schedules 8.2.1 for further details. 2.1.1 includes customer contributions and gifted assets consistent with AR 8.2.1.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

No changes from the previous year.

Worksheet: 2.1 Expenditure Summary

Table 2.1.2 - Standard Control Services Opex by Purpose

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

There is no use of estimates.

The data is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

This table was derived using data sourced from the Oracle ERP General Ledger.

METHODOLOGY [SECTION 5.2.1 (B)]

The process for operating expenditure is the same as prior years. As this is a summary table, the source of the data is the same as Table 8.4 Opex. The first step in the process involves the extraction of 2024-25 ERP projects subledger data from the Finance Golden Dataset (FDS) by regulatory segment and project type. For direct expenditure, categorisation across regulatory segments is based on the regulatory segment assigned against projects. For indirect expenditure, costs are allocated across regulatory segments based on the AER approved Cost Allocation Method.

Non-network and Export services are not separately disclosed, with the figures embedded in the Network and Corporate overheads (to avoid double counting). Please refer to Tables 2.6 and 3.9 for this data.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

Table 2.1.2 has changed slightly from prior year, with no balancing item included. This was used to avoid double counting of overheads with 2.1.2 requiring both non-network expenditure and corporate and network overheads. AER has confirmed we must report expenditure against a prescribed purpose on a mutually exclusive and collectively exhaustive basis.

Worksheet: 2.1 Expenditure Summary

Table 2.1.3 - Alternative Control Services Capex

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

There is no use of estimates.

The data is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

This table is a summary of Capex as shown in AR RIO Tables but separates overhead components using resource categories. Data has been sourced from Oracle ERP, including the GL module, project sub-ledger and the Asset Management module. It is categorised by regulatory segment. Refer to the BOP for the AR RIO Capex schedules 8.2.1 for further details.

METHODOLOGY [SECTION 5.2.1 (B)]

The data model used for overall capex reporting has been applied with capitalised overhead costs separated, based on the resource categories included in the transactional data. Refer to the BOP for the AR RIO Capex schedules 8.2.1 for further details.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

No changes from the previous year.

Worksheet: 2.1 Expenditure Summary

Table 2.1.4 - Alternative Control Services Opex

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

There is no use of estimates.

The data is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

This table was derived using data sourced from the Oracle ERP General Ledger.

METHODOLOGY [SECTION 5.2.1 (B)]

The process for operating expenditure is the same as prior years. As this is a summary table, the source of the data is the same as Table 8.4 Opex. The first step in the process involves the extraction of 2024-25 ERP projects subledger data from the Finance Golden Dataset (FDS) by regulatory segment and project type. For direct expenditure, categorisation across regulatory segments is based on the regulatory segment assigned against projects. For indirect expenditure, costs are allocated across regulatory segments based on the AER approved Cost Allocation Method.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

No changes from the previous year.

Worksheet: 2.2 Repex

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

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

All non-financial units are actual.

Although most expenditure information is based on actual data some of the data splits and disaggregation of totals has been estimated. The information required for the asset categorisation in this table does not exist in the ERP or Copperleaf project source data. In addition, ERP and the C55 are not linked to the asset management datasets in WACS which are required to complete this table. Therefore, the splits of financial information for asset types have been estimated, with the exception of public lighting SCADA related expenditure which is actual and sourced from ERP.

Where source data is not available to categories Activities\Assets ie Unknowns, data is smeared across the known records

Replacement expenditure, at an aggregate level, is considered to be reliable as it has been sourced from the Annual Regulatory Accounts. Apportionment of expenditure into the different categories requested by the AER is based on assumptions and estimates so caution should be used when using this for benchmarking or decision-making purposes.

Replacement data for the current year is exclusively sourced from our AMS system WACS.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Several asset management and planning systems and business reports have been used. These systems are listed below along with the asset group to which the data has been applied.

SOURCE SYSTEM	ASSET GROUPS	USED FOR		
		Expenditure	Asset Replacements	Asset Failures
ERP	All	Yes	No	No
WACS	All	No	Yes	No
Network Asset Failure report (A DB merger of WASP, eMWL & Pole Failure DB)	Staked Poles, Poles, Pole Top Structures, OH Conductors, UG Cables, Service Lines, Transformers, Switchgear	No	No	Yes
AMS	SCADA	No	No	Yes
ERP	Load Control (FI) Receiver Relays	No	Yes	Yes
SCADA by Region Spreadsheet	SCADA	No	Yes	No
Relay Failures MASTER spreadsheet	Protection	No	No	Yes
Protection Project Database	Protection	No	Yes	No

METHODOLOGY [SECTION 5.2.1 (B)]

All Expenditure Categories

Actual expenditure information was sourced from ERP using project accounts and applied directly to the public lighting Luminaires and Brackets related Asset Categories in Table 2.2.1.

The remaining asset categories in Table 2.2.1 do not specifically exist in ERP project source data, therefore the amounts were apportioned to the correct asset category using a model that:

- Apportions the asset group amounts to the respective asset categories based on estimated replacement capital unit rates used in previous years.

All Asset Replacements

Asset replacement units were sourced from completed Work Activity records in the WACS database except SCADA, Load control, Protection, zone substations group replacements which are from a variety of sources as above.

Activity records were allocated to Repex using several methods in priority of:

- WACS Activity Framework
- ERP Financial Mapping

All Asset Failures

Failure numbers are based on failure service history data record within WACS which were Function failures and the failure is tagged as Unassisted in the Network Asset Failure Report (NAFR).

For SCADA, zone substation assets the sources of failure data are above.

Only Functional[1] failures with Unassisted causes have been included in accordance with the *Asset failure (REPEX)* definition[2] outlined in the Glossary attached to the Annual Information Orders published by the AER on 5 April 2024. The Primary Cause recorded against each Functional failure determines whether if it is Unassisted or Assisted.

Poles

Staking Wooden Poles (Replacements)

- Replacement data has been based on a count of the following completed WACS work tasks in REPEX projects:

  "Pole reinforcement – install"

  "Pole reinforcement – replace"

Poles (Replacements)

- Replacement data has been based on a count of the following completed WACS work tasks in Repex projects and did not have a pole stake component at the time of the replacement:

  "Pole – Install"

  "Pole – replace"

  "Pole – upgrade"

1 Functional Failure - Is the term used to describe an asset that is no longer performing its primary purpose and/or role in the network.

2 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. Excludes planned interruptions.

- Dedicated streetlight poles and columns were excluded from the count and included in Public Lighting
- Private poles have been excluded except for those managed and maintained by Essential Energy.
- Bollard/Stay pole replacements are included in Other Poles group category.
- If Pole Material or Voltage = "Unknown", then smear across replacement profile

Poles (Failures)

- Includes any Unassisted pole failure of a pole managed and maintained by Essential Energy that did not have a stake component at the time of failure.
- Data has been sourced from the NAFR. The data is populated from several different sources and audited monthly.
- Dedicated streetlight poles or columns and private poles have been excluded from the count.

Pole Top Structures

Pole Top (Replacements)

- Replacement data has been based on a count of the following completed WACS work tasks in Repex projects:

  "Crossarm – Replace/Upgrade/Install"

  "Span Support – Replace/Upgrade/Install"

  "Poletop – Upgrade"

  "Stay Replace/Upgrade/Install"

Pole Top (Failures)

Includes any Unassisted of failure of a critical structural support holding overhead conductors atop a pole i.e. crossarm, steel brackets, vertical delta brace construction etc.

Private pole top failures have been excluded except for those managed and maintained by Essential Energy.

Overhead Conductors & Underground Cables

Conductor/Cables (Replacements)

- Replacement data has been based on a count of the following completed WACS work tasks in REPEX projects:

  "Conductor – Replace/Upgrade/Install"

  "Cable – Upgrade/Install"

  "Cable - Replace Entire Length"

  "Cable - Replace Section"

Conductor/Cable (Failures)

- Includes any Unassisted of failure of a span/cable managed and maintained by Essential Energy
- Failure data has been based on a count (units, not km) of all NAFR records representing Unassisted failure records of the conductor or cable body or critical inline joins and terminations that form part of the circuit.

- Private conductor and cable failures have been excluded except for those managed and maintained by Essential Energy.

Service Lines

Service Line (Replacements)

> Replacement data has been based on a count of the following completed WACS work tasks in Repex projects:

"LV service conductor – replace"

"Service – Programmed Replacement"

- Essential Energy only classifies < 11 kV voltage lines connected to customers as services.

Service Line (Failures)

- Includes any Unassisted of failure of services managed and maintained by Essential Energy
- Failure data has been based on a count (units, not km) of all NAFR records representing Unassisted service failures, both overhead and underground types.
- Private service failures have been excluded except for those managed and maintained by Essential Energy.

Transformers

Transformer (Replacements)

- The following relates to the smaller category transformers known as "distribution" transformers in Essential Energy. For the larger category transformer replacements, refer to the Zone Substation section.
- Replacements have been based on a count of the following completed WACS work tasks in Repex projects:

"Transformer – Replace/Upgrade/Install "

"Sub (Chamber) - upgrade"

"Sub (ground mounted) - upgrade"

"Sub (padmount) - Replace/Upgrade/Install"

"Sub (pole mounted) - Replace/Upgrade/Install "

"Regulator - Replace/Upgrade/Install"

- Unknown distribution substation types have been smeared across the profile.
- Regulator Transformers have been included in *Other* category.

Transformer (Failures)

- Includes any Unassisted of failure of transformers/regulators managed and maintained by Essential Energy
- Failure data has been based on a count of all NAFR records representing Unassisted transformer tank only failures.
- Private transformer failures have been excluded except for those managed and maintained by Essential Energy.

Switchgear

Switchgear (Replacements)

- Replacement data has been based on a count of the following completed WACS work tasks in Repex projects:

  "ABS – Replace/Upgrade with Gas Switch"
  "Circuit Breaker - Replace/Upgrade/Install"
  "Earth Switch - Replace/Upgrade/Install"
  "Links – Replace/Upgrade/Install"
  "Fuse – Replace/Upgrade/Install"
  "HV/LV Fuse Carrier Replace"
  "Load break switch – Replace/Upgrade/Install"
  "Recloser – Replace/Upgrade/Install"
  "Sectionaliser – Replace/Upgrade/Install"

Switchgear (Failures)

- Includes any Unassisted of failure of switches managed and maintained by Essential Energy
- Failure data has been based on a count of all NAFR records representing Unassisted switchgear assembly failures only.
- Private switchgears failures have been excluded except for those managed and maintained by Essential Energy.

PUBLIC LIGHTING

DATA REPORTING QUALITY

This data has been extracted from actual WACS inventory and finance expenditure data. However, whilst actual data is used, assumptions have been made to split the data into certain categories. Furthermore, the split between energy-efficient and non-efficient, as well as major and minor road assets, has been undertaken on a pro-rata basis in terms of asset volumes replaced, not actual expenditure data for each asset on our network. This is because the number of assets on our network, and variability in costs with each individual replacement activity make an actual split of the data virtually impossible. As such, although this data is considered reliable, caution should be applied if using this data for benchmarking or decision-making purposes.

ASSUMPTIONS

- Streetlight assets include luminaires, brackets and dedicated streetlight poles/columns (i.e. excluding pole/columns that also deliver electricity to the network). There are no lamp assets held following the rollout of LED lights onto our network, as well as any "other" public lighting assets.
- The SQLs assign each activity as a FAILURE based on the associated CAUSE CODE. As such, third party damage impacts are *not* classified as asset failures, whilst causes such as DETERIORATION or CORROSION are. The accuracy of this information relies on the accuracy of the input data.
- An asset was classified as a MAJOR ROAD asset from the presence of a luminaire with a P/L light code listed in the Night Patrol PL codes document (see list below). This document reports the major road light types that night patrols are conducted on and aligns with the Operational Standard: Public Lighting Maintenance (CEOS5126.02) – 14th February 2025. All other P/L light codes not listed below were, by default, assigned as MINOR ROAD assets.

Night Patrol P/L Load Table Codes	
HPS0090 - High Pressure Sodium 150	LED0214 - GE Area Lighter Flood Light 150W
HPS0100 - High Pressure Sodium 220	LED0218 - GE Area Lighter Flood Light 240W
HPS0110 - High Pressure Sodium 250	LED0222 - Sirkel Catenary 100W
HPS0120 - High Pressure Sodium 2x250	LED0223 - IGNIS 1 LED 76W 4000K
HPS0160 - High Pressure Sodium 360	LED0240 - GE EVOLVE CAT V LEOPARD 204W
HPS0170 - High Pressure Sodium 400	LED0244 - GE EVOLVE CAT V LEOPARD 122W
HPS0190 - High Pressure Sodium 3x400	LED0268 - 80W Parkville Mk2 4K TOP ENTRY
HPS0250 - High Pressure Sodium 1000	LED0270 - 80W Parkville Mk2 4K SIDE ENTRY
LED0009 - Pecan LED 42w	LED0276 - 150W Parkville Mk2 4K TOP ENTRY
LED0011 - Aldridge LED 105W	LED0293 - GE 80W LED HID Lamp in dec. luminaire
LED0012 - Aldridge LED 198W - Std Distribution	LED0298 - 110W Sylvania SASTA Maximus
LED0013 - Aldridge LED 198W - Forward Distribution	LED0299 - 175W Aldridge VLED Mark II 4000K
LED0014 - Aldridge LED 298W - Std Distribution	LED0500 - HBW 85W LED
LED0090 - LED90	LED0501 - HBW 141W LED
LED0117 - Gerard RoadLED Midi LED 50W 4000K	LPS0050 - Low Pressure Sodium 135
LED0121 - Gerard RoadLED Midi LED 80W 4000K	LPS0060 - Low Pressure Sodium 150
LED0123 - Gerard 80W 4000K + Zhaga	MHC0020 - Metal Hallide (Constant Ctrl Gear) 250
LED0124 - Gerard 80W 4000K + Zhaga Connected	MHC0030 - Metal Hallide (Constant Ctrl Gear) 400
LED0125 - Gerard RoadLED LED 150W 4000K	MHR0010 - Metal Hallide (Reactor Ctrl Gear) 70
LED0127 - Gerard 150W 4000K + Zhaga	MHR0020 - Metal Hallide (Reactor Ctrl Gear) 100
LED0129 - Gerard RoadLED LED 300W 4000K Aeroscreen	MHR0030 - Metal Hallide (Reactor Ctrl Gear) 150
LED0131 - Gerard 300W 4000K Aero + Zhaga	MHR0050 - Metal Hallide (Reactor Ctrl Gear) 175
LED0149 - IGNIS 1 LED 71W 4000K	MHR0060 - Metal Hallide (Reactor Ctrl Gear) 250
LED0153 - IGNIS 1 LED 49W 4000K	MHR0070 - Metal Hallide (Reactor Ctrl Gear) 400
LED0175 - Parkville 80W LED Top Entry	MHR0100 - Metal Hallide (Reactor Ctrl Gear) 1000
LED0179 - Parkville 100W LED Top Entry	MVA0190 - Mercury Vapour 250
LED0183 - Parkville 155W LED Top Entry	MVA0220 - Mercury Vapour 400
LED0187 - Parkville 80W LED Side Entry	MVA0250 - Mercury Vapour 500
LED0195 - Parkville 155W LED Side Entry	MVA0290 - Mercury Vapour 1000
LED0210 - Emilio Catenary 71W	

The following activity codes were used to ascribe the activity as a REPLACEMENT for each public lighting asset type: --

LUMINAIRES:

'A186 – SL luminaire - external bulk replacement', 'A206 - Streetlight – replace ', 'A207 - Streetlight – upgrade ', 'A380 - SL luminaire - internal bulk replacement' and 'A395 - Streetlight – install '.

BRACKETS:

'A214 - Streetlight bracket - replace' and 'A391 - Streetlight bracket - upgrade'

POLES/COLUMNS

'A210 - Streetlight column - replace', 'A393 - Streetlight column - install ' and 'A394 - Streetlight column - upgrade'.

Energy efficiency was determined from the use of light emitting diode (LED) lighting technology versus less energy efficient non-LED technology. The presence of LED0 in the P/L load table code was how actual streetlight inventory data was assigned as efficient lighting. For brackets and pole/columns, the light attached to the asset determined the designation as energy efficient. By default, all non-LED technology was considered non-energy efficient.

METHODOLOGY

A series of SQLs were used to extract actual work activity data from WACS. Built into the SQL was extraction of the data from FY25 only using the completion date of the activity. In addition, the SQL was designed to only include Essential Energy assets and work activities that had been completed, closed or finished (as opposed to cancelled).

SQL Logic and Pivot Table filtering:

- Built into the RIN TABLE MAPPING category was a designation of each asset type into minor and major based on the assumptions mentioned above.
- Built into the RIN_ASSET_CATEGORY was a designation of each asset type into efficient or non-efficient based on the assumptions mentioned above.
- By summing the COUNT (related to each unique activity code), the number of major (or minor) energy efficient or non-efficient replacements for each asset type was determined.

Actual expenditure data for major and minor luminaires and brackets was then determined by taking a proportional split of the summed Augex, Repex and Connections Project public lighting expenditure data (excluding customer-funded minor capital works projects) based on the number of replacement activities in each asset class. This was further proportionately split based on whether the attached light was energy efficient or not.

For pole replacement data expenditure, the total replacement expenditure data for Essential Energy was proportionally split according to the percentage of dedicated streetlight poles relative to all other pole/column assets. This value was further split into major or minor roads as described previously.

To further count the number of FAILURES as a subset of replacement activities, this was done by filtering on the designation of each activity as a failure of the asset or not --> FAILURE column, based on the assumptions mentioned above.

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION

Just a minor change in how minor and major assets were assigned. Last year this was based on wattage, whist this year is it determined using the P/L load table code associated with the asset. The overall impact on the data is a < 1% change. In addition to this, whilst the same methodological basis as last year was used, the data for all assets was extracted from WACS using SQL logic this year for consistency with the wider network's assets.

SCADA

Asset Replacement data was obtained from SCADA by region spreadsheet.

- Asset Failure data was obtained from ASM.
- Totals included in this section are an amalgam of figures from true SCADA (ZSS RTUs).

Telecomms (Communications network assets)

Failures Data - was deduced from the Data#3 records for replacement equipment under the Maintenance contract EE has for their Data Network Equipment and also using the ASM CMDB for the failures that cause replacement for the radio equipment.

Replacement –was deduced from the Data#3 and ASM records for replacement equipment under the Maintenance contract EE has for their Data Network Equipment and using the ASM CMDB for the failures that cause replacement for the radio equipment.

Frequency Injection Receiver Relays

Data is sourced from ERP usage, with relays installed by EE staff considered failures.

Audio Frequency Load Control (FI) plant

Data for is sourced from field staff for failures and age profile for replacements.

Zone Substations

- CTs, VTs, Batteries, Surge Diverters - quantities replaced are those with a commissioning date within the financial year, where they are not part of an augmentation project. Failures are those where the asset failed in service and was replaced during the year.

Zone Substation Protection Relays

- Quantities replaced are those with an Electronic Field Device Initial Energisation form completed during the 2024-25 financial year and are not a new asset location.
- Any protection relay within a zone substation that functionally failed during the 2024-25 financial year. Data from Relay Failures MASTER spreadsheet.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 2.2 Repex

Table 2.2.2 - Selected Asset Characteristics

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

All information is based on actual data.

This data is considered reliable although Essential Energy acknowledge that data used for this table may not be perfect and some caution should be used when using it for benchmarking or decision-making purposes.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Refer to “Source of Information” for Table 2.2.1, above.

METHODOLOGY [SECTION 5.2.1 (B)]

The methodology and assumptions for each category are outlined below.

Total Poles by Feeder Type

- Data was sourced from WACS with feeder type referenced from Smallworld.
- Data for poles in commission includes all owners (i.e. all poles that Essential Energy inspects) and is limited to only those poles with a service status of “In Service”. Data for replacements is as per Table 2.2.1.
- Feeder type has been determined by mapping individual assets to the geospatial information held in Smallworld, HV feeders based on reliability categorisation, LV feeders based on their parent HV feeder, and transmission and unknowns distributed by ratio across the three categories.
- The “Asset Volumes Currently in Commission” column includes the “Staking of a Wooden Pole” asset category but excludes dedicated streetlight poles/columns.

Overhead Conductors by Feeder & Material Type and Underground Cable by Feeder Type

- Data has been sourced from GIS Smallworld.
- Data for conductor/cable in commission includes only Essential Energy owned assets and is not limited by service status. Streetlight conductors/cables have been included; however LV services have been excluded. Data for replacements is as per Table 2.2.1.
- Feeder type has been determined by mapping individual assets to the geospatial information held in Smallworld, HV feeders based on reliability categorisation, LV feeders based on their parent HV feeder, and transmission and unknowns distributed by ratio across the three categories. Essential Energy has no CBD category feeders.
- Material type has been assigned from Smallworld attributes, with unknowns spread by ratio. All covered conductors besides LV ABC (HV ABC, CCT, etc.) have been included in “Other”.
- The determination of the replacement being Repex is based on the Activity Framework in WACS

Transformers by Total MVA

- Data has been primarily sourced from WACS and ERP.
- Data for transformers in commission is a sum of the maximum MVA for all distribution and zone substation power transformers. It does not include regulators, zone substation auxiliary transformers, step up transformers, or SWER isolating transformers.
- Zone substation transformer MVA has been assumed to be 5MVA for assets with an unknown rating. Distribution transformer MVA for assets with an unknown rating has been derived from the Substation Site's “Total KVA”. If this is not available, then kVA has been derived as follows (note this has only occurred in 2% of cases):

  If Substation Site “Total KVA” is blank, then use sum of children Transformer “KVA”.

  If Substation Site “Total KVA” and children Transformer “KVA” fields are blank, then use Substation Site “Phases” as follows:

- 3 phase = 63kVA
- 1 phase = 10kVA

If Substation Site "Total KVA" and children Transformer "KVA" fields are blank and Substation Site "Phases" is blank, then use Substation Site "Construction Type" as follows:

- Pad/Kiosk Substation = 500kVA
- Chamber Substation = 1000kVA
- Ground Substation = 1000kVA
- All others (e.g. Pole Substation) = 10kVA

- Data for transformers replaced is based on a sum of the maximum MVA for all distribution transformers with a capitalised WACS work task ("Substation - Replace Tank" and "Transformer – replace"), the sum of the estimated MVA amount of transformers in the Planning Database as well as a sum of the maximum MVA from transformer commissioning records for zone substation transformers (filtered to include only replacements). The same inclusions/exclusions and assumptions apply as per the in-commission transformer sum.

Data for disposed transformers is the sum of the MVA nameplate ratings of Transformer & ZS Power Transformer assets in WACS where the Asset Status was changed to 'Scrapped' within the relevant RIO reporting year.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 2.3 Augex

2.3.3 - Augex Data - HV/LV Feeders and Distribution Substations | Descriptor Metrics

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

No information has been estimated.

The data in this table is reliant on planners selecting the correct project driver when creating work.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

SYSTEM	DATA
WACS	Augex classified activities link to Span/ Cable and Substation assets

METHODOLOGY [SECTION 5.2.1 (B)]

Circuit kilometres added/upgraded and Substation Augmentations

Asset replacement units were sourced from completed Work Activity records. Activity records were allocated to Repex using several methods in priority of:

- WACS Activity Framework
- ERP Financial Mapping

Many capex projects are comprised of both Repex, Augex and Connection components. Due to system limitations and the resultant inability to capture the required level of detail, those projects are allocated as either Repex, Augex and Connection based on their primary driver.

Replacement data has been based on a count of the following completed WACS work tasks in REPEX projects:

"Conductor Install/Replace/Upgrade"
"Cable Install/Replace/Upgrade"
"Substation or Transformer Install/Replace/Upgrade"

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 2.3 Augex

Table 2.3.3 - Augex Data - HV/LV Feeders and Distribution Substations | Cost Metrics

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Total Augex is based on actual data. Drivers have been used for the data splits and disaggregation of totals.

The data in this table is considered reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Source data was from the Oracle ERP and WACS Data Set is also used in the process of collating the data for the Annual Reporting RIO.

METHODOLOGY [SECTION 5.2.1 (B)]

Information was sourced from the RIO Finance Data (refer to 8.2 for details) and split between Augex and Repex by the various asset categories. This data is also used in the collation of data for the Annual Regulatory Accounts.

Regulatory Accounts asset categories are consistently grouped based on model parameters.

Mapping was performed to comply with the requirements of the RIO tables.

ASSUMPTIONS [SECTION 5.2.1 (C)]

No assumptions made

ADDITIONAL INFORMATION [SECTION 5.2.3]

No Additional Information

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

No changes other than as described in 8.2.

Worksheet: 2.3 Augex

Table 2.3.4 - Augex Data - Total Expenditure

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Total Augex is based on actual data. Drivers, resource categories and derived asset profiles have been used for the data splits and disaggregation of totals.

The data in this table is considered reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Data is sourced from the Capex RIN Data model which includes enriched capital expenditure transactions through a RIN Optimisation process (Methodology section), and which attaches relevant attributes relating to the expense journal item. This allows each expense item to be classified by RIN Purpose and RIN asset category (which is based on the asset profile). Asset profiles are mainly derived from project types assigned to each project, or estimates (WASP) which split the planned work into the assets to be created, or Tasks where available in the Oracle Project template and where the project type does not apply to a specific expense type within the project. The approach is consistent with that used for 2.1 and collating Capex data for the Annual Reporting RIN.

A new Asset management system (WACS) was implemented in 2024, and the asset profile classification is based on the Project Activity Level.

METHODOLOGY [SECTION 5.2.1 (B)]

All direct expenditure on network system projects which have a project justification type that relates to augmentation are included in the total of table 2.3.4. The RIO asset categories are derived through mapping of the asset profiles (lowest asset classification within our fixed asset register) to the RIO Asset categories relevant to the table. The total of all line items reconcile to the Annual Reporting RIO for 2024-25.

The expenditure shown for the “Subtransmission Substations, Switching Stations, Zone Substations” and “Subtransmission Lines” rows at the top of Table 2.3.4 do not reconcile to Tables 2.3.1 and 2.3.2, respectively. This is because Tables 2.3.1 and 2.3.2 show expenditure relating to relevant projects which have been closed out during the financial year, whilst Table 2.3.4 shows total expenditure for the financial year for those asset categories.

ASSUMPTIONS [SECTION 5.2.1 (C)]

Many capex projects are comprised of both Repex and Augex components. Due to system limitations and the resultant inability to capture the required level of detail, those projects are allocated as either Repex or Augex based on their primary driver.

ADDITIONAL INFORMATION [SECTION 5.2.3]

Integration Logic

If no WACS of WASP data exists, only ERP data is returned.

Assets are linked across systems using PAR_ASSET_ID, and all assets from either system are included.

Projects may share numbers between ERP and WACS, but IDs differ.

Capex/Opex distinction is at the Task level in ERP and Activity level in WACS.

A single WACS Work Order can map to multiple ERP Tasks (both Capex and Opex).

ERP Capex tasks are prefixed with "C-".

Special Cases

Some WACS project numbers start with "11" (inflight projects) and can be mapped to ERP projects, but these are not integrated into WACS data due to lack of correspondence.

Some WACS assets (PAR_ASSET_IDs) link to multiple ERP assets; the model joins to the ERP asset with the smallest ID.

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

Except for the addition of the WACS system, the Basis of Preparation stays the same as last year.

Worksheet: 2.5 Connections

Table 2.5.1 - Descriptor Metrics (Standard Control Services)

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Essential Energy has used estimated information for premises where Residential/Customer or Overhead/Underground could not be determined.

An estimate was required in the following cases:

- Where Residential/Commercial could not be determined. Premise data is historical where status data is current. Premises may have become extinct, but exist historically, therefore no Residential/Commercial value can be determined.
- Premises with no network connectivity therefore no Overhead/Underground value can be determined.
- All premises where the Overhead/Underground or Commercial/Residential status could not be determined were deemed "Unknown". The Unknowns were distributed across all categories based on the ratio of the known premises.

The data used for determining the overall quantities has been provided previously and has been categorised based on assumptions and estimates.

The assumptions were made in the best effort to optimise the information at Essential Energy's disposal without compromising the reliability of the figures.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

SYSTEM	DATA
PEACE	Premises with Creation Date in the Financial Year Premise's Residential/Commercial flag. Embedded Generation Sites are Premises with an Export Tarif assigned in the Export Register for the given NMI.
Smallworld	Premise's connection to the Underground or Overhead network.
WACS	Substations with Underground/Overhead flag. List of Activities associated with "Connections" projects.
Oracle ERP	Financial data is extracted from Oracle ERP financials for the current financial year. Connections capex expenditure was derived from the PIP4 - Customer Connections portfolio. This expenditure falls within the larger Repex/Augex/Connections finance expenditure data.

METHODOLOGY [SECTION 5.2.1 (B)]

The main assumptions are:

- Essential Energy has no Subdivision assets based on the definition "is intended to capture expenditure in connecting un-reticulated lots or areas."
- The ratio of known embedded generation is the same ratio applied to unknown embedded generation.

- An Embedded Generation Connection was categorized as 'New' if the Premise had an Export Tarif listed in the present financial year's extract but not in the previous years.
- Where practical, the determination of Underground/Overhead was derived from GIS Smallworld, otherwise WACS was used.

All Asset Replacements

Asset replacement units were sourced from completed Work Activity records. Activity records were allocated to Connections using several methods in priority of:

- WACS Activity Framework
- ERP Financial Mapping

Many capex projects are comprised of both Repex, Augex and Connection components. Due to system limitations and the resultant inability to capture the required level of detail, those projects are allocated as either Repex, Augex and Connection based on their primary driver.

Replacement data has been based on a count of the following completed WACS work tasks in REPEX projects:

"Conductor Install/Replace/Upgrade"
"Cable Install/Replace/Upgrade"
"Substation or Transformer Install/Replace/Upgrade"

Number of Connections

Total new connections were determined by the number of premises with a creation date in the financial period.

From 1 October 2021, there was an AEMO requirement that non-contestable unmetered loads (NCONUML) previously known as (SUMS and Night vision) needed to be accounted for in market settlements. This means these assets require a Market NMI that is published in MSATS and records consumption of the assets.

To meet this regulatory requirement, all Off Market small unmetered supply sites were migrated to market NMI's in the 2021. 6014 premise connections for migrated NMIs that were bulk loaded to Peace on the 01/09/2021 were flagged and excluded from the 2022-23 Financial Year counts on the basis that the premises were already existing in peace under off market NMI's and didn't represent true new connections.

Expenditure

This is based on the standard methodology adopted for all finance expenditure data in the Category Analysis. Refer to section ***Error! Reference source not found. Error! Reference source not found.*** for the overall Basis of Preparation on finance data prepared for multiple tables . The specific methodology and assumptions made for this table are also outlined below.

Specifically, the connections capex expenditure was derived from the PIP4 - Customer Connections portfolio as opposed to unit rate estimations previously utilised. This expenditure falls within the larger Repex/Augex/Connections finance expenditure data described above.

Expenditure is then proportioned across the six asset categories based on the financial allocation percentage of the previous year.

Overhead/Underground Totals

Connection activities against Spans and Cables were separated by voltage and totalled by km. To split between Residential and Commercial the ratio of Residential and Commercial customer was used from 5.2 Asset Age Profile

Distribution Substations Installed – for Residential/Commercial and Subdivision Connections

Connection activities against Substations and Transformers were separated by voltage and totalled by MVA. To split between Residential and Commercial the ratio of Residential and Commercial customer was used from 5.2 Asset Age Profile

Mean days to connect residential customer with LV single phase connection (0's)

Not reported as done by Accredited Service Providers under Power of Choice and outside our control.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 2.5 Connections

Table 2.5.2 - Cost Metrics by Connection Classification

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Essential Energy has used estimated information for this table.

The data used for determining the overall quantities into categories is based on assumptions and estimates. Caution should therefore be used when using this information for benchmarking or decision-making purposes.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

SYSTEM	DATA
Salesforce	Premises with Commissioning Date in the Financial Year Premises Classification (Gen / Load). Premises Connection Process

METHODOLOGY [SECTION 5.2.1 (B)]

The information in this table is a summation of table 2.5.1 and therefore uses the same underlying methodology and assumptions.

Complex Connections

Source of Information

SYSTEM	DATA
Salesforce	Premises with Commissioning Date in the Financial Year Premises Classification (Gen / Load). Premises Connection Process

Number of Connections

Total new connections were determined by the number of premises with a commissioning date in the financial period.

Expenditure

All projects are fully customer funded therefore no expenditure incurred.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 2.5 Connections

Table 2.5.3 - Capital Contributions (Type 1) by Connection Classification

This section is not applicable.

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

N/A

INFORMATION SOURCE [SECTION 5.1.1 (A)]

N/A

METHODOLOGY [SECTION 5.2.1 (B)]

N/A

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 2.5 Connections

Table 2.5.4 - New Connections by Connection Classification - All Other Services Excluding Standard Control Services

The information in this table is a summation of table 2.5.2 and therefore uses the same underlying methodology and assumptions.

METHODOLOGY [SECTION 5.2.1 (B)]

Embedded Generation

The PEACE database was used as the basis for Embedded Generation data. An Embedded Generation site is defined as a Premise with an Export Tarif assigned in the Export Register for the associated NMI.

A complete extract of Premises with an Export Tarif recoded against them is taken from the Export Register as at the 30th June each year.

An Embedded Generation Connection is categorized as 'New' if the Premises had an Export Tarif listed in the present financial year's extract but not in the previous year's, effectively capturing the net change in premise records between the two years.

The determination of Underground or Overhead connection was made in Smallworld.

Worksheet: 2.6 Non-Network

Table 2.6.1 - Non-Network Expenditure

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Information is based on actual information, with best practise methodology used to apportion actual non-network expenditure across some RIO categories.

This information is considered reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Capex data was sourced from ERP and work files prepared for the 2024-25 Annual RIO.

Opex data was sourced from ERP.

METHODOLOGY [SECTION 5.2.1 (B)]

The specific methodology and assumptions made for this table are also outlined below.

Motor vehicles – Opex & Capex

Data was sourced from Oracle ERP to obtain total Fleet operating costs. The CAM was used to identify the regulated Fleet expenditure. Actual operating costs are not captured by Motor Vehicle categories in the general ledger. As a proxy, the Oracle Fleet list which details vehicles types and forms the basis for the Fleet Hire Charge, was used to apportion the actual Fleet operating costs across the Motor Vehicle categories.

Total Capex for 2024-25 was sourced from the ERP system. The CAM allocation to Water business unit, was replace with actual Water Fleet, hence adjusting the Standard Control amount reported. A listing of fleet Capex by project (asset individual identifier mapped) was utilised to categorise row level expenditure to Motor Vehicle categories. This asset level categorisation was pivoted to determine category proportioning which was applied to the reported Standard Control (adjusted for Water Fleet) Capital expenditure figure for each Motor Vehicle Category.

Trailers and other fleet items that do not meet the Motor Vehicle categories are included in the Other Expenditure category.

Buildings and Property – Opex & Capex

2024-25 Opex data was sourced from ERP. Property operating costs were based on expenditure within the Property division (Cost Centre structure).

Total Capex for 2024-25 was sourced from the 2024-25 Annual RIO, The CAM allocation to Water business unit, was replaced with actual Water Property Projects, hence adjusting the Standard Control amount reported in RIO.

Furniture & Fittings – Capex

Data was sourced from the 2024-25 Annual Regulatory Accounts, RIO Dataset.

ICT – Opex & Capex

2024-25 Opex data was sourced from Oracle ERP. ICT operating costs were based on expenditure within the Digital Services division plus the ICT within the Transformation and Asset and Operation Excellence cost centres.

For 2024-25, Export Services are captured separately in table 3.9.10 – Export Services Opex and 3.9.11 – Export Services Capex**.** Export Services expenditure in the Digital Services division has been excluded to avoid double counting.

The CAM was used to identify regulated ICT expenditure. Figures were mapped to RIO categories based on mapping provided by SMEs. Attribution to CA RIO categories was as follows:

- Operating expenditure line items were reviewed, and an assessment made as to whether the costs within the line item were predominately client device, recurrent or non-recurrent expenditure, which included Comms;

Capex data was sourced from the 2024-25 Annual RIO. Expenditure was mapped to the Category Analysis RIO based on mapping provided by SMEs and the category splits were based on project data in ERP. Comms was separated out into the other non-network category.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

Fleet Capital expenditure methodology has been updated. Previous years Capital expenditure allocation by Motor Vehicle Category was proportioned based on hire charge percentages in combination with CAM rates. System enhancements and improvements to process and procedures have now enabled the ability to map Capital expenditure project row level costs to individual Fleet assets, enable cost proportioning down to an asset level/Motor Vehicle Category.

New table required for 2024-25 to capture Export Services. To avoid double counting, any Export Services has been removed from Tables 2.6

Worksheet: 2.6 Non-Network

Table 2.6.2 - Annual Descriptor Metrics - IT & Communications Expenditure

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The underlying device data comes from source systems, and as such, the data provided for this table is considered actual.

The data is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

SYSTEM/SOURCE	USED FOR
ICTs Configuration Management Database (CMDB)	Extract used for determining number of devices as at 5.30pm 30 June Financial Year end.

METHODOLOGY [SECTION 5.2.1 (B)]

The following method and assumptions have been used when compiling this data:

Number of Devices

The in-use device numbers include laptops, desktops, tablets, mobile phones, satellite phones and smartphones. and are based on information within the ICT Configuration Management Database (CMDB).

The 30 June 2025 total has been multiplied by the Standard Control Services percentage.

Steps for obtaining data

At 5:30pm 30 June, a scheduled asset report was run and emailed to Change Team members (saved as MTCS_RIN_2025_Data.csv in Sharepoint).

Pivot Tables and Numbers

A pivot table was created from the asset data;

Physical Status was added to the filter section of the pivot table and "In Use" only was selected.

Employee ID was added to the filter section and excluded instances where the ID is less than 5 characters, null, blank or starts with a "-".

Assets Type was added to "rows" section of table and asset types of mobile broadband or integrated broadband were removed as these are SIMs, not devices.

The serial number was added to the "values section of pivot table".

Grand Total should equal 8964 devices ("number of devices" determined).

Standard control percentage is then applied (79%) bringing the total to 7100.

Further Explanation

Employee IDs from the RIO asset data, where the ID is negative or not of 5 characters are asset groups such as Kiosk machines, stock groups, etc.

Device count only includes assets that are "in use". On Loan or stock assets or mobile devices that are being terminated or returned to stock are not included in the user count and were also not included in the last FY.

Asset data comes from the CMDB and although the data is "actual data", the data could contain errors.

The CMDB is very fluid, with new devices being allocated or returned frequently. Numbers therefore change on a regular basis.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 2.6 Non-Network

Table 2.6.3 - Annual Descriptor Metrics - Motor Vehicles

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The information reported in this table was based on actual data.

The data is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Oracle Maintenance Management

IVMS Essential Energy GAP Portal

METHODOLOGY [SECTION 5.2.1 (B)]

Vehicle annual km's are obtained from the IVMS (In Vehicle Monitoring System) Essential Energy GAP portal reports. The annual km's are based on assets which were in service for the whole FY25 period. Units which entered or exited the fleet during the period were excluded from the annual km average calculation.

The in-service and disposal dates form the fleet list were used to determine those units that entered or exited the fleet.

Data table was pivoted to calculate average utilisation, count of in service date (units purchased) and count of fleet identifier (unit count).

The CAM rates supplied by the Finance team were used to determine proportion of total fleet expenditure allocated as regulatory expenditure (percentage).

Items of fleet that do not fit within the RIO categories have been excluded.

Oracle Maintenance Management shows plant and carrier as separate assets however they were joined to determine utilisation.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 2.7 Vegetation Management

Table 2.7.1 - Descriptor Metrics by Zone

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

We are using route line length and bay/span counts derived from Smallworld route data using various scripts. The degree of accuracy cannot be determined when converting conductor data into distance data therefore it would need to be regarded as an estimate.

Caution should be used when using this data for benchmarking or decision-making purposes.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

- Xugo Vegetation Management System (Client Version: 20250819.1) via Azure Databricks & Power BI
- Smallworld
- 2018 LiDAR Incursion Data

METHODOLOGY [SECTION 5.2.1 (B)]

Source Data Verification

For the reporting period, the data relating to vegetation has been drawn from the Vegetation Information Management system “Xugo”. The data is made accessible via a number of tables within the Databricks data platform which is brought into a Power BI data model. For information not related to vegetation the data is primarily drawn from SmallWorld.

Route Length with Zone (Actual)

Route length is calculated using the Span object in Smallworld filtering out any span where the “Is Underbuilt?” value is set to No. Spans are only included if: Owner is Essential Energy or Private or Unknown and the Span is In Service, Out of Service or Unknown

Number of Vegetation Maintenance Spans (Actual)

Using the Power BI semantic model (Xugo Databricks v3) which draws vegetation task data from the Xugo veg management system via Databricks we pull together all actionable veg tasks with a completion date sitting within the reporting period. We then do a distinct count of the field “Bay ID” which identifies which network bay the task resides in. This distinct count gives us the number of vegetation maintenance bays for the reporting period. One of the fields within this data set is the rural/urban designation which allows us to split the result across urban and rural.

Total Length of Maintenance Spans (Actual)

Taking the data set created for “Number of Vegetation Maintenance Spans” above we pivot this data against the “Bay ID” which gives us one row per bay worked on. We then map (using the Bay ID join) the bay length from our Xugo geo spatial data set against this data set which gives us an individual bay length and therefore the “Total Length of Maintenance Span” when aggregated up to a urban and rural total.

Length of Vegetation Corridors (Estimate)

Using Power BI, we extract data for all actioned vegetation tasks from Xugo (which stores data from 1 July 2021). Each task record includes a Bay ID identifying the bay where work occurred. Multiple tasks can exist per bay over time, as each Vegetation Management Area (VMA) is cut according to its cycle. By pivoting the data by Bay ID, we create a table where each row represents a bay. We then add the MAX completion date for each bay, indicating when it was last cut. Next, we map the bay length into this dataset, enabling calculation of the total combined length of all bays treated since 1 July 2021—a period sufficient to ensure VMAs on long cycles have been treated at least once.

Average number of trees per urban and CBD vegetation maintenance span (Estimate)

We take LiDAR incursion data where the clearance category runs from A1 to C1. We round the Latitude and Longitude values to 4 decimal places. We then concatenate the rounded Latitude and Longitude into a single field which represents a tree (approx. a 10m square). We then count unique instances of these Lat Long values against a zone and divide that value by the total maintenance span count in the same zone to arrive at the average number of trees per maintenance span. Please note that this process provides an estimate only and is based on data collected in 2018 with no new data being generated since that time.

Average frequency of the cutting cycle (Estimate)

We have created a pivoted table of all VMAs that are listed in our current five year veg maintenance contract and averaged out their individual cycle times expressed in months and these average values (across both urban and rural) are divided by 12 to arrive at an “average frequency of cutting” measured in years. The data in the pivot is extracted from a single Databricks table which lists all VMAs that are currently loaded in our veg management system called “Xugo”.

Average number of defects per vegetation maintenance span

We take the total number of veg tasks and divide this by the unique span count in the same data set to derive an average defect per maintenance span. The result is pivoted against the urban/rural classification to produce both an urban and rural result.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 2.7 Vegetation Management

Table 2.7.2 - Expenditure Metrics by Zone

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

We have essentially taken data from our Power BI veg model which manages the externally sourced veg contracts to establish ratios of the types of work we complete. We have then applied those ratios to the ERP data we extract from the "Financials ERP View" Power BI report (where we can see the categories for external contractors and internal cutting crews). In this ERP report we can also see amounts for audits and inspections. Once the total veg expenditure amount has had external contractors, internal cutting crews, audit and inspection work types removed we have a residual figure that represents "Other vegetation management costs".

Financials to physical units' analyses are not considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Full year total for vegetation expenditure provided by Finance Dept.

METHODOLOGY [SECTION 5.2.1 (B)] (ESTIMATED)

An initial set of task categories for "Ground Clearance", "Hazard Tree Cutting", "Tree Trimming", "Vegetation Corridor Clearance" are established within the current vegetation management Power BI semantic model (Xugo Databricks V3).

RIO Cost Category =

IF(Tasks[Is Fall In]="YES","Hazard Tree Cutting",

IF(Tasks[Crew Type Simple]="GL","Ground Clearance",

IF(Tasks[Crew Type Simple]="EWP","Tree Trimming","Vegetation Corridor Clearance")))

This allows a pivot table to be generated in Report "RIN Financials" which attributes actual contract costs down to a task level and sets up the ratios that we need to allocate the total veg expenditure amount.

RIN Cost Categories

RIN Cost Category	Total Combined Spend	% of Total
Ground Clearance	$11,450,623	12.86%
Hazard Tree Cutting	$17,313,695	19.44%
Tree Trimming	$37,209,614	41.77%
Vegetation Corridor Clearance	$23,101,182	25.93%
Total	**$89,075,113**	**100.00%**

Using the Power BI report "Financials ERP View" (which utilises the 'Finance Golden Data Set') we can sub divide the External Contractors and Internal Cutting crews using the ratios from the "RIN Financials" Power BI report. This gives us tree trimming, hazard tree cutting, ground clearance and corridor clearance figures. Additional to this we can directly derive figures for Inspection and Audit directly from the "Financials ERP

View – Task Name Split" report. This leaves $1,829,856 which is categorised as Other vegetation management costs (made up primarily of switching and other sundry items).

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 2.7 Vegetation Management

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

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The information in this table is considered to be based on actual data and is sourced from our TotalSAFE system.

In some cases, classification of the data into "cause" types can be somewhat subjective. However, data is recorded based on best information available using considered judgement and is considered to be actual.

This information is considered reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

TotalSAFE

Microsoft Excel

METHODOLOGY [SECTION 5.2.1 (B)]

Vegetation Caused Fire Data

On the Fire Report Form in the TotalSAFE system, the available options can be selected from the drop-down list for Secondary Cause & Contributory Cause.

For consistency, the investigation officer completes the form on behalf of field staff and selects the appropriate code details from discussions with field staff and photos, where provided.

Data from TotalSAFE is exported to a Microsoft Excel Master register of all fire incidents. This register is used to complete analysis and reporting on a monthly and yearly basis.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 2.8 Maintenance

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

DATA REPORTING QUALITY

All non-financial units are actual.

Although most expenditure information is based on actual data some of the data splits and disaggregation of totals has been estimated. The information required for the asset categorisation in this table does not exist in the ERP or Copperleaf project source data. In addition, ERP and the C55 are not linked to the asset management datasets in WACS which are required to complete this table. Therefore, the splits of financial information for asset types have been estimated, with the exception of public lighting SCADA related expenditure which is actual and sourced from ERP.

Where source data is not available to categories Activities\Assets ie Unknowns. Data is smeared across the known records

Maintenance expenditure, at an aggregate level, is considered to be reliable as it has been sourced from the Annual Regulatory Accounts. Apportionment of expenditure into the different categories requested by the AER is based on assumptions and estimates so caution should be used when using this for benchmarking or decision-making purposes.

Maintenance data for the current year is exclusively sourced from our AMS system WACS.

INFORMATION SOURCE

The table below lists the system and data sets from which maintenance activity information was sources for the various asset categories.

MAINTENANCE ACTIVITY	SYSTEM	DATA SET
All categories ex SCADA & Network Control Maintenance	WACS	Specific activity data for all asset maintenance tasks categories as routine & non-routine or inspection tasks were extracted from WACS using a series of SQL logic.
SCADA & Network Control Maintenance	SCADA by Region spreadsheet/ASM	Historic Asset Replacements/Asset Failure
Zone Substation maintenance	CEOP8011	Technical Maintenance Plan
Emergency Recoverable Works	ERP	Number of events

METHODOLOGY

Further details about the methodology employed and any assumptions made for each specific asset category is given below.

2.8.1 Asset Maintained and Inspected excluding SCADA, Network Control and Protection Systems

ASSUMPTIONS

- All assets inside a zone substation are inspected during routine zone substations inspections
- Streetlights are not inspected as part of routine pole inspections
- All other assets associated with a pole are inspected during a routine pole inspection

GENERAL METHODOLOGY

- All activities are extracted from WACS and Classified as relevant to 2.8.1 and are tagged to an asset category based on the asset joined to the activity
- All activities are then split into Maintenance or Inspection Tasks

- Additional tasks are calculated base on:
    - All assets at a pole sight are inspected during a routine Pole Inspection exc streetlights
    - All assets are inspected at a zone substations during a routine inspection

Public Lighting Maintenance

PUBLIC LIGHTING - ASSUMPTIONS

- MAJOR ROAD public lighting assets are associated with a light with a P/L light code listed in the Night Patrol PL codes document (see list below). This document reports the major road light types that night patrols are conducted on and aligns with the Operational Standard: Public Lighting Maintenance (CEOS5126.02) – 14th February 2025. All other P/L light codes not listed below are considered MINOR ROAD lights.

Night Patrol P/L Load Table Codes	
HPS0090 - High Pressure Sodium 150	LED0214 - GE Area Lighter Flood Light 150W
HPS0100 - High Pressure Sodium 220	LED0218 - GE Area Lighter Flood Light 240W
HPS0110 - High Pressure Sodium 250	LED0222 - Sirkel Catenary 100W
HPS0120 - High Pressure Sodium 2x250	LED0223 - IGNIS 1 LED 76W 4000K
HPS0160 - High Pressure Sodium 360	LED0240 - GE EVOLVE CAT V LEOPARD 204W
HPS0170 - High Pressure Sodium 400	LED0244 - GE EVOLVE CAT V LEOPARD 122W
HPS0190 - High Pressure Sodium 3x400	LED0268 - 80W Parkville Mk2 4K TOP ENTRY
HPS0250 - High Pressure Sodium 1000	LED0270 - 80W Parkville Mk2 4K SIDE ENTRY
LED0009 - Pecan LED 42w	LED0276 - 150W Parkville Mk2 4K TOP ENTRY
LED0011 - Aldridge LED 105W	LED0293 - GE 80W LED HID Lamp in dec. luminaire
LED0012 - Aldridge LED 198W - Std Distribution	LED0298 - 110W Sylvania SASTA Maximus
LED0013 - Aldridge LED 198W - Forward Distribution	LED0299 - 175W Aldridge VLED Mark II 4000K
LED0014 - Aldridge LED 298W - Std Distribution	LED0500 - HBW 85W LED
LED0090 - LED90	LED0501 - HBW 141W LED
LED0117 - Gerard RoadLED Midi LED 50W 4000K	LPS0050 - Low Pressure Sodium 135
LED0121 - Gerard RoadLED Midi LED 80W 4000K	LPS0060 - Low Pressure Sodium 150
LED0123 - Gerard 80W 4000K + Zhaga	MHC0020 - Metal Hallide (Constant Ctrl Gear) 250
LED0124 - Gerard 80W 4000K + Zhaga Connected	MHC0030 - Metal Hallide (Constant Ctrl Gear) 400
LED0125 - Gerard RoadLED LED 150W 4000K	MHR0010 - Metal Hallide (Reactor Ctrl Gear) 70
LED0127 - Gerard 150W 4000K + Zhaga	MHR0020 - Metal Hallide (Reactor Ctrl Gear) 100
LED0129 - Gerard RoadLED LED 300W 4000K Aeroscreen	MHR0030 - Metal Hallide (Reactor Ctrl Gear) 150
LED0131 - Gerard 300W 4000K Aero + Zhaga	MHR0050 - Metal Hallide (Reactor Ctrl Gear) 175
LED0149 - IGNIS 1 LED 71W 4000K	MHR0060 - Metal Hallide (Reactor Ctrl Gear) 250
LED0153 - IGNIS 1 LED 49W 4000K	MHR0070 - Metal Hallide (Reactor Ctrl Gear) 400
LED0175 - Parkville 80W LED Top Entry	MHR0100 - Metal Hallide (Reactor Ctrl Gear) 1000
LED0179 - Parkville 100W LED Top Entry	MVA0190 - Mercury Vapour 250
LED0183 - Parkville 155W LED Top Entry	MVA0220 - Mercury Vapour 400
LED0187 - Parkville 80W LED Side Entry	MVA0250 - Mercury Vapour 500
LED0195 - Parkville 155W LED Side Entry	MVA0290 - Mercury Vapour 1000
LED0210 - Emilio Catenary 71W	

- Inspection and maintenance tasks do NOT include any replacement or upgrade activities. Specifically , these tasks are NOT included: A206 – streetlight replace, A207 – streetlight upgrade, A210 – streetlight column replace, A214 – streetlight bracket replace, A380 – SL luminaire internal bulk replacement, A391 – streetlight bracket upgrade, A393 – streetlight column install , A 394 -streetlight column upgrade, A395 – streetlight install and A889 – nightvision luminaire replacement.
- Tasks are designated as INSPECTION, MAINTENANCE or CONSTRUCITON based on their SERVICE CLASS TYPE.

- INSPECTION tasks include A791 - Streetlight Inspection" and "A793 - Lighting - Night Patrol Inspection" tasks only.
- MAINTENANCE tasks include activity codes A183, A201, A202, A203, A204, A205, A208, A209, A211, A212, A213, A215, A216, A301, A317, A392, A400, A640, A643 and A701 only. This is basically all tasks that are NOT replacements, upgrades or inspections.
- PUBLIC LIGHTING assets include STREETLIGHT assets or DEDICATED STREETLIGHT poles/columns.
- RIN MAPPING in terms of inspection and maintenance has been associated with the tasks listed above.

PUBLIC LIGHTING - METHODOLOGY

- From the ACTIVITY DATA list extracted from WACS, create a PIVOT TABLE.
- Filter in RIN ASSET TYPE --> Public Lighting
- To count the number of INSPECTION tasks, take the sum of the count after filtering in Public lighting Major – Inspection **and** Public lighting Minor – Inspection for RIN TABLE MAPPING.
- To count the number of MAINTENANCE tasks, take the sum of the count after filtering in Public lighting Major – Maintained and Public lighting Minor – Maintained for RIN TABLE MAPPING.

PUBLIC LIGHTING - CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION

For this regulatory we have reviewed our approach to assigning the inspection cycle. We only inspect major road (Cat V) luminaires biannually (these are our night patrol tasks) hence the 0.5 value inserted here.
We have also reviewed our approach to assigning the maintenance cycle. As of FY25, the only public lighting maintenance task with a set cycle is the cleaning programme, with a set cycle of 6 years for every light. LED light technology has a warranty lifetime of 10 year, however, under Australian standards 1158 we must maintain/clean all streetlights every 6 years. All other tasks are reactive or non-reactive and hence do not have set cycle.

SCADA & Network Control Maintenance

Asset quantity at year end - Assets captured in this category are SCADA assets in ZS and Telecomms assets. those which have a sole purpose of providing SCADA & Network Control functionality. Assets used to provide communication services to pole top devices have not been included in this section and will be captured elsewhere.

Asset quantity inspected/maintained - Essential Energy has included all SCADA assets in this category that have either been physically inspected during Zone Substation inspection or tested– but note these are continuously monitored assets

Average age of asset group - Data is based on year of purchase for the asset

Whilst the number of in-service devices is accurate, the use of firmware versions/dates of commissioning remains an indicative age of the device for the older units remaining in service.

Protection Systems Maintenance

- Asset quantities represents all “in service” distribution and zone substation reclosers owned by Essential Energy, and protection relays in ZS.
- Quantity inspected/maintained represents those tasks directly related to maintaining recloser sites and was taken from WACS, added to the quantity maintained in zone substations.

- Average age is based on the recloser or the recloser site estimated age. Data is approximate and should not be considered accurate.

All inspection and maintenance cycles are performed in line with asset inspection policies.

ADDITIONAL INFORMATION

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION

N/A

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

DATA REPORTING QUALITY

The definition for most of the categories in table 2.8.2 require high level assumptions and estimation to be used. We believe these assumptions provide a relatively accurate response, however the definitions for each data point are not adequate to consider the data actual.

Wherever possible, the data splits within this table are based on actual financial reporting categorisation of costs into routine and non-routine. Where this is not possible, high-level assumptions and estimation have been used to provide a relatively accurate response to the required tables. Estimation has been developed based on actual tasks undertaken and a derived unit rate.

Maintenance expenditure at a total level aligns to the Annual Regulatory Accounts, however the split into the various categories is based on assumptions and estimation. Caution should be applied when using this information for decision making or benchmarking purposes.

INFORMATION SOURCE

This is based on the standard methodology adopted for all finance expenditure data in the Category Analysis. Refer to the overall Basis of Preparation on finance data prepared for multiple tables in the RIO.

Splitting the high level financial categories down to individual activities is done by utilising task and project type mapping from the Opex model used to develop Essential Energy's annual Opex Statement of Works.

The Regulatory Accounts (as summarised in Table 2.1) associated with Essential Energy’s maintenance expenditure were used as the base data. These accounts were then sorted into either routine or non-routine expenditure and were then mapped to corresponding maintenance activities in the RIN table.

GENERAL METHODOLOGY

Where an account covered multiple maintenance activities, a pro-rata system was used to assign the expenditure based on the directly mapped accounts and the quantity of units maintained.

Where no accounts were able to be directly mapped to inspection/maintenance activities, a unit rate system was used to assign expenditure based on like-activities with known expenditure.

Where maintenance activities contained units for both inspections and maintenance, the routine versus non-routine expenditure was applied pro-rata based on those units.

Public Lighting Maintenance

PUBLIC LIGHTING - ASSUMPTIONS

- Non-routine tasks are defined as fault and emergencies, repairs, replace tasks and all tasks listed as Maintenance and Rectification (M&R). All other tasks have been classified as Routine. Routine tasks include minor maintenance, bulk replacements, upgrades, inspection, standard maintenance, audit and glare shield tasks.

PUBLIC LIGHTING - METHODOLOGY

- Public lighting non-routine maintenance expenditure is calculated by Finance based on expenditure in the following activities and is mapped directly to Public Lighting Luminaires and Brackets. Poles and Columns are included in the above:

  Non-routine expenditure includes: Public Lighting Corrective Maintenance, Public Lighting Unplanned Maintenance Faults and Emergencies (F & E) and Public Lighting Maintenance and Rectification (M&R)

  Routine expenditure includes: Public Lighting Inspections (routine) and Public Lighting Cleaning

A prorated split of the relevant expenditure categories was then applied according to the number of minor and major maintenance tasks associated with this expenditure.

- The number of MAJOR MAINTENANCE tasks was determined from the sum of the count after filtering in **Public lighting Major – Maintained** only for RIN TABLE MAPPING.
- The number of MINOR MAINTENANCE tasks was determined from the sum of the count after filtering in **Public lighting Minor – Inspection** and **Public lighting Minor – Maintained** for RIN TABLE MAPPING.

PUBLIC LIGHTNG - CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION

Changes in methodology were made due to implementation of WACS which has greater visibility for activities completed in the public lighting categories. No WASP data was used as the rollover to WACS was completed for this FY.

Worksheet: 2.9 Emergency Response

Table 2.9.1 - Emergency Response Expenditure (Opex)

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

There has been no use of estimated data. The data is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Data has been sourced from the general ledger, via the Finance Data Set (Oracle ERP).

METHODOLOGY [SECTION 5.2.1 (B)]

The process for expenditure is the same as prior years. Data is taken from the 2024-25 ERP Projects Subledger from the Finance Golden Dataset (FDS) by regulatory segment and project type.

In May 2024, the business began using Oracle WACS as the asset management system. Emergency Response expenditure is not differentiated from Unplanned Corrective Maintenance expenditure in WACS. To separate Emergency Response expenditure for AIO reporting, standing projects for unplanned corrective maintenance (Transmission and Distribution) were reallocated to emergency response, excluding recoverable works. Refer to “FY25 Corrective Maintenance Emergency Response Analysis.xlsx” workpaper for details of the standing projects.

ASSUMPTIONS [SECTION 5.2.1 (C)]

There has been no use of estimated data.

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

In previous years, Emergency Response expenditure was sourced from the WASP Asset Management System. Since switching to Oracle WACS, Emergency Response expenditure was no longer separated from Unplanned Corrective Maintenance expenditure. As a result, standing projects for unplanned corrective maintenance (Transmission and Distribution) were reallocated to emergency response, excluding recoverable works.

Worksheet: 2.10 Network Overheads

Table 2.10.1 - Network Overheads Expenditure

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

As reported information is materially dependent on information from the Oracle ERP financial system it is considered as actual information for 2024-25.

This information is considered reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Data has been sourced from the Finance Golden Data Set in the Oracle ERP system.

METHODOLOGY [SECTION 5.2.1 (B)]

- Expenditure classified as 'Indirect" based on the project expenditure type "Corporate Burden", "Network Burden", "Corporate Other Burden" and "Water Burden".
    - "Corporate Other Burden" and "Water Burden" categorised as "Network Burden" in the workpaper.
- Regulatory Segment used to separate overheads across each regulatory business.
- Support cost adjustments from the management accounts are included in the "2.Indirect_Expenditure (FDS)" tab in the "FY25_CAM_Network_Corporate_Overheads_20250722" workpaper.
- Direct cost aligns to what is included in the workpaper: FY25_RIN_Reconciliation_2025_08_06.

ASSUMPTIONS [SECTION 5.2.1 (C)]

No assumptions were used in reporting this table.

ADDITIONAL INFORMATION [SECTION 5.2.3]

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

There have been no changes to the methodology for preparing this table.

Worksheet: 2.10 Network Overheads

Table 2.10.2 - Corporate Overheads Expenditure

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

As reported information is materially dependent on information from the Oracle ERP financial system it is considered as actual information for 2024-25.

This information is considered reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Data has been sourced from the Finance Golden Data Set in the Oracle ERP system.

METHODOLOGY [SECTION 5.2.1 (B)]

- Expenditure classified as 'Indirect" based on the project expenditure type "Corporate Burden", "Network Burden", "Corporate Other Burden" and "Water Burden".
    - "Corporate Other Burden" and "Water Burden" categorised as "Network Burden" in the workpaper.
- Regulatory Segment used to separate overheads across each regulatory business.
- Support cost adjustments from the management accounts are included in the "2.Indirect_Expenditure (FDS)" tab in the "FY25_CAM_Network_Corporate_Overheads_20250722" workpaper.
- Direct cost aligns to what is included in the workpaper: FY25_RIN_Reconciliation_2025_08_06.

ASSUMPTIONS [SECTION 5.2.1 (C)]

No assumptions were used in reporting this table.

ADDITIONAL INFORMATION [SECTION 5.2.3]

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

There have been no changes to the methodology for preparing this table.

Worksheet: 2.11 Labour

Table 2.11.3 - Labour / Non-Labour Expenditure Split - Standard Control Services

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Actual data from Oracle ERP general ledger

ESTIMATED DATA

N/A

Null Response

N/A

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Labour related data has been sourced from the following files, which are all based on actual data from Oracle ERP general ledger:

- Labour_Totex_by_Regulatory_Segment file
- ARR Calculations file
- Agency_Workings file

METHODOLOGY [SECTION 5.2.1 (B)]

In-house labour expenditure

Comprises direct opex, direct capex and support labour and is sourced from the:

- Labour_Totex_by_Regulatory_Segment file
- Direct Opex reflects all 'Direct Labour (Account Level 6) filtered on Standard Control Services (Regulatory Tree, Regulatory_Description)
- Direct Capex reflects Project Capex, Labour and Labour Burdens (Expenditure Categories), filtered on Cost Type (Direct) and Expenditure Type, filtered on Regular, OT and Allow; and if applicable Temporary Staff.
- Support Labour reflects spend within 'Labour' accounts (Account Level 6) in Indirect Expenditure. Support spend, allocated to 210 - Standard Control, is based on the CAM (Cost Allocation Methodology), which has been applied in the 'Labour_totex_by_Regulatory_Segment' file.
- The percentage of support labour allocated to Standard Control was 81.8%.
- Temp agency costs (GL account 512135) are excluded, as these are captured in labour expenditure outsourced.

Labour support costs allocations to opex and capex is sourced from:

- ARR Calculations workbook which in turn sourced from 'Labour_Totex_by_Regulatory_Segment workbook'
- These models include the breakdown of support spend allocated to opex and capex and what portion of support spend is allocated to opex only
- For FY25, the mix of support allocated to opex and capex was 49.6% opex, 50.4% capex.
- The total standard control labour costs allocated to opex only was $55.7M.
- Support Allocations takes total Standard Control support costs, less temps, and support allocated to opex only. The remaining is split between opex and capex based on the 50:50 mix. The opex only is then added back to opex, which results in a 57:43 opex/capex mix.

Outsourced labour expenditure

is sourced from:

- Agency_Workings file

- Temp agency costs (GL account 512135 opex) are split between direct opex, direct capex and support opex in same method as in-house labour. Support costs allocated to Standard Control based on the CAM. Allocation of the support costs to opex/capex based on the 50:50 mix.

Non-labour opex and capex was derived by deducting labour expenditure in this table from total opex / capex as shown in Tables 8.4.1 and 8.2.1 of the 2024-25 Annual Reporting RIO.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

No changes to process.

Worksheet: 2.12 Input Tables

Table 2.12.1 - Input Tables

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Actual data has been used. The data is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Data shown in this table has been sourced from ERP.

METHODOLOGY [SECTION 5.2.1 (B)]

The completed CA RIO tables for 2.7 Vegetation Management, 2.8 Routine and Non-Routine Maintenance, 2.9 Emergency Response, 2.6 Non-Network Expenditure, 3.9 Export services and 2.10 Overheads expenditure were extracted.

Each expenditure category was classified by type: materials, labour, contractors and other, based on expenditure types from ERP (extracted from the Finance Golden Dataset). A percentage of the total was calculated for each type. This calculation is in the 2.12_Workpaper_20250915 in the tab Control.4_Opex_by_Expense.

ASSUMPTIONS [SECTION 5.2.1 (C)]

There has been no use of estimated data.

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

Previously, Table 2.12 included total expenditure. However, it now only includes Standard Control Operating expenditure as per the AER's instructions.

Non-Network expenditure has been categorised across labour, materials, contractors and other for FY25, as per AER instructions. Previously all captured in "Other".

In prior years, Table 2.12 contained more granular expense categories (eg. zone substation equipment maintenance, SCADA & network control maintenance). Each of these sub-categories within routine and non-routine maintenance was assumed to have the same splits between labour, materials, contractors and other using the percentages calculated above. The data in Table 2.12 was considered estimated in prior years because of that assumption. This year, Table 2.12 uses broader expense categories (eg. Routine Maintenance, Non-routine Maintenance, Emergency Response, Vegetation Management). For these expense categories, actual data was used.

Worksheet: 4.1 Public Lighting

Table 4.1.1 - Descriptor Metrics Over Year

DATA REPORTING QUALITY

Actual inventory data from WACS was used. The counts reported are dependent on the accuracy of the data within WACS as well as any assumptions.

INFORMATION SOURCE

Actual luminaire and pole/column inventory data has been extracted from the WACS system using a series of SQLs. This extracted data for FY25 only based on the reported IN SERVICE date of the asset. A pivot table was then created and certain filters applied to extract the required data.

ASSUMPTIONS

- The designation of an asset as LUMINAIRE in the LIGHT TYPE column of the STL ASSET DATA is based on the presence of a P/L load table code in the STREETLIGHT ALL ASSETS data.
- The FUNDED BY fields denote the responsibility to maintain the public lighting asset.
- COUNT represents the number of LUMINAIRES with the same PL LOAD TABLE CODE (this is reported as P/L LOAD DESC in the generated STL ASSET DATA sheet).

METHODOLOGY

Create a pivot table for the STL ASSET DATA and then

1. Filter in LIGHT TYPE --> LUMINAIRE
2. Filter in SERVICE STATUS --> IN SERVICE only
3. In RETIRED LIGHT --> select NO only
4. In LIGHTING CATEGORY filter out any QUARANTINED assets
5. Filter in FUNDED BY --> CUSTOMER, CUSTOMER PRE-2009 and EE only
6. Make P/L LOAD DESC a Rows value
7. Take the SUM of the COUNT for each P/L LOAD DESC

ADDITIONAL INFORMATION

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION

Additional light types have been added in the PUBLIC LIGHTING BY LIGHT TYPE column as there are new lights in our system. Redundant light types have also been removed (as this is a reset year). Whilst this has caused problems with comparing trends from last year, all % changes relative to FY24 have been reported and commented on in the commentary section in Rosetta.

Table 4.1.2 - Descriptor Metrics Annually

DATA REPORTING QUALITY

The number of light installations, replacements and maintenance activities was determined from actual activity data in WACS. The counts reported are dependent on the accuracy of the data within WACS as well as any assumptions.

Actual revenue data in this table provides a cost build-up for major and minor light types.

The actual amount of time spent for installations and replacements and the frequency of spot maintenance are based on past failure data and include actual material and labour inputs.

Given the underlying assumptions made in this data, caution should be applied if using the data in the table for benchmarking or decision-making purposes.

INFORMATION SOURCE

Number of major and minor lights and poles installed, replaced or maintained

Actual luminaire and pole/column activity data has been extracted from the WACS system using a series of SQLs. This was designed to extract data for FY25 based on activity completion date, and only extracted data for activities that were completed, closed or finished (so cancelled tasks were not included). A pivot table was then created and certain filters applied (see methodology) to the extracted ACTIVITY DATA sheet to obtain the required data. Assumptions made to obtain the extracted data are reported in the assumptions section below.

The revenue data in this table is estimated from a cost build-up perspective

ASSUMPTIONS

- The designation of an asset to the RIN ASSET TYPE = PUBLIC LIGHTING in the extracted ACTIVITY DATA is based on the association of the asset to a STREETLIGHT asset in WACS.
- The designation of an asset as a DEDICATED SL COLUMN links the pole to the SUPPORT TYPE BILLING codes: S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11 and S17 as well as dedicated streetlight in POLE FUNCTION.
- The designation of an asset as a DEDICATED SL POLE links the pole to the SUPPORT TYPE BILLING codes S12, S13, S14, S15 and S16 in SUPPORT TYPE BILLING, as well as dedicated streetlight in POLE FUNCTION.
- The number of installed lights over FY25 can be reliably captured from the number of activities with the activity code “A395 - Streetlight – install” only in the ACTIVITY DATA extracted from WACS.
- The number of installed poles over FY25 can be reliably captured from the number of activities with the activity code “A393 - Streetlight column – install” only in the ACTIVITY DATA extracted from WACS.
- The number of replaced lights over FY25 can be reliably captured from the number of activities with the activity code: 'A186 – SL luminaire - external bulk replacement', 'A206 - Streetlight – replace ', 'A207 - Streetlight – upgrade ', 'A380 - SL luminaire - internal bulk replacement' and 'A395 - Streetlight – install’.
- The number of replaced poles over FY25 can be reliably captured from the number of activities with the activity code: 'A210 - Streetlight column - replace', 'A393 - Streetlight column - install ' and 'A394 - Streetlight column - upgrade'.
- The number of maintained lights over FY25 can be reliably captured from the number of PUBLIC LIGHTING assets which are NOT associated with the activity codes: A206 - Streetlight – replace, 'A207 - Streetlight – upgrade; 'A380 - SL luminaire - internal bulk replacement', ‘A391 – Streetlight bracket – upgrade’, A393 - Streetlight column - install ', 'A395 - Streetlight – install '' and 'A889 - Night vision luminaire - replace'.
- The number of maintained poles over FY25 can be reliably captured from the number of DEDICATED STREETLIGHT POLES/COLUMN associated with the activity codes: A208 - Streetlight column – remove; A209 - Streetlight column – repair, A317 - Streetlight column – investigate and PINS – Pole Inspection.
- MAJOR ROAD lights are considered those with a P/L light code listed in the Night Patrol PL codes document (see list below). This document reports the major road light types that night patrols are conducted on and aligns with the Operational Standard: Public Lighting Maintenance (CEOS5126.02) – 14th February 2025. All other P/L light codes not listed below are considered MINOR ROAD lights.

Night Patrol P/L Load Table Codes	
HPS0090 - High Pressure Sodium 150	LED0214 - GE Area Lighter Flood Light 150W
HPS0100 - High Pressure Sodium 220	LED0218 - GE Area Lighter Flood Light 240W
HPS0110 - High Pressure Sodium 250	LED0222 - Sirkel Catenary 100W
HPS0120 - High Pressure Sodium 2x250	LED0223 - IGNIS 1 LED 76W 4000K
HPS0160 - High Pressure Sodium 360	LED0240 - GE EVOLVE CAT V LEOPARD 204W
HPS0170 - High Pressure Sodium 400	LED0244 - GE EVOLVE CAT V LEOPARD 122W
HPS0190 - High Pressure Sodium 3x400	LED0268 - 80W Parkville Mk2 4K TOP ENTRY
HPS0250 - High Pressure Sodium 1000	LED0270 - 80W Parkville Mk2 4K SIDE ENTRY
LED0009 - Pecan LED 42w	LED0276 - 150W Parkville Mk2 4K TOP ENTRY
LED0011 - Aldridge LED 105W	LED0293 - GE 80W LED HID Lamp in dec. luminaire
LED0012 - Aldridge LED 198W - Std Distribution	LED0298 - 110W Sylvania SASTA Maximus
LED0013 - Aldridge LED 198W - Forward Distribution	LED0299 - 175W Aldridge VLED Mark II 4000K
LED0014 - Aldridge LED 298W - Std Distribution	LED0500 - HBW 85W LED
LED0090 - LED90	LED0501 - HBW 141W LED
LED0117 - Gerard RoadLED Midi LED 50W 4000K	LPS0050 - Low Pressure Sodium 135
LED0121 - Gerard RoadLED Midi LED 80W 4000K	LPS0060 - Low Pressure Sodium 150
LED0123 - Gerard 80W 4000K + Zhaga	MHC0020 - Metal Hallide (Constant Ctrl Gear) 250
LED0124 - Gerard 80W 4000K + Zhaga Connected	MHC0030 - Metal Hallide (Constant Ctrl Gear) 400
LED0125 - Gerard RoadLED LED 150W 4000K	MHR0010 - Metal Hallide (Reactor Ctrl Gear) 70
LED0127 - Gerard 150W 4000K + Zhaga	MHR0020 - Metal Hallide (Reactor Ctrl Gear) 100
LED0129 - Gerard RoadLED LED 300W 4000K Aeroscreen	MHR0030 - Metal Hallide (Reactor Ctrl Gear) 150
LED0131 - Gerard 300W 4000K Aero + Zhaga	MHR0050 - Metal Hallide (Reactor Ctrl Gear) 175
LED0149 - IGNIS 1 LED 71W 4000K	MHR0060 - Metal Hallide (Reactor Ctrl Gear) 250
LED0153 - IGNIS 1 LED 49W 4000K	MHR0070 - Metal Hallide (Reactor Ctrl Gear) 400
LED0175 - Parkville 80W LED Top Entry	MHR0100 - Metal Hallide (Reactor Ctrl Gear) 1000
LED0179 - Parkville 100W LED Top Entry	MVA0190 - Mercury Vapour 250
LED0183 - Parkville 155W LED Top Entry	MVA0220 - Mercury Vapour 400
LED0187 - Parkville 80W LED Side Entry	MVA0250 - Mercury Vapour 500
LED0195 - Parkville 155W LED Side Entry	MVA0290 - Mercury Vapour 1000
LED0210 - Emilio Catenary 71W	

- The only costs associated with any new streetlights installations are associated with Minor Capital Works (MCW) finance data. Through MCW public lighting customers can request the install of new streetlights; all other costs associated with new light or pole installations are assumed $0 customer funded and deemed as gifted assets.
- The pricing cost builds-up use actual materials, labour, plant, and traffic control inputs.
- Light replacement costs are the same as light installation costs
- Light Maintenance costs are built-up based on planned and unplanned maintenance tasks. Planned maintenance including bulk lamp replacement and night patrol tasks. These costs are relatively constant and known. Unplanned maintenance are all other tasks that are performed when lights are reported to be not working. Historical failure rates for each individual technology are utilised to estimate the unit rate for unplanned maintenance.

METHODOLOGY

Data was extracted from WACS using a series of SQLs with subsequent pivoting of data in Excel to determine final counts.

Built into the logic was extraction of the data for FY25 using the date the activity was closed, and the extraction of completed, closed or finished activities only.

Number of major and minor lights installed, replaced or maintained

Take the ACTIVITY DATA sheet generated by the SQL and create a pivot table.

1. Filter on ACT CODE --> (see assumptions for actual codes to filter in or out)
2. Filter on PUBLIC LIGHTING BY – LUMINAIRES MINOR ROAD only in the RIN TABLE MAPPING column only
3. Take the SUM of CNT to determine total number of minor road lights installed.
4. Filter on PUBLIC LIGHTING BY – LUMINAIRES MAJOR ROAD only in the RIN TABLE MAPPING column only
5. Take the SUM of CNT to determine total number of minor road lights installed.

Number of major and minor lights installed, replaced or maintained

Take the ACTIVITY DATA sheet generated by the SQL and create a pivot table.

1. Filter on ACT CODE --> (see assumptions for actual codes to filter in or out)
2. Filter on PUBLIC LIGHTING BY – POLES/COLUMNS MINOR (and MAJOR) only in the RIN TABLE MAPPING column only
3. Take the GRAND TOTAL SUM of CNT to determine total number of poles installed.

Light or Pole Installation Revenue

From the cost build-up of light installations for major road lights relative to minor roads, a 62:38 % split (or 1.62:1) cost difference in the installation of a major road light was determined.

This was used to split the MCW finance data for streetlight installations into major and minor light costs, to determine a unit rate for minor lights where:

$$\text{Minor road unit cost} = \frac{\text{total MCW finance data for light installations}}{(\text{number of major road installation} \times 1.62)+(\text{number of minor road installations})}$$

The major road unit cost was then determined by the minor road unit cost × 1.62.

Maintenance costs were determined in a similar manner, except maintenance finance data was employed.

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION

Changes in methodology were made due to implementation of WACS. No WASP data was used as the rollover to WACS was completed for this FY. Actual finance data was split as opposed to a reliance on modelled / estimated data from last year, with a more basic split in cost based on major and minor light types only. There was also a change in how major and minor lights were designated, however, the actual effect of this on the data was negligible. E.g. if the same method last year was used, the % change in the major light count was 0.23%, and 0.08% for minor lights.

Table 4.1.3 – Cost Metrics

DATA REPORTING QUALITY

The following sections outline how Essential Energy has ensured that the information provided is consistent with the requirements of the Notice.

INFORMATION SOURCE

The unit cost price obtained from Table 4.1.2 for luminaire installation was used to determine the unit price for each luminaire installation. Each luminaire was designated major or minor based on its P/L Load Code according to the instructions in 4.1.2. The data in this table is considered estimated.

METHODOLOGY & ASSUMPTIONS

Refer to the methodology and assumption for 4.1.2.

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION

Changes in methodology were made due to implementation of WACS. No WASP data was used as the rollover to WACS was completed for this FY. Actual finance data was split as opposed to a reliance on modelled / estimated data from last year, with a more basic split in light installation cost per light type based on the light being a major or minor light type only.

Table 4.1.4 - Public Lighting Metrics by Tariff

DATA REPORTING QUALITY

Actual inventory data from WACS was used. The counts reported are dependent on the accuracy of the data within WACS as well as any assumptions.

INFORMATION SOURCE

Actual luminaire and pole/column inventory data has been extracted from the WACS system using a series of SQLs. This extracted data for FY25 only based on the reported IN SERVICE date of the asset. A pivot table was then created and certain filters applied to extract the required data.

ASSUMPTIONS

- The designation of an asset as LUMINAIRE in the LIGHT TYPE column of the STL ASSET DATA is based on the presence of a P/L load table code in the STREETLIGHT ALL ASSETS data.
- The designation of an asset as BRACKET in the LIGHT TYPE column of the STL ASSET DATA is based on the presence of a BO1 or BO2 in the BRACKET_TYPE_(BILLING) attribute in WACS. This accounts for the fact that not all luminaires have a bracket (these have a BO3 code).
- The designation of an asset as OUTREACH in the LIGHT TYPE column of the STL ASSET DATA is based on the presence of all in the SUPPORT_TYPE_(BILLING) attribute section EXCEPT S18 – Suspended, S19 - Shared or No Pole AND S20 – multiple lights in WACS. This accounts for the fact that not all lights are on dedicated streetlight poles/column (e.g. may be a network pole).
- The FUNDED BY fields denote the responsibility to maintain the public lighting asset.
- Quarantined assets are not included.
- COUNT represents the number of LUMINAIRES with the same PL LOAD TABLE CODE (this is reported as P/L LOAD DESC in the generated STL ASSET DATA sheet).
- Assets were designated energy efficient based on association with light emitting diode (LED) technology, which provides a greater light output for a lower energy input compared to non-LED technology. For luminaires this was determined from the presence of LED0 in the PL LOAD TABLE

CODE attribute in WACS (this is reported as P/L LOAD DESC in the generated STL ASSET DATA sheet). For brackets and poles/columns, if the attached light was energy efficient, the asset was designated energy efficient. Assets not designated energy efficient defaulted to non-energy efficient.

- The suffix -A in the TARIFF CODE refers to OPEX only (maintenance only charge); -C refers to Customer Funded (paid upfront – maintenance only charge); -E refers to Essential Energy funded (maintenance and capital recovery). -P refers to private assets which were not counted here.

METHODOLOGY

Create a pivot table for the STL ASSET DATA and then

1. Filter in SERVICE STATUS --> IN SERVICE only
2. In RETIRED LIGHT --> select NO only
3. In LIGHTING CATEGORY filter out any QUARANTINED assets
4. Filter in FUNDED BY --> CUSTOMER, CUSTOMER PRE-2009 and EE only
5. Filter in LIGHT TYPE --> BRACKET, LUMINAIRE and OUTREACH
6. Make RIN TARIFF CODE a Rows value
7. Take the SUM of the COUNT for each RIN TARIFF CODE

Total revenue values were taken from the Unmetered Supplies (UMS) RIN audit report that pulls actual finance data out of EDDiS. This data is already split by each Business Defined Tariff Category listed in table 4.1.4. From this a proportional split into energy efficiency (or non) was performed as described in assumptions above.

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION

Changes in methodology were made due to implementation of WACS. No WASP data was used as the rollover to WACS was completed for this FY. Actual finance data was split as opposed to a reliance on modelled / estimated data from last year, with a more basic split in cost based on major and minor light types only. In terms of the revenue data, this was obtained in the same way as last year; there was just no split according to energy efficiency in previous years.

Additional categories have been added and/or redundant categories removed from the Business Defined Tariff column for this reset year. Whilst this has caused problems with comparing trends from last year, all % changes relative to FY24 have been reported and commented on in the commentary section in Rosetta.

Worksheet: 4.2 Metering

Table 4.2.1 - Metering Descriptor Metric

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The data includes an apportionment of approximately 50,000 meters into the reported splits based on known meter types. This apportionment is not considered material, and the data can be considered as actual.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

EDDiS - This system is used by metering services, in its capacity as an accredited Meter Provider and Meter Data Provider in the NEM, to store and process meter readings and meter registry information pertaining to chapter 7 of the NER.

METHODOLOGY [SECTION 5.2.1 (B)]

Meter population volumes for 2024-25 have been produced through automated queries from the EDDiS database, with the queries providing total number of meters by type and categories required for completion of this table.

> Type 1-3 meters single phase or multi phase (Actual) - Type 4 meters single phase or multi phase numbers were calculated using meter phases data

> Type 1-3 meters current transformer number (Actual) - Type 4 meters current transformer numbers were calculated using meter amps data

> Type 4 meters (Actual) – Essential Energy has not installed Type 4 (Smart) meters.

> Type 5 meters single phase or multi phase (Actual) - Type 5 meters single phase or multi phase numbers were calculated using meter phases data.

> Type 5 meters current transformer (Actual) - Type 5 meters current transformer numbers were calculated using meter amps data

> Type 6 meters single phase or multi phase (Estimated) - Type 6 meters single phase or multi phase was calculated using the meter model. Each distinct model has a known number of phases. See assumptions

> Type 6 meters current transformer (Estimated) - Type 6 meters current transformer numbers were calculated using a combination of meter model, amps and multiplier. See assumptions

> Type 6 meters direct connect (Estimated) - Type 6 meters direct connect numbers were calculated using a total number of meters minus number of current transformer meters

Note: Meter population numbers are duplicated in the AIO template with details provided by subcategory of Single Phase and Multi Phase Meter Populations and also by subcategory of Current Transformer and Direct

Connect Meter Populations. The sum of Single Phase and Multi Phase meters should equal the sum of Current Transformer and Direct Connect Meter populations.

Some assumptions have been made on type 6 meters to whether some meters are single phase or multi phase due to the Meter Type being unknown.

Some assumptions have also been made on type 6 meters to whether meters are current transformer or direct connect due to minimal data on very old meter model's current ranges.

Unknown meter models would be distributed similar to the known models.

According to ring fencing rules Essential Energy should not be the Meter Provider for Type 1-3 meters. Essential Energy has not been successful in convincing Retailers to transfer these sites away from Essential Energy and as a result still have contestable Type 4 meters installed. Essential Energy is reporting to the AER on its progress transferring these sites away. All but two of the meters are currently on disconnected NMI's.

ASSUMPTIONS [SECTION 5.2.1 (C)]

Some assumptions have also been made on type 6 meters to whether meters are current transformer or direct connect due to minimal data on very old meter model's current ranges.

Unknown meter models would be distributed like the known models.

ADDITIONAL INFORMATION [SECTION 5.2.3]

Essential Energy no longer installs revenue meters.

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

No changes from previous years.

Table 4.2.2 - Cost Metrics

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The totals come from the ERP, PEACE and EDDiS and are considered actual. Best practice methodology has been applied to determine some splits as noted in the Methodology section above.

The totals are considered reliable however caution should be applied if using the specific data for benchmarking or decision-making purposes.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

> EDDiS - This system is used by metering services to store and process meter readings and meter registry information pertaining to chapter 7 of the NER.

> Reports and budgetary information from PeopleSoft, ERP and PEACE. This data was aligned to the Annual Reporting AIO based on mapping provided by SMEs.

The data supplied from EDDiS, ERP and PEACE are considered actuals.

METHODOLOGY [SECTION 5.2.1 (B)]

Reporting for Metering is in line with how the alternative control data for Type 5 & 6 meters.

Meter Purchase
> There have been no meter purchases for Type 5&6. Any meters required for meter maintenance were old stock.

Meter Testing
Volumes and Expenditure
> Meter testing includes the regulatory compliance testing of meters undertaken by Essential Energy in accordance with the NER. Meter testing figures have come from EDDiS for all works orders raised and completed for Meter Testing Activities and are considered actual numbers.

> Information Expenditure for 2024-25 is based on financial reports from ERP. This data has been allocated based on Projects that relate to Meter Testing and are thus considered to be actual information.

Meter Investigation and Special Meter Reading
Volumes for Meter Type 5 and Meter Type 6
> The volumes for the Scheduled Meter Readings are sourced from EDDIS and are considered actual. A report is run and the readings after 30 June 2025 has been removed.

> Type 6 meter reads are actually charged per premise rather than per read. Unit costs are increasing as shown in the table below. This is not evident in table 4-2-2 as it documents the actual type 6 meter read count.

Financial Year	NMI Reads	Cost	Avg cost per NMI read
2025	1,840,326	$9,324,491.00	$5.07
2024	2,266,281	$9,752,008.00	$4.30
2023	2,561,712	$10,000,000.00	$3.90

Expenditure for Meter Type 5

- Information for Type 5 readings is based on the number of Type 5 meters being read remotely on a fortnightly basis. These costs are apportioned based on the volume of sites and the reading frequency. Remote meter reading costs are included in the Type 5 meter reading costs provided under Scheduled Meter Reading. While these meters are set up as Type 5 meters, they are read remotely due to the technical difficulties in probe reading these meters.
- Scheduled meter reading type 5 assumes 26 reads a year per meter with an estimated a cost of $361.90 per meter per year and are considered estimated.
- Estimated cost per meter was calculated using average cost of remotely reading meter and processing data. This includes communications costs and the labour to process the data including validation and forwarding data to MSATS, the Retailer and Network Billing.
- Note: CPI has been applied to uplift the costs of Type 5 meter reading from 2015/16 $s to 2024/25 $s.
- Expenditure for Meter Type 5 Reading should be considered estimated.

Expenditure for Meter Type 6

This information has been sourced from ERP. The data has been extracted based on Projects that relates to Meter Readings and is considered actual data.

New Meter Installs

All data for this section is zero as Essential Energy is no longer authorised to install new meters. New meter installs are conducted by Accredited Service Providers.

Meter Replacement

Meter replacement includes the pro-active replacement of meters that have failed to meet compliance under the NER. There is no information for 2024-25, as the program was suspended as a result of the Power of Choice initiative.

Meter Maintenance

Volumes and Expenditure

- Meter maintenance includes the routine maintenance of meters, including investigation of meters that have suspected to have failed in service. Volume figures are based on the amount of works orders raised and completed for meter maintenance activities. These have been extracted from PEACE and the maintenance activities actioned after 30 June 2025 have been removed. The data is therefore considered to be actuals.
- Essential Energy has no separation between Type 5 and Type 6 maintenance costs with Type 5 costs being included in Type 6 maintenance costs.
- Expenditure Data for 2024-25 has been sourced from ERP and is allocated based on Metering Projects that relate to maintenance. The data reconciles back to Regulatory accounts and is therefore considered actual information.

Expenditure for Other Metering

Other Metering

- Other metering includes costs incurred in the Meter Data Agency section.
- Expenditure for meter type 5 reading being estimated has a non-material effect on the accuracy of other metering expenditure as the overall actual metering costs are actuals, supplied by ERP. Other metering expenditure should be considered actual.
- Expenditure for meter Type 7 is captured in Other Metering Type 6 figure.
- As there are very few Type 4 meters installed and maintained these costs have been included in other metering costs.

ASSUMPTIONS [SECTION 5.2.1 (C)]

Some assumptions have also been made on type 6 meters to whether meters are current transformer or direct connect due to minimal data on very old meter model's current ranges.

Unknown meter models would be distributed like the known models.

ADDITIONAL INFORMATION [SECTION 5.2.3]

Essential Energy no longer installs revenue meters.

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

No changes from previous years.

Worksheet: 4.3 Fee-based services

Table 4.3.1 - Cost Metrics for Fee-Based Services - Direct Expenditure Including Capital Contributions

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

All Volumes & Expenditure are considered as actual.

This data is considered reliable.

A full listing of all Ancillary Network Services can be viewed here;

FY25 Price Schedule

INFORMATION SOURCE [SECTION 5.1.1 (A)]

- SOURCE OF INFORMATION: CWMS & SALESFORCE
    - Reference: 4.3 Ancillary Services - Fee-Based Services excel file
        - CWMS & SalesForce – Rows 18-26, 34
        - SalesForce – Rows 14-17, 33, 35, 63, 66
    - Volume data is sourced from Essential Energy's Contestable Works Management System (CWMS) and connection portal SalesForce and is based on sales volumes. Several services were transitioned from CWMS to SalesForce in FY25; hence volumes are sourced from both systems.
    - Expenditure data is extracted from Oracle Enterprise Resource Planning (ERP).

- SOURCE OF INFORMATION: ERP/PEOPLESOFT
    - Reference: 4.3 Ancillary Services - Fee-Based Services excel file: Rows 33, 62, 65
    - Volume data is sourced from Essential Energy's ERP and PeopleSoft systems via PowerBi reports.

- Expenditure data is extracted from ERP.

- SOURCE OF INFORMATION: CHARGEABLE WORKS DOCKET (CWD)
  - Reference: 4.3 Ancillary Services - Fee-Based Services excel file: Rows 22, 29-31
  - Volume data is sourced from Essential Energy's CWD eForm data base via a PowerBi report and is based on sales volumes.
  - Expenditure data is extracted from ERP.

- SOURCE OF INFORMATION: OUTLOOK
  - 4.3 Ancillary Services - Fee-Based Services excel file: Row 27
  - For cases where Land Registry Services (LRS) conducts the 'Searches' on Essential Energy's behalf, data comes from the invoices LRS send.
  - For cases where Essential Energy conducts the 'Searches' themselves, data comes from Essential Energy's corporate system Outlook.
  - Volumes are based on searches charged and completed.
  - Expenditure Data is extracted from ERP.

- SOURCE OF INFORMATION: PEACE
  - Reference: 4.3 Ancillary Services - Fee-Based Services excel file: Rows 28, 40, 45-61
  - Volume data is based on sales and is extracted from Essential Energy's corporate system Peace via the SQL Server Reporting Services (SSRS) which is a Microsoft server-based report generating software system.
  - Expenditure Data is extracted from ERP.

- SOURCE OF INFORMATION: AUTHORISATION MANAGEMENT SYSTEM
  - Reference: 4.3 Ancillary Services - Fee-Based Services excel file: Rows 41-44
  - Authorisation volume data is extracted from Essential Energy's corporate Authorisation Management system and is based on sales volumes.
  - Expenditure Data is extracted from ERP.

- SOURCE OF INFORMATION: AXCELERATE
  - Reference: 4.3 Ancillary Services - Fee-Based Services excel file: Rows 36-37
  - Authorisation volume data is extracted from Essential Energy's corporate Learning Management system – AXcelerate and is based on sales volumes.
  - Expenditure Data is extracted from ERP.

- SOURCE OF INFORMATION: ORACLE UTILITIES WORK AND ASSET CLOUD SERVICE (WACS)
    - Reference: 4.3 Ancillary Services - Fee-Based Services excel file: Rows 38-39
    - Provision of Security Lighting and Luminaire Glare Shield volume data is extracted from Essential Energy's corporate Asset Management system WACS and is based on tasks completed.
    - Expenditure Data is extracted from ERP.

- SOURCE OF INFORMATION: CUSTOMER INTERACTION MANAGEMENT (CIM) SYSTEM – SERVICENOW DATABASE
    - Reference: 4.3 Ancillary Services - Fee-Based Services excel file: Row 64
    - Volume data is sourced from Essential Energy's Customer Interaction Management (CIM) system – ServiceNow data base via a PowerBi and is based on tasks completed.
    - Expenditure Data is extracted from ERP.

METHODOLOGY [SECTION 5.2.1 (B)]

2.1 Substation Commissioning

2.2 Testing and Commissioning of Streetlights/Mains/Cables/UG Pillars

2.3 Redundant Material Co-ordination

2.4 Commissioning - Other Network Equipment

3.1 Notice of Arrangement

4.3 Connect & disconnect MG to OH/UG mains, switchboard or kiosk

4.3 Install & remove HV LL Links or bonds

4.3 Break & remake LV bonds

13.7 Substation Inspection

- An extract of the FY25 sales volumes is exported from the CWMS and SalesForce PowerBi reports into excel and combined for totals.
- Finance team extract all direct project expenditure data from ERP, map to ANS based on the project fields in excel and send to RIO author.
- RIO author populates RIO table.

3.2 Request for Early Notice of Arrangement

13.4 Inspection Customer Installation – CCEW

24.4 Connection Offer Service - Incomplete Information

24.4 Connection Offer Service - Auto-Approved

24.4 Connection Offer Service - Technical Review

24.8 Pioneer Scheme Administration

- An extract of the FY25 sales volumes is exported from the SalesForce PowerBi report into excel.
- Finance team extract all direct project expenditure data from ERP, map to ANS based on the project fields in excel and send to RIO author.
- RIO author populates RIO table.

13.2Inspection of Service Work (Level 2 ASPs)

- Enterprise Resource Planning (ERP)/Peoplesoft data: Volume data is sourced from Essential Energy's ERP and PeopleSoft systems via PowerBi reports. ERP: Unique project values map to the applicable service to determine volumes. PeopleSoft: Volumes are based on extracting time recorded against standing project number in PeopleSoft.
- SalesForce data: An extract of the FY25 sales volumes is exported from the SalesForce PowerBi report into excel.
- Finance team extract all direct project expenditure data from ERP, map to ANS based on the project fields in excel and send to RIO author.
- RIO author populates RIO table.

4.1 Connections

- CWMS and SalesForce data: An extract of the FY25 sales volumes is exported from the CWMS and SalesForce PowerBi reports into excel and combined for totals.
- Chargeable Works Docket data: An extract of the FY25 sale volumes is exported from the CWD eForm PowerBi report into excel.
- Finance team extract all direct project expenditure data from ERP, map to ANS based on the project fields in excel and send to RIO author.
- RIO author populates RIO table.

8.1 Work Near Electrical Assets - De-Energisation of Mains

8.6 Warning Markers

- An extract of the FY25 sale volumes is exported from the CWD eForm PowerBi report into excel.
- Finance team extract all direct project expenditure data from ERP, map to ANS based on the project fields in excel and send to RIO author.
- RIO author populates RIO table.

8.2 Work Near Electrical Assets - Disable Auto Reclose - Safe Approach Clearances

- Volume data is sourced from Essential Energy's ERP and PeopleSoft systems via PowerBi reports. ERP: Unique project values map to the applicable service to determine volumes. PeopleSoft: Volumes are based on extracting time recorded against standing project number in PeopleSoft.
- Finance team extract all direct project expenditure data from ERP, map to ANS based on the project fields in excel and send to RIO author.
- RIO author populates RIO table.

6.1 Conveyancing Information

- Volume data from LRS and Outlook based on searches charged and completed is consolidated and emailed to Author.
- Finance team extract all direct project expenditure data from ERP, map to ANS based on the project fields in excel and send to RIO author.
- RIO author populates RIO table.

7.1 Site Establishment

30.1 Off-Peak Conversion

26.1 Move In/Move Out Read

26.2 Special Meter Read

26.3 Special Meter Test - 1st

26.4 Special Meter Tests - Additional

26.5 Special Meter Tests - CT Meter

27.2 Unplanned outage – meter HW fault (site attendance)

29.1 Retailer Requested Distributor Planned Interruption - Cancellation After Notification

29.2 Retailer Requested Distributor Planned Interruption - Initial Visit

29.3 Retailer Requested Distributor Planned Interruption - Isolation Completed

4.4 Retailer Requested Distributor Planned Interruption - Early Cancellation

29.5 Retailer Requested Distributor Planned Interruption - MC No Attendance

24.11 Disconnect / reconnect – vacant premise

24.11 Disconnect/Reconnect - Site Visit Only

24.11 Disconnect/Reconnect - Pole Top/Pillar

24.11 Disconnect/Reconnect - Complete

24.11 Disconnection – technical disconnection

24.11 Reconnect - Outside of Normal Business Hours

- An extract of the FY25 sale volumes is exported from a SSRS report into excel.
- Finance team extract all direct project expenditure data from ERP, map to ANS based on the project fields in excel and send to RIO author.
- RIO author populates RIO table.

15.1 Authorisation of ASPs – Authorisation - Initial

15.1 Authorisation of ASPs – Authorisation - Renewal

15.2 ASP Authorisation Agreement - Authorisation Agreement - Initial

15.2 ASP Authorisation Agreement - Authorisation Agreement - Renewal

- An extract of the FY25 sale volumes is exported from AMS into excel and is emailed to Author.
- Finance team extract all direct project expenditure data from ERP, map to ANS based on the project fields in excel and send to RIO author.
- RIO author populates RIO table.

14.1 Provision of Training to ASPs for Network Access

14.3 Provision of Training - Entry into Electrical Stations

An extract of the FY25 sale volumes are exported from AXcelerate into excel and is emailed to Author.

Finance team extract all direct project expenditure data from ERP, map to ANS based on the project fields in excel and send to RIO author.

RIO author populates RIO table.

16.1 Provision of Security Lighting

16.2 Provision of luminaire glareshield

An extract of the FY25 volumes is exported from WACS based on tasks complete into excel and is emailed to Author.

Finance team extract all direct project expenditure data from ERP, map to ANS based on the project fields in excel and send to RIO author.

RIO author populates RIO table.

8.7 High Load Escorts - High Load Permit

An extract of the FY25 volumes is exported from the Customer Interaction Management (CIM) data base PowerBi report into excel.

Volumes are based on service orders raised via CIM.

Finance team extract all direct project expenditure data from ERP, map to ANS based on the project fields in excel and send to RIO author.

RIO author populates RIO table.

ASSUMPTIONS [SECTION 5.2.1 (C)]

NA

ADDITIONAL INFORMATION [SECTION 5.2.3]

NA

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

ANS capital expenditure (capex) has previously been reported under Standard Control (refer table 8.2). With the introduction of the new reporting template from FY25 both operational expenditure (opex) and capex (type 1 capital contributions only) is reported under table 4.3.

Access Permits renamed Connections.

Unplanned outage Ac" meter HW fault (site attendance) re named Unplanned Outage Meter HW Fault (Site Attendance).

Disconnect / reconnect Ac" vacant premise renamed Disconnect/Reconnect - Vacant Premise.

Classified as a Quoted service in the 2019-2024 Regulatory Period. This service is now classified as a Fee-Based Service in the 2024-2029 Regulatory Period.

- 3.2 Request for Early Notice of Arrangement

Classified as a Fee Based service in the 2019-2024 Regulatory Period. This service is now classified as a Quoted Service in the 2024-2029 Regulatory Period.

- 1.1 Design Information
- 1.2 Design Certification
- 1.4 Administration
- 5.1 Sale of Approved Materials/equipment to ASPs
- 8.3 Provision of Traffic Control by the DNSP
- 13.1 Inspection of Construction Work (by Level 1 ASPs)

This is a new service fee introduced in the 2024-29 Regulatory Period.

- 8.7 High Load Escorts - High Load Permit
- 24.4 Connection Offer Service - Incomplete Information

This service does not exist in the 2024-29 Regulatory Period.

- Connection Offer Service - Standard

Worksheet: 4.4 Quoted Services

Table 4.4.1 - Cost Metrics for Quoted Services - Direct Expenditure Including Capital Contributions

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

All Volumes & Expenditure are considered as actual.

This data is considered reliable.

A full listing of all Ancillary Network Services can be viewed here;

FY25 Price Schedule

INFORMATION SOURCE [SECTION 5.1.1 (A)]

SOURCE OF INFORMATION: CWMS & SALESFORCE

Reference: 4.4 Ancillary Services - Quoted Services excel file

CWMS & SalesForce – Rows 9-10, 14, 16-18, 20-21, 23, 30, 40, 42

SalesForce – Rows 12-13, 15, 19, 22, 31, 38-39, 41, 47-48

Volume data is sourced from Essential Energy's Contestable Works Management System (CWMS) and connection portal SalesForce and is based on sales volumes. Several services were transitioned from CWMS to SalesForce in FY25, hence volumes are sourced from both systems.

Expenditure data is extracted from Oracle Enterprise Resource Planning (ERP).

SOURCE OF INFORMATION: ERP/PEOPLESOFT

Reference: 4.4 Ancillary Services - Quoted Services excel file: Rows 11, 24, 26, 32-33, 35-38, 43-44, 49-54, (57)

Volume data is sourced from Essential Energy's ERP and PeopleSoft systems via PowerBi reports.

Expenditure data is extracted from ERP.

SOURCE OF INFORMATION: CHARGEABLE WORKS DOCKET (CWD)

Reference: 4.4 Quoted Service Financials excel file: Rows 18,25-26, 28-29, 34, 45, 51, 56

Volume data is sourced from Essential Energy's CWD eForm data base via a PowerBi report and is based on sales volumes.

Expenditure data is extracted from ERP.

SOURCE OF INFORMATION: CUSTOMER INTERACTION MANAGEMENT (CIM) SYSTEM – SERVICENOW DATABASE

Reference: 4.4 Quoted Service Financials excel file: Row 27

Volume data is sourced from Essential Energy's Customer Interaction Management (CIM) system – ServiceNow data base via a PowerBi and is based on sale volumes.

Expenditure data is extracted from ERP.

SOURCE OF INFORMATION: TOTALSAFE DATABASE

Reference: 4.4 Quoted Service Financials excel file: Row 26

Volume data is sourced from Essential Energy's TotalSafe data base via a PowerBi. The service count is based on third party safety advise requests received during the financial year irrelevant of status.

Expenditure data is extracted from ERP.

SOURCE OF INFORMATION: SPREADSHEET

Reference: 4.4 Quoted Service Financials excel file: Row 55

Volume data is sourced from a spreadsheet register maintained by the Meter Provision team and is based on sale volumes.

Expenditure data is extracted from ERP.

METHODOLOGY [SECTION 5.2.1 (B)]

1.2 Design Certification

1.4 Administration

1.5 Non-Standard Design Approval

3.2 Request for Early Notice of Arrangement

3.3 Completion Notice - Other than Notice of Arrangement

6.3 Services Involved in Obtaining Deeds of Agreement (DOA)

13.3 Re-Inspection of Work of a Service Provider (Level 1 and Level 2 ASPs Work)

24.1 Connections Customer Interface co-ordination – Basic Connections

24.3 Connection/Relocation Process Facilitation

24.6 Additional Services Requested by ASP/Connection Applicant

24.7 Data Gathering Fee - Failure to Provide Documentation

- An extract of the FY25 sales volumes is exported from CWMS and SalesForce PowerBi reports into excel and combined for totals.

Finance team extract all direct project expenditure data from ERP, map to ANS based on the project fields in excel and send to RIO author.

- RIO author populates RIO table.

1.1 Design Information

1.3 Design Consultation

4.4 Rectification of Contestable Work (ASP Installed)

6.2 Easement Processing - Conveyancing Review

6.7 Network-Related Property Disbursement

13.1 Inspection of Construction Work (by Level 1 ASPs)

13.5 Re-inspection Customer Installation – CCEW

24.2 Preliminary Enquiry Service - Basic Enquiry

24.2 Preliminary Enquiry Service - Complex Enquiry

24.5 Planning, Protection and Power Quality Studies - Planning / Protection Studies and Analysis

- An extract of the FY25 sales volumes is exported from the SalesForce PowerBi report into excel.
- Finance team extract all direct project expenditure data from ERP, map to ANS based on the project fields in excel and send to RIO author.
- RIO author populates RIO table.

4.2 Access to Network Assets (standby)

- CWMS and SalesForce data: An extract of the FY25 sales volumes is exported from CWMS and SalesForce PowerBi reports into excel and combined for totals.
- Chargeable Works Docket data: An extract of the FY25 sale volumes is exported from the CWD eForm PowerBi report into excel.
- Finance team extract all direct project expenditure data from ERP, map to ANS based on the project fields in excel and send to RIO author.
- RIO author populates RIO table.

6.6 Legal Review Services - Customer Funded Works

- SalesForce data: An extract of the FY25 sales volumes is exported from the SalesForce PowerBi report into excel.

- ERP data: Volume data is sourced from Essential Energy's ERP system. Unique project values map to the applicable service to determine volumes.
- Finance team extract all direct project expenditure data from ERP, map to ANS based on the project fields in excel and send to RIO author.
- RIO author populates RIO table.

5.1 Sale of Approved Materials/equipment to ASPs

6.4 Development Applications and Encroachment Processing

6.5 Crown Land Acquisition

21.1 Third Party Funded Network Alterations or Other Improvements

21.2 Third Party Funded Network Alterations or Other Improvements - Lighting Services Minor Capital Works (MCW)

23.1 Non-Basic Negotiated Connection

24.1 Connections Customer Interface Co-Ordination - Complex

24.10 Connection Point Management Services

24.11 Reconnections/Disconnections - Illegal Connections

24.5 Planning, Protection and Power Quality Studies - Power Quality Studies

24.9 Application - Complex Connection

O & M - Standard Control

- Volume data is sourced from Essential Energy's ERP and PeopleSoft systems via PowerBi reports. ERP: Unique project values map to the applicable service to determine volumes. PeopleSoft: Volumes are based on extracting time recorded against standing project number in PeopleSoft.
- Finance team extract all direct project expenditure data from ERP, map to ANS based on the project fields in excel and send to RIO author.
- RIO author populates RIO table.

8.3 Provision of Construction Work by DNSP

8.4 Site Safety Supervision

9.4 Rectification Works by EE of Private Asset Aerial Mains Defects

11.1 Planned Interruption - Customer Requested

31.1 Provider of Last Resort Services (POLR)

- An extract of the FY25 sale volumes is exported from the CWD eForm PowerBi report into excel.

Finance team extract all direct project expenditure data from ERP, map to ANS based on the project fields in excel and send to RIO author.

- RIO author populates RIO table.

8.7 High Load Escorts

- An extract of the FY25 volumes is exported from the Customer Interaction Management (CIM) data base PowerBi report into excel.
- Volumes are based on service orders raised via CIM.
- Finance team extract all direct project expenditure data from ERP, map to ANS based on the project fields in excel and send to RIO author.
- RIO author populates RIO table.

8.5 Provision of Construction Work by DNSP

- An extract of the FY25 sale volumes is exported from the CWD eForm PowerBi report into excel.
- ERP data: Volume data is sourced from Essential Energy's ERP system. Unique project values map to the applicable service to determine volumes.
- An extract of the FY25 safety advice request volume is exported from the TotalSafe data base PowerBi report into excel.
- Finance team extract all direct project expenditure data from ERP, map to ANS based on the project fields in excel and send to RIO author.
- RIO author populates RIO table.

22.1 Standard Connection Services

- An extract of the FY25 sale volumes is exported from the CWD eForm PowerBi report into excel.
- ERP data: Volume data is sourced from Essential Energy's ERP system. Unique project values map to the applicable service to determine volumes.
- Finance team extract all direct project expenditure data from ERP, map to ANS based on the project fields in excel and send to RIO author.
- RIO author populates RIO table.

29.7 Retailer Requested Planned Interruption on High Voltage Ct Metering Site, including Testing of Distributer Owned High Voltage Metering Primary and Secondary Plant

- The FY25 sale volumes register is emailed to Author.
- Finance team extract all direct project expenditure data from ERP, map to ANS based on the project fields in excel and send to RIO author.
- RIO author populates RIO table.

ASSUMPTIONS [SECTION 5.2.1 (C)]

NA

ADDITIONAL INFORMATION [SECTION 5.2.3]

NA

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

ANS capital expenditure (capex) has previously been reported under Standard Control (refer table 8.2). With the introduction of the new reporting template from FY25 both operational expenditure (opex) and capex (type 1 capital contributions only) is reported under table 4.3.

Classified as a Quoted service in the 2019-2024 Regulatory Period. This service is now classified as a Fee-Based Service in the 2024-2029 Regulatory Period.

3.2 Request for Early Notice of Arrangement

Classified as a Fee Based service in the 2019-2024 Regulatory Period. This service is now classified as a Quoted Service in the 2024-2029 Regulatory Period.

1.1 Design Information

1.2 Design Certification

1.4 Administration

5.1 Sale of Approved Materials/equipment to ASPs

8.3 Provision of Traffic Control by the DNSP

13.1 Inspection of Construction Work (by Level 1 ASPs)

This is a new service fee introduced in the 2024-29 Regulatory Period.

1.3 Design Consultation

6.7 Network-Related Property Disbursement

21.1 Third Party Funded Network Alterations or Other Improvements

21.2 Third Party Funded Network Alterations or Other Improvements - Lighting Services Minor Capital Works (MCW)

22.1 Standard Connection Services

23.1 Non-Basic Negotiated Connection

24.9 Application - Complex Connection

24.10 Connection Point Management Services

29.7 Retailer Requested Planned Interruption on High Voltage Ct Metering Site, including Testing of Distributer Owned High Voltage Metering Primary and Secondary Plant

31.1 Provider of Last Resort Services (POLR)

This service does not exist in the 2024-29 Regulatory Period.

Design Re-Checking

Design Re-Certification

Part A. Design & Construction of Connection Assets

Non-Standard Connection Services

Worksheet: 5.2 Asset Age Profile

Table 5.2.1 - Asset Age Profile

Poles and Pole Staking

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Essential Energy has used estimated information when an accurate combination of Material and Voltage aligned to the RIO categories was not able to be determined. In these cases asset sub category could not be determined the assets were smeared based on the existing profile.

Any assets without a "Date Installed" have been smeared across the existing asset age profile.

Caution should be applied if using this data for benchmarking or decision-making purposes. The counts reported are dependent on the accuracy of the data within WACS as well as assumptions made as per this Basis of Preparation document for Table 5.2.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

This data has been obtained from Essential Energy's WACS database using SQL and pivoting of data in Excel. Excel was used to calculate MeaN/Average Age and Standard Deviation.

METHODOLOGY [SECTION 5.2.1 (B)]

Asset Type = ('Pole – Timber', 'Pole – Concrete', 'Pole – Metal', 'Pole – Composite', 'Tower')

- Pole Asset Owner = ('Essential Energy', 'Private', 'Unknown') and Pole Site Responsibility <> 'Private Support'. This includes privately owned poles that Essential Energy still inspects and in some cases maintains.
- Service Status = 'In Service' or 'Out of Service' (where it isn't in an Out of Service store location)
- Staked Poles have been determined based on the Pole having a 'Reinforcement' Asset Component attached to it (Status = 'Attached') with an Effective Date prior to the end of the reporting period. Staked poles have only been recorded in their own specified row and have not been included in the other pole voltage/material groupings to ensure no double counting.
- Age is determined from the pole's "Date Installed" (for non-staked poles) or the reinforcement "Effective Date" (for staked poles). Those Poles that do not have a "Date Installed" have been prorated across the existing asset age profile.
- Pole Material categorisation is determined from the pole Asset Type as follows:

ASSET TYPE	MATERIAL
Pole – Timber	Wood
Pole – Concrete	Concrete
Pole – Metal	Steel
Tower	Steel
Pole – Composite	Composite

Voltage categorisation is determined from the pole's "Highest Voltage" as follows:

HIGHEST VOLTAGE	VOLTAGE
Bollard	Other
LV	<= 1kV
11kV	> 1 kV & < = 11 kV

3.3kV	> 1 kV & < = 11 kV
6.25kV	> 1 kV & < = 11 kV
6.6kV	> 1 kV & < = 11 kV
22kV	> 11 kV & < = 22 kV
19.1kV	> 11 kV & < = 22 kV
33kV	> 22 kV & < = 66 kV
66kV	> 22 kV & < = 66 kV
80kV	> 66 kV & < = 132 kV
110kV	> 66 kV & < = 132 kV
132kV	> 66 kV & < = 132 kV
220kV	> 132 kV
330kV	> 132 kV
500kV	> 132 kV

Where an accurate combination of Material and Voltage aligned to the RIO categories was not able to be determined it was categories as 'Unknown' and spread across the existing material/voltage profile (this occurred in 4% of cases).

If the asset voltage is "Bollard – None", it has been included in "Other".

ASSUMPTIONS [SECTION 5.2.1 (C)]

Refer to above.

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Overhead Conductors

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Date Installed (Smallworld Span)

Essential Energy has used a combination of actual and estimated information for the Date Installed attribute of lines. The probability of a record having a valid Date Installed value is greater in the years from 2003 onwards. Although legacy data has been used to fill in these values, valid dates are less likely to be available for lines installed by pre-amalgamation distributors. The collection of this information in the field is extremely difficult.

Assumptions:

1. Various aging techniques have been undertaken by the business to age unknown sections of the network. These undertakings have been adopted in an effort to age the network as accurately as possible.

The reliability of the data in this table is dependent on the accuracy of the data within the GIS Smallworld database and the assumptions and estimations that have been used. Caution should be applied if using this data for benchmarking or decision-making purposes.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

SYSTEM	DATA
Smallworld	Span - Date Installed, Purpose, Operating Voltage, Service Status, Owner, Nominal Length, Geometry (both Centreline and Actual Centreline combined)

A snapshot of the GIS Smallworld data was taken as at 1st July. From this snapshot, service cables are extracted using scripts.

METHODOLOGY [SECTION 5.2.1 (B)]

Smallworld Cables used in the analysis were filtered by:

2. Owner = Essential Energy
3. Operating Voltage exclude services only
4. The Date Installed was converted into financial year. Lengths were summed by financial year and regulatory voltage category, i.e.. 1kV, and entered into the “quantity by year” cells of the table.

5. Where an estimated date installed was unable to be determined for a cable it was classified as 'Unknown'. These 'Unknown' services were then spread across the age classes prior to 2004 according to the age distribution for each voltage category.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

UNDERGROUND CABLES

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Date Installed (Smallworld Cable)

6. Essential Energy has used a combination of actual and estimated information for the Date Installed attribute of lines. The probability of a record having a valid date installed value is greater in the years from 2003 onwards. Although legacy data has been used to fill in these values, valid dates are less likely to be available for lines installed by pre-amalgamation distributors. The collection of this information in the field is extremely difficult.

Assumptions:

7. Various aging techniques have been undertaken by the business to age unknown sections of the network. These undertakings have been adopted in an effort to age the network as accurately as possible.

Some caution should be applied if using this data for benchmarking or decision making purposes.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

SYSTEM	DATA
Smallworld	Cable - Date Installed, Purpose, Operating Voltage, Service Status, Owner, Nominal Length, Geometry (both Centreline and Actual Centreline combined)

A snap of the GIS Smallworld data was taken as at 1st July. From this snapshot, service cables are extracted using scripts.

METHODOLOGY [SECTION 5.2.1 (B)]

Smallworld Cables used in the analysis were filtered by:

8. Owner = Essential Energy
9. Operating Voltage exclude services only

The Date Installed was converted into financial year. Lengths were summed by financial year and regulatory voltage category, i.e. ≤1kV, and entered into the "quantity by year" cells of the table.

10. Where an estimated date installed was unable to be determined for a cable it was classified as 'Unknown'. These 'Unknown' services were then spread across the age classes prior to 2004 according to the age distribution for each voltage category.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

SERVICE LINES

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Date Installed (Smallworld Cable/Span)

Essential Energy has estimated the Date Installed value for services. The location of services has not been uniformly populated in the system until recent years. The Customer, Premise, Substation group has been connecting the Service Point to the network in bulk over the past decade – date installed information was not included as part of this process. The collection of this information in the field is both difficult and practically impossible.

Date installed determined the dates in the below categories and if found, assigned the date in the order of priority below:

11. Known Service Cable Date
12. Land Parcel Registration Date
13. Service Pole Installation Date
14. Substation Installation Date

Any Service Cable that could not be allocated a date was spread across the age classes according to the age distribution.

Assumptions:

15. The land parcel registration date is the date the service was installed and has not been subsequently replaced.
16. The service pole installation date is the date the service was installed and has not been subsequently replaced.
17. The substation installation date is the date the service was installed and has not been subsequently replaced.

Customer Type

Information regarding the customer type that the cable is servicing is not maintained against the cable object in GIS Smallworld. Therefore this information was obtained from the premise information in Peace. If a Service Point in GIS Smallworld had at least one residential Premise joined to it, it was considered residential.

Caution should be applied if using this data for benchmarking or decision making purposes.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

SYSTEM	DATA
WACS	Substations Site - Asset label, Date Constructed
Smallworld	Cable - Date Installed, Purpose, Operating Voltage, Service Status, Owner, Nominal Length, Geometry (both Centreline and Actual Centreline combined), LV Service Type, Parent Substation Service Point – Premise Join

A snapshot of the GIS Smallworld data was taken as at 1st July. From this snapshot, service cables are extracted using scripts.

METHODOLOGY [SECTION 5.2.1 (B)]

Cables used in the analysis:

18. Purpose = all
19. Operating Voltage = LV
20. Owner = Essential Energy
21. LV Service type = Service
22. Service Status = all

In GIS Smallworld, premises are located at an object known as a Service Point. The Smallworld Cable (underground or overhead) connecting the Service Point to the network is attributed as “Service”.

23. For each Service Point find the following information:

a. Date Installed of Service Cable (estimated if required – see below)

b. Customer Type Residential or Business

24. Convert the date installed into financial years. Count the cables by financial year and enter into the “quantity by year” cells of the table for the appropriate category.
25. Data from WACS is used for other date and label information.

NOTE:

Essential Energy does not have any Service lines that are not low voltage.

Essential Energy does not have any Service lines that are complex.

Essential Energy does not have any Service lines of type subdivision.

All Essential Energy Commercial & Industrial customers are low voltage and are therefore connection complexity = Simple.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

TRANSFORMERS

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Essential Energy has used estimated information when there is no 'Date Manufactured' or 'Date Installed' for Transformer asset. This has occurred in 18% of cases. These have been prorated across the existing age profile

Essential Energy has used estimated information when there is no 'Rating (kVA)' for the Transformer as per the logic detailed above. This was required in 16% of cases. The methodology used to estimate the kVA in these instances is considered to provide a reasonable approximation and was determined using averages and most common kVA by Transformer Type. This logic is consistent with previous years.

Caution should be applied if using this data for benchmarking or decision-making purposes. The counts reported are dependent on the accuracy of the data within WACS as well as assumptions made as per this Basis of Preparation document for Table 5.2.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

This data has been obtained from Essential Energy's WACS database using SQL and pivoting of data in Excel. Excel was used to calculate MeaN/Average Age and Standard Deviation.

METHODOLOGY [SECTION 5.2.1 (B)]

Asset Type = ('Power Transformer', 'Transformer', 'Regulator Tank')

Owner = "Essential Energy".

Service Status = 'In Service' or 'Out of Service' (where it isn't in an Out of Service store location)

Includes SWER Isolators and Step Up/Down Transformers. This varies to the method for completion of EB RIO Section 3.5 Physical Assets.

Mounting Type for the RIO Category has been determined from the Asset Type, Power Transformer Type (for Power Transformers) and parent Substation Site Construction Type (for Transformers) as follows:

ASSET TYPE	POWER TRANSFORMER TYPE	CONSTRUCTION TYPE	MOUNTING TYPE
Power Transformer	Regulator	NA	Other
Regulator Tank	NA	NA	Other
Power Transformer	NA	NA	Ground Outdoor/Indoor Chamber Mounted
Transformer	NA	Pole Substation	Pole Mounted
Transformer	NA	2 Pole Platform Substation	Pole Mounted
Transformer	NA	Supported Platform Substation	Pole Mounted
Transformer	NA	Ground Substation	Ground Outdoor/Indoor Chamber Mounted
Transformer	NA	Chamber Substation	Ground Outdoor/Indoor Chamber Mounted
Transformer	NA	Pad/Kiosk Substation	Kiosk Mounted
All Others	All Others	All Others	Pole Mounted

Voltage for the RIO Category has been determined from the Mounting Type (determined above) and the transformer's "Primary Voltage" as follows:

MOUNTING TYPE	PRIMARY VOLTAGE	VOLTAGE
Pole Mounted Kiosk Mounted	LV 3.3kV 6.35kV 6.6kV 11kV 12.7kV 19.1kV 22kV NULL or Unknown	<=22kV
Ground Outdoor/Indoor Chamber Mounted	LV 3.3kV 6.35kV 6.6kV 11kV 12.7kV 19.1kV NULL or Unknown	<22kV
	22kV 33kV	>=22kV and <=33kV
	66kV	>33kV & <=66kV
	110kV 132kV	>66kV and <=132kV
	220kV 500kV	>132kV

kVA for the RIO Category has been obtained from the Transformer's 'Rating (kVA)' attribute that forms part of its Engineering Specification (for Asset Type 'Transformer') or the Power Transformer's 'Max Rating (MVA)' attribute. If this is blank or 0, then kVA has been derived as follows:

'Ground Outdoor/Indoor Chamber Mounted' Mounting Type = 1000kVA

'Kiosk Mounted' Mounting Type = 500kVA

All Others (e.g. 'Pole Mounted') based on phases:

Multiple Phase = 63kVA

Single Phase = 10kVA

For larger transformers (Ground and Chamber >= 22kV), the kVA determined above has been converted to MVA by dividing by 1000 for input into the RIO template.

Phases was determined based on the asset 'Phases' attribute as follows:

"HV1" or "SWER" = Single Phase

Else Multiple Phase

Year has been obtained from the Transformer's 'Date Manufactured' attribute. If this is not available then Transformer's 'Install Date' has been used. Transformers that do not have a Date Manufactured or an Install Date have been prorated across the existing asset age profile.

ASSUMPTIONS [SECTION 5.2.1 (C)]

n/a

ADDITIONAL INFORMATION [SECTION 5.2.3]

n/a

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

n/a

SWITCHGEAR

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Essential Energy has estimated information for:

26. The asset's age when there is no 'Date Manufactured' or 'Date Installed' attribute for that asset. If neither of these dates were available to determine age, then the assets were prorated as per the existing age profile. This was required in 8% of cases.
27. The asset's voltage where 'Primary Voltage' is blank or 'Unknown'. In these cases the query navigates up the asset hierarchy (e.g. parent Site) and selects the first non-NULL voltage. If Voltage is unable to be determined via this method then it is assumed to be 11kV.
28. LV fuses that are considered part of pole mounted Substation Sites and are not discretely recorded in WACS have been entirely estimated based on knowledge of the network and existing data in WACS.
29. For noting:
    - HV fuses on pole mounted substations sites have been added into WACS and are no longer estimated (were estimated prior to FY21).
    - HV and LV fuses and switches at ground mounted sites were created as part of migration from WACS to WACS and therefore are no longer estimated (were estimated prior to FY24).

Caution should be applied if using this data for benchmarking or decision-making purposes. The counts reported are dependent on the accuracy of the data within WACS as well as assumptions made as per this Basis of Preparation document for Table 5.2.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

This data has been obtained from Essential Energy's WACS database using SQL and pivoting of data in Excel. Excel was used to calculate MeaN/Average Age and Standard Deviation.

METHODOLOGY [SECTION 5.2.1 (B)]

> Profile was determined in three parts:

30. Zone Substations Switchgear and Distribution Standalone Switchgear (doesn't include LV/HV switchgear at Distribution Substation Sites) recorded in WACS
31. Switchgear at Ground Mounted Distribution Substation Sites record in WACS (recorded as components of LV and HV Switchgear at Distribution Gound Mounted Substation Sites)
32. Estimate Switchgear that are part of Pole Mounted Distribution Substation Sites (not discretely recorded in WACS)

The results from these queries/estimations were then combined. The SQL logic for each of these three parts is detailed below:

1. Zone Substations Switchgear and Distribution Standalone Switchgear recorded in WACS

Asset Types = Recloser Tank, Sectionaliser Set, Sectionaliser Tank, Fuse Set, Fuser Saver Set, Link, Link Set, Air Break Switch, Load Break Switch, Circuit Breaker - Gas, Circuit Breaker - Oil, Circuit Breaker - Other, Earth Switch, Fault Thrower - Mechanical Arm, Fault Thrower – CB

Owner = "Essential Energy".

Service Status = 'In Service' or 'Out of Service' (where it isn't in an Out of Service store location)

Voltage for RIO Category has been determined from the asset's 'Primary Voltage'. If the asset voltage is blank or 'Unknown' then the query navigates up the asset hierarchy (e.g. parent Site) and selects the first non-NULL voltage. If Voltage is unable to be determined via this method then it is assumed to be 11kV.

Asset Category for RIO Category has been determined from the Asset Type and Primary Voltage (determined above) as follows:

ASSET TYPE	VOLTAGE	ASSET CATEGORY
Fuse Set Fuse Saver Set	LV 3.3kV 6.35kV 6.6kV 11kV 12.7kV 19.1kV	Fuse

Fuse Set Fuse Saver Set	All Others	Switch
Recloser Tank Circuit Breaker – Gas Circuit Breaker – Oil Circuit Breaker – Other	NA	Circuit Breaker
All Others: Sectionaliser Set Sectionaliser Tank Link Set Air Break Switch Load Break Switch Earth Switch Fault Thrower – Mechanical Arm Fault Thrower – CB	NA	Switch

Year has been obtained from the asset's 'Date Manufactured' attribute. If this is not available then asset's 'Install Date' has been used. Assets that do not have a Date Manufactured or an Install Date have been prorated across the existing asset age profile.

2. Switchgear at Ground Mounted Distribution Substation Sites record in WACS
   - Asset Types = Fuse Switch, Circuit Breaker, Link Switch, Cable Switch
   - Parent Location = Cubicle, Distribution Substation Site
   - Owner = "Essential Energy".
   - Service Status = 'In Service' or 'Out of Service' (where it isn't in an Out of Service store location)
   - Voltage for RIO Category has been determined from the asset's 'Primary Voltage'. If the asset voltage is blank or 'Unknown' then the query navigates up the asset hierarchy (e.g. parent Site) and selects the first non-NULL voltage. If Voltage is unable to be determined via this method then it is assumed to be 11kV.
   - Asset Category for RIO Category has been determined from the Asset Type and Primary Voltage (determined above) as follows:

ASSET TYPE	VOLTAGE	ASSET CATEGORY
Fuse Switch	LV 3.3kV 6.35kV 6.6kV 11kV 12.7kV 19.1kV	Fuse
Fuse Switch	All Others	Switch
Circuit Breaker – Component	NA	Circuit Breaker
Link Switch Cable Switch	NA	Switch

> Year has been obtained from the asset's 'Date Manufactured' attribute. If this is not available then asset's 'Install Date' has been used. Assets that do not have a Date Manufactured or an Install Date have been prorated across the existing asset age profile.

3. Estimate Switchgear that are part of Pole Mounted Distribution Substation Sites

LV Fuses and Switches that are part of pole mounted substation sites are not typically discreetly recorded in WACS. These were estimated as follows:

33. Step 1: The quantity of pole mounted substation sites was determined from WACS.
34. Step 2: Based on the existing configuration of substation sites across Essential Energy's network it was determined that on average there are 2.5 fuses per substation site (1.5 LV fuses and 1 HV fuse per substation site) in urban areas and 2 fuses per substation site (1 LV fuse and 1 HV fuse per substation site) in rural areas.

URBAN / RURAL	# LV FUSES ESTIMATED
Urban	1.5 x qty of pole mounted substations that have an 'Urban/Rural' attribute of 'Urban'
Rural	1 x qty of pole mounted substations that have an 'Urban/Rural' attribute of 'Rural

ASSUMPTIONS [SECTION 5.2.1 (C)]

Refer to above.

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

PUBLIC LIGHTING

DATA REPORTING QUALITY

This data has been extracted from WACS which provides a true set of data. Although this data is considered reliable, some caution should be applied if using this data for benchmarking or decision-making purposes.

Any dedicated streetlight poles without a "Date Installed" have been prorated across the existing asset age profile (this occurred in 1% of cases).

Caution should be applied if using this data for benchmarking or decision-making purposes. The counts reported are dependent on the accuracy of the data within WACS as well as assumptions made as per this Basis of Preparation document for Table 5.2.

INFORMATION SOURCE

The same methodological basis as last year was used to extract the data. Data was extracted from WACS using a series of SQLs with subsequent pivoting of data in Excel to determine final counts.

Built into the logic was extraction of the data for FY25 only using the "in service date" of the asset with the inclusion of in-service assets only, and assets owned and maintained, or maintained only, by Essential Energy. Quarantined assets were also excluded.

ASSUMPTIONS

The 'Funded By' field denotes the responsibility to maintain the public lighting asset.

Assets with the same 'Asset Label' are unique poles in different vicinities.

A major road asset was determined from the presence of a luminaire with a P/L light code listed in the Night Patrol PL codes document (see list below). This document reports the major road light types that night patrols are conducted on and aligns with the Operational Standard: Public Lighting Maintenance (CEOS5126.02) – 14th February 2025.

Night Patrol P/L Load Table Codes	
HPS0090 - High Pressure Sodium 150	LED0214 - GE Area Lighter Flood Light 150W
HPS0100 - High Pressure Sodium 220	LED0218 - GE Area Lighter Flood Light 240W
HPS0110 - High Pressure Sodium 250	LED0222 - Sirkel Catenary 100W
HPS0120 - High Pressure Sodium 2x250	LED0223 - IGNIS 1 LED 76W 4000K
HPS0160 - High Pressure Sodium 360	LED0240 - GE EVOLVE CAT V LEOPARD 204W
HPS0170 - High Pressure Sodium 400	LED0244 - GE EVOLVE CAT V LEOPARD 122W
HPS0190 - High Pressure Sodium 3x400	LED0268 - 80W Parkville Mk2 4K TOP ENTRY
HPS0250 - High Pressure Sodium 1000	LED0270 - 80W Parkville Mk2 4K SIDE ENTRY
LED0009 - Pecan LED 42w	LED0276 - 150W Parkville Mk2 4K TOP ENTRY
LED0011 - Aldridge LED 105W	LED0293 - GE 80W LED HID Lamp in dec. luminaire
LED0012 - Aldridge LED 198W - Std Distribution	LED0298 - 110W Sylvania SASTA Maximus
LED0013 - Aldridge LED 198W - Forward Distribution	LED0299 - 175W Aldridge VLED Mark II 4000K
LED0014 - Aldridge LED 298W - Std Distribution	LED0500 - HBW 85W LED
LED0090 - LED90	LED0501 - HBW 141W LED
LED0117 - Gerard RoadLED Midi LED 50W 4000K	LPS0050 - Low Pressure Sodium 135
LED0121 - Gerard RoadLED Midi LED 80W 4000K	LPS0060 - Low Pressure Sodium 150
LED0123 - Gerard 80W 4000K + Zhaga	MHC0020 - Metal Hallide (Constant Ctrl Gear) 250
LED0124 - Gerard 80W 4000K + Zhaga Connected	MHC0030 - Metal Hallide (Constant Ctrl Gear) 400
LED0125 - Gerard RoadLED LED 150W 4000K	MHR0010 - Metal Hallide (Reactor Ctrl Gear) 70
LED0127 - Gerard 150W 4000K + Zhaga	MHR0020 - Metal Hallide (Reactor Ctrl Gear) 100
LED0129 - Gerard RoadLED LED 300W 4000K Aeroscreen	MHR0030 - Metal Hallide (Reactor Ctrl Gear) 150
LED0131 - Gerard 300W 4000K Aero + Zhaga	MHR0050 - Metal Hallide (Reactor Ctrl Gear) 175
LED0149 - IGNIS 1 LED 71W 4000K	MHR0060 - Metal Hallide (Reactor Ctrl Gear) 250
LED0153 - IGNIS 1 LED 49W 4000K	MHR0070 - Metal Hallide (Reactor Ctrl Gear) 400
LED0175 - Parkville 80W LED Top Entry	MHR0100 - Metal Hallide (Reactor Ctrl Gear) 1000
LED0179 - Parkville 100W LED Top Entry	MVA0190 - Mercury Vapour 250
LED0183 - Parkville 155W LED Top Entry	MVA0220 - Mercury Vapour 400
LED0187 - Parkville 80W LED Side Entry	MVA0250 - Mercury Vapour 500
LED0195 - Parkville 155W LED Side Entry	MVA0290 - Mercury Vapour 1000
LED0210 - Emilio Catenary 71W	

The ‘luminaire effective date’ represents the date of installation of a luminaire and as such is assumed to be new as at the time of installation and the age of the asset is calculated from this date.

The ‘bracket effective date’ represents the date of installation of a bracket and as such is assumed to be new as at the time of installation and the age of the asset is calculated from this date.

The ‘support effective date’ represents the date of installation of a dedicated pole/column and as such is assumed to be new as at the time of installation and the age of the asset is calculated from this date.

Additional filtering was applied to the ‘Bracket Type Billing’ attribute to exclude assets listed as ‘B03 – no bracket’ as these do not require the use of a bracket.

The volume of major road luminaires or brackets was determined by summing the unique WACS ID for any attached streetlights with a P/L Load Table code listed in the Night Patrol P/L Load Table Code table above. Any asset associated with a P/L load table codes that is not listed in the table above is considered a minor road asset. Once identified as minor from the P/L load table code, the volume of luminaire or brackets on minor roads was determined by summation of the unique WACS ID.

METHODOLOGY

Luminaries and Brackets (no lamps since LED rollout)

SQL Logic:

- Identify asset as luminaire or bracket in Light type column. For luminaires, the designation is based on the presence of a P/L load table code in the STREETLIGHT ALL ASSETS data. For brackets, this is

based on the presence of a BRACKET BILLLING CODE of B01 or B02 only (so B03 representing no bracket is not included) in the STREETLIGHT ALL ASSETS data.

- Asset is listed as IN SERVICE in STREETLIGHT ASSET DATA.
- Lighting Category isn't associated with QUARANTINED asset
- Luminaire funded by field = Customer, Customer-Pre 2009 or Essential Energy only
- The install year is determined from the asset's "Effective date" attribute.

For Poles

SQL Logic:

- Identify poles considered to be Dedicated Streetlight Poles/Columns Asset
- Asset Type = ('Pole – Timber', 'Pole – Concrete', 'Pole – Metal', 'Pole – Composite', 'Tower')
- Pole Asset Owner = ('Essential Energy', 'Private', 'Unknown') and Pole Site Responsibility <> 'Private Support'
- Pole has a Streetlight asset attached
- Pole Function = ('Dedicated Streetlight', 'Bollard Pole', 'LV Pole', 'Unknown', 'Wildlife Pole', 'Training yard pole') (excludes HV, Transmission and Communications poles)
- Pole 'In Service Date' and 'Created Date' were prior to the end of reporting period
- Pole Service Status = 'In Service' or 'Out of Service' (where it isn't in an Out of Service store location)
- Streetlight attached has a Dedicated Support Type <> 'Shared or No Pole'
- Streetlight attached has a Lighting Category <> ('Metered Light', 'Private Lighting', 'Under Awning Lighting')
- Streetlight attached Lantern Funded By = ('Customer', 'Customer Pre-2009', 'Essential Energy') or NULL (excludes Private and Metered Lights)
- Streetlight attached Support Funded By = ('Customer', 'Essential Energy') or NULL (excludes Private and Metered Lights)
- Streetlight attached Support Type Billing <> ('S19 – Shared or No Pole', 'S20 – Multiple Lights') and not like 'S18%'
- Select major (or minor) as required. Note that the split between major and minor was determined from the associated luminaire on the asset, using the same method reported for luminaires and brackets.
- The install year is determined from the pole's "Date Installed" attribute. Those Poles that do not have a "Date Installed" have been pro-rated across the existing asset age profile.

ADDITIONAL INFORMATION

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION

Just a minor change is how minor and major assets were assigned. Last year this was based on wattage, whist this year is it determined using the P/L load table code associated with the asset. The overall impact on the data is a < 1% change. In addition to this, whilst the same methodological basis as last year was used to extract the data, public lighting asset data was extracted using SQL logic this year to capture all dedicate streetlight pole asset data, as the downloadable streetlighting reports from WACS do not include all pole activity data.

SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS

SCADA and Network Control

Compliance with Requirements of the Notice

The information provided shows the age profile of Essential Energy owned zone substation SCADA Remote Terminal Units ("RTU"s) that are currently in use.

Source of Information

This data has been obtained from the SCADA by region spreadsheet. Assets captured in this category are those which have a sole purpose of providing SCADA and Network Control functionality to zone substations. Assets used to provide communication services to pole top devices are not included.

Methodology & Assumptions

Age profile is the age of RTUs as recorded in the SCADA by region Spreadsheet

Use of Estimated Information

The age of the zone substation SCADA has been entirely estimated based on the install date of the RTUs.

RTU's where the age is not known have been spread across the age profile.

Reliability of Information

Caution should be exercised when using this data for decision making or benchmarking purposes.

Communications Network Assets

Compliance with Requirements of the Notice

The information provided shows the age profile of Essential Energy owned Communications Assets installed.

Source of Information

This data was derived from the ages of devices found in the ASM CMDB and the Telecommunications Rules of Engagement document (Maintenance contract ROE).

The asset information is cross referenced with Cisco Prime or other relevant Network Management Tools.

Methodology & Assumptions

Calculate Age of Asset from install date on ASM CMDB or ROE (If Age of Asset is unknown use asset average age)

Use of Estimated Information

Plant where the age is not known have been spread across the age profile of that asset.

Reliability of Information

Although this data is considered reliable, some caution should be applied if using this data for benchmarking or decision-making purposes.

AFLC (Audio Frequency Load Control also known as Load Control Plant or Frequency Injection)

Compliance with Requirements of the Notice

The information provided shows the age profile of Essential Energy owned AFLC plants installed.

Source of Information

This data was derived from the last year's data and knowledge that no FI plant replacements have been made.

Methodology & Assumptions

The age of the controller is a representation of the age of the plant.

Reliability of Information

Caution should be exercised when using this data for decision making or benchmarking purposes.

OTHER

Other - Zone Substation Property

Compliance with Requirements of the Notice

The information provided shows the number of Essential Energy owned Zone Substation Sites.

Source of Information

This data has been obtained from Essential Energy's WACS database using SQL and pivoting of data in Excel. Excel was used to calculate MeaN/Average Age and Standard Deviation.

Methodology & Assumptions

SQL Logic:

35. Asset Type = 'Zone Substation'
36. Owner = 'Essential Energy'
37. Service Status = 'In Service' or 'Out of Service' (where it isn't in an Out of Service store location)
38. Zone Substation Type <> FI Plant, Privately Owned, Other
39. Age is obtained from site's 'Date Manufactured'. If this is not available, then the 'Install Date' attribute is used.
40. Those assets where age cannot be estimated are distributed across the existing asset age profile.

Use of Estimated Information

Any Zone Substations without a 'Date Manufactured' or 'Install Date' have been prorated across the existing asset age profile (this occurred in 8% of cases).

Reliability of Information

Total volumes are considered to be actual, and reliable. Caution should be applied if using this data for benchmarking or decision-making purposes. The asset ages reported are dependent on the accuracy of the data within WACS as well as assumptions made as per this Basis of Preparation document for Table 5.2.

Other - Zone Substation Batteries

Compliance with Requirements of the Notice

The information provided shows the number of Essential Energy owned Zone Substation Batteries.

Source of Information

This data has been obtained from Essential Energy's WACS database using SQL and pivoting of data in Excel. Excel was used to calculate MeaN/Average Age and Standard Deviation.

Methodology & Assumptions

SQL Logic:

41. Asset Type = 'Battery Bank'
42. Owner = 'Essential Energy'
43. Service Status = 'In Service' or 'Out of Service' (where it isn't in an Out of Service store location)
44. Parent Location <> 'Comms Site', 'SAPS' (ignore Battery Banks associated with Telecommunications or Stand Alone Power Systems)
45. Age is obtained from site's 'Date Manufactured'. If this is not available, then the 'Install Date' attribute is used.
46. Those assets where age cannot be estimated are distributed across the existing asset age profile.

Use of Estimated Information

Any Zone Substation Batteries without a 'Date Manufactured' or 'Install Date' have been prorated across the existing asset age profile (this occurred in 1% of cases).

Reliability of Information

Total volumes are considered to be actual, and reliable. Caution should be applied if using this data for benchmarking or decision-making purposes. The asset ages reported are dependent on the accuracy of the data within WACS as well as assumptions made as per this Basis of Preparation document for Table 5.2.

Other - Zone Substation Current Transformers

Compliance with Requirements of the Notice

The information provided shows the number of Essential Energy owned Zone Substation Current Transformers.

Source of Information

This data has been obtained from Essential Energy's WACS database using SQL and pivoting of data in Excel. Excel was used to calculate MeaN/Average Age and Standard Deviation.

Methodology & Assumptions

SQL Logic:

47. Asset Type = 'Current Transformer'
48. Owner = 'Essential Energy'
49. Service Status = 'In Service' or 'Out of Service' (where it isn't in an Out of Service store location)
50. Age is obtained from site's 'Date Manufactured'. If this is not available, then the 'Install Date' attribute is used.
51. Those assets where age cannot be estimated are distributed across the existing asset age profile.

Use of Estimated Information

Any Zone Substation Current Transformers without a 'Date Manufactured' or 'Install Date' have been prorated across the existing asset age profile (this occurred in 4% of cases).

Reliability of Information

Total volumes are considered to be actual, and reliable. Caution should be applied if using this data for benchmarking or decision-making purposes. The asset ages reported are dependent on the accuracy of the data within WACS as well as assumptions made as per this Basis of Preparation document for Table 5.2.

Other - Zone Substation Voltage Transformers

Compliance with Requirements of the Notice

The information provided shows the number of Essential Energy owned Zone Substation Voltage Transformers.

Source of Information

This data has been obtained from Essential Energy's WACS database using SQL and pivoting of data in Excel. Excel was used to calculate MeaN/Average Age and Standard Deviation.

Methodology & Assumptions

SQL Logic:

52. Asset Type = 'Voltage Transformer'
53. Owner = 'Essential Energy'
54. Service Status = 'In Service' or 'Out of Service' (where it isn't in an Out of Service store location)
55. Age is obtained from site's 'Date Manufactured'. If this is not available, then the 'Install Date' attribute is used.
56. Those assets where age cannot be estimated are distributed across the existing asset age profile.

Use of Estimated Information

Any Zone Substation Voltage Transformers without a 'Date Manufactured' or 'Install Date' have been prorated across the existing asset age profile (this occurred in 1% of cases).

Reliability of Information

Total volumes are considered to be actual, and reliable. Caution should be applied if using this data for benchmarking or decision-making purposes. The asset ages reported are dependent on the accuracy of the data within WACS as well as assumptions made as per this Basis of Preparation document for Table 5.2.

Other - Zone Substation Surge Diverters

Compliance with Requirements of the Notice

The information provided shows the number of Essential Energy owned Zone Substation Surge Diverter (count is done at the Arrester Set level).

Source of Information

This data has been obtained from Essential Energy's WACS database using SQL and pivoting of data in Excel. Excel was used to calculate MeaN/Average Age and Standard Deviation.

METHODOLOGY & ASSUMPTIONS

SQL Logic:

57. Asset Type = 'Arrester Set
58. Owner = 'Essential Energy'
59. Service Status = 'In Service' or 'Out of Service' (where it isn't in an Out of Service store location)
60. Age is obtained from the oldest children Arrester component. If this is not available, then the 'Install Date' attribute on the Arrester Set is used.
61. Those assets where age cannot be estimated are assumed to be installed in the last 20 years and distributed across the last 20 years as per the existing asset age profile.

USE OF ESTIMATED INFORMATION

Any Zone Substation Voltage Transformers without a 'Date Manufactured' or 'Install Date' have been prorated across the existing asset age profile (this occurred in 28% of cases).

RELIABILITY OF INFORMATION

Total volumes are considered to be actual, and reliable. Caution should be applied if using this data for benchmarking or decision-making purposes. The asset ages reported are dependent on the accuracy of the data within WACS as well as assumptions made as per this Basis of Preparation document for Table 5.2.

Other - Zone Substation Protection Relays

Compliance with Requirements of the Notice

The information provided shows the number of Essential Energy owned Zone Substation Protection Relays that are currently in use.

Source of Information

This data has been obtained from Essential Energy's PSA Power APP using a Power BI report to fetch the data, which is then exported to Excel.

Methodology & Assumptions

SQL Logic:

62. Includes assets categorised in PSA Power App as "ZS Relay".
63. Only Essential Energy assets included.

Use of Estimated Information

This is actual data from PSA Power App for category ZS Relay, filtered to include only protection relays and where the age of the Zone Substation Protection Relays is not known it is based on knowledge of the network and existing data in PSA Power App, and for relays with no age data is estimate by spreading the unknown ages across the population.

Reliability of Information

Although this data is considered reliable, some caution should be applied if using this data for benchmarking or decision making purposes.

Frequency Injection Relays

Compliance with Requirements of the Notice

The information provided shows an estimate of the age profile of Essential Energy owned frequency injection relays.

Source of Information

This data has been obtained by updating the previous age profile based on number of relays replaced. There is no system which records the ages of frequency injection relays.

Methodology & Assumptions

Previous age profile was updated using data of number of relays used from stores by EE staff and contractors as replacements. It is assumed the oldest relays are being replaced. Additionally Origin Energy has disconnected some EE owned FI relays and the age profile has been reduced by this number of relays. Number of load control customers has reduced, and the age profile adjusted accordingly. The reductions in relay numbers due to Origin actions and customer reductions has been assumed to be even across the age profile.

Use of Estimated Information

See above.

Reliability of Information

Caution should be exercised when using this data for decision making or benchmarking purposes.

Other - Type 5 & 6 Meters Installed

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Total volumes are considered to be actual, and reliable. However, we note that some volumes in the more past years may not be entirely accurate and the age may have been estimated for these early years.

Type 6 meters have only been tracked in EDDiS since 2002. Before 2002 limited meter standing data was held in Essential Energy's and its predecessors billing systems.

Since 2002 all meters purchased have been loaded into EDDiS with their standing data upon receipt. One of the fields populated is the year of manufacture. When the meter was installed by the ASP the meter change would be updated in PEACE which would automatically update EDDiS where the meter standing data would be matched up with the meter installation details.

As a result, the year of manufacture data for meters installed since 2002 is complete and accurate, but the dates for meters installed before 2002 has been estimated.

The estimation of year of manufacture dates were calculated utilising data supplied by the meter manufacturers. The manufacturers supplied the years each of the meter models were manufactured. Each meter model was then evenly distributed within those years. EDDiS meter records were permanently update with this data to allow reporting from a common data set.

When reporting on these meters the UNKNOWN meter model meters are distributed in the same proportions as the known meter model meters.

As result of this estimation the year of manufacture is only accurate to the level of the period of each model's manufacture. Data at any lower resolution is affected by chance.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

This data has been obtained from:

> Essential Energy's EDDiS database using SQL.

> Grouping of data in Excel.

> Assets captured in this category are those which have a purpose of providing billing consumption. Assets used to provide power quality information and not used for billing consumption information have not been included in this section.

METHODOLOGY [SECTION 5.2.1 (B)]

SQL logic:

> Only Essential Energy assets included.

> Meters are connected to a current market NMI.

> The meters have a meter install code of MRIM or Basic.

The meter install data shows meters installed by calendar year, eg. 2017-18 shows meters installed in the 2018 calendar year.

ASSUMPTIONS [SECTION 5.2.1 (C)]

The reliability of the data in this table is dependent on the accuracy of the data within the EDDiS database and the assumptions and estimations that have been used. Caution should be applied if using this data for benchmarking or decision-making purposes.

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 5.3 MD - Network level

Table 5.3.1 Maximum Demand Characteristics

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Actual data was used for determining the maximum demand, generation and applicable dates.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

The data is based on the maximum network demand as per the Annual Regulatory Accounts and what was reported in the Economic Benchmarking RIO.

The network level maximum demand is sourced from the half hourly Bulk Supply Point and Embedded Generator NMIs (from EDDiS via Spotfire).

METHODOLOGY [SECTION 5.2.1 (B)]

The maximum network demand is determined by the sum of Essential Energy's Bulk Supply Points, Cross Border Supplies, and the inclusion of the Embedded Generators load at a half hourly level. From the half hourly data, the Maximum Demand is determined with the date and time recorded. The actual dates and times of the occurrence have been reported in this table.

ASSUMPTIONS [SECTION 5.2.1 (C)]

Actual data was used and is considered reliable.

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 5.4 MD & utilisation - spatial

Table 5.4.1 Non-Coincident & Coincident Maximum Demand - Subtransmission Substation & Zone Substation

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Data is actual.

The Weather corrected 10% and 50% POEs are based on best practise methodology in line with AER guidelines and although some calculations are performed it is considered to meet the requirements of actual information.

Most data for the 2024/25 year has been gathered from raw metering data and is therefore considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

The individual STS data and individual zone substation data was obtained from demand meters (via EDDIS) and from SCADA. The calculation of weather corrected POE values requires weather station temperature measurements or daily maximum temperatures.

METHODOLOGY [SECTION 5.2.1 (B)]

MW and MVA

There is a simple relationship between components of supplied electrical power, including MW, MVAr, MVA and pf. Some of these components include MW, MVAr, MVA and pf. These values can be calculated when two or more components are known by using fundamental equations for electrical properties. MW is the real

power supplied, MVAr is reactive power, MVA is apparent power and pf is the power factor. The two most relevant equation for this section are to calculate the pf and determining MVA from MW and MVAr

The equation for determining pf is:

$$\frac{MW}{MVA} = pf$$

In this equation power factor equals a value between 0 and 1, so MVA is always equal to or greater than MW.

To calculate MVA from MW and MVAr, the equation is:

$$MVA = SQRT(MW^2 + MVAr^2)$$

The data measured is typically MW and MVAr, so this equation is used to determine the MVA for each site. The summation of MVA also uses this equation, where the sum of MW and sum of MVAr are determined. This equation is then used to calculate the MVA sum.

Change to timing arrangements

In order to provide the actual loads for 2024/25, the winter of 2024 and the summer of 2024/25 was used, which included loads from April 1st 2024 to March 31st 2025. An example of the reasoning behind this method is where there is a very high load winter, with a large peak in June and another in July. A financial year split will count these events as two separate years, so the data misses the previous and next summer peaks. Essential Energy does not consider the use of financial years to be adequate for use in forecasting.

Raw Adjusted MD

Non – coincident Maximum Demand

The vast majority of STSs and ZSs have reliable data recording devices. A minor number of the very small ZSs have limited methods to record the peak demand such as recloser data or maximum demand indicators from which maximum demand has been derived. The raw data from each substation is collated into a common format and is compared against network configuration changes and filtered where an absence or abnormality is present. The peak demand is then screened and further cleansed if required to eliminate abnormal peaks to determine the true peak demand.

Coincident Maximum Demand

The raw coincident maximum demand for the 2024/25 year was extracted from each site after it has been compiled into the common format required for screening the non-coincident maximum demand.

Adjustments – Embedded Generation

Only discrete embedded generation units that impact the demand of the STSs or ZSs are included in the table. Rooftop photovoltaic generation is not shown as its impact is included in the actual and forecast demand of the individual ZSs. There are other discrete generation units that connect via Essential Energy's subtransmission network to a TNSP's connection point but they have no impact on the demand of Essential Energy owned STSs or ZSs.

Non-Coincident Weather Corrected MD

The weather corrected data for 50% PoE or 10% PoE has been calculated for the vast majority of STSs and ZSs based on the nationally consistent methodology of using regression with historical local temperature

data. A very small number of sites did not have sufficient history of demand data to accurately produce PoE values. The raw adjusted MD was used where PoE data could not be produced. The main variables that influence the POE calculation for each site include:

- The number of years of historical data used – some sites use less than the full dataset due to network configuration changes.
- The primary weekdays used – many sites have a variation between their weekday and weekend loads, others are consistent every day.
- The weather station used – most sites use the closest weather station, but some correlate better to stations further away and some station data is unreliable.
- The data points used – each site has a unique list of data points used to calculate the site totals. These can change each year due to metering issues or site reconfiguration.
- Outliers – days that include switching or poor metering data are excluded.

Coincident Weather Corrected MD

Coincident weather correction is based on the ratio of non-coincident peak demand to non-coincident weather corrected peak demand.

Date MD Occurred

The date and time of the coincident and non-coincident peak demands were identified during data extraction, where the peak MW and corresponding MVA demand was recorded in this table. Several sites have been identified where the raw adjusted MVA maximum demand occurred at a different time to the raw adjusted MW maximum demand. These situations occur when the site is not quite at the MW peak and the loads have a worse total power factor than at the peak MW time, resulting in a higher MVA than at the peak MW time.

Table 5.4.1 Subtransmission and Zone Substations with MVA Peak different to MW Peak

SUBSTATION	NON-COINCIDENT MVA PEAK	DATE AND TIME OF MVA PEAK
Ashley	3.643	29/07/2024 20:00
Ballina 132kV	31.018	13/06/2024 16:30
Boggabri	4.735	04/08/2024 20:00
Bermagui	3.237	15/07/2024 18:30
Cobar CSA	28.414	16/12/2024 20:00
Cobar Elura	4.118	27/03/2025 10:30
Cobar Peak	15.212	28/12/2024 00:30
Deniliquin	21.284	16/12/2024 18:00
Edrom	3.023	03/04/2024 10:30
Googong Town	13.138	15/07/2024 18:30
Girilambone	1.78	06/07/2024 03:00

Geurie	1.586	05/01/2025 17:30
Hawks Nest 132/33kV	9.088	28/01/2025 17:30
Jerilderie	4.076	27/01/2025 19:00
Koolkhan 11kV	2.653	07/11/2024 17:30
Koraleigh	4.883	12/03/2025 19:30
Leeton	19.647	07/02/2025 15:00
Mumbil	1.396	26/01/2025 19:00
Monteagle	0.895	19/06/2024 18:30
Moulamein	2.803	27/04/2024 08:00
Murrumburrah	4.595	16/12/2024 18:30
Merrywinebone	2.917	23/07/2024 07:00
Moruya Town	7.163	12/06/2024 18:00
Ringwood Road	3.815	03/02/2025 13:00
Snowy Adit 11kV	0.454	19/07/2024 20:30
Talbingo	1.191	19/11/2024 18:30
Thredbo	14.173	14/07/2024 22:00
Upper Manilla	0.637	01/01/2025 23:00
Warrawidgee	1.293	23/02/2025 15:30
Wallangra	0.307	21/05/2024 10:00
Walcha South 66/22kV	2.087	16/07/2024 18:30
Wenna	2.78	21/07/2024 21:00
Young	17.529	29/07/2024 19:00

Changes to sites reported

2024/25 changes;

There are no changes that affect the number of sites reported in this year.

2023/24 changes;

There are no changes that affect the number of sites reported in this year.

2022/23 changes;

There are no changes that affect the number of sites reported in this year.

2021/22 changes;

There are no changes that affect the number of sites reported in this year.

2020/21 changes;

Carrathool spelling was corrected, is Carathool in previous years

2019/20 changes; Boundary Street has been decommissioned.

Maher Street has changed its configuration to now include both 33kV and 11kV outgoing feeders, still supplied from the 66kV network. The Maher Street site reported in previous RINs is now Maher Street 11, and Maher Street 33 has been added.

2018/19 changes;

There are no changes that affect the number of sites reported in this year.

2017/18 changes;

Marulan South is a new zone substation to replace the old Marulan South zone substation.

2016/17 changes;

- Junee Zone Substation changed its configuration to now be supplied from the 132kV network, with both 66kV and 11kV outgoing feeders. The Junee site reported in previous RINs is now Junee 11kV, and Junee 66kV has been added.
- Shannon Creek was identified as an eligible zone substation, so it is now included in this table.
- Steeple Flat 22kV has been reported in prior RINs, however it has now been removed as it does not satisfy the zone substation definition.
- Thredbo had previously been reported as two separate sites - the snowmaker and the village. The site is now combined in line with the forecasting performed by Essential Energy, as there was no benefit in performing the weather correction and load forecasting separately.

Winter/Summer Peaking

Essential Energy defines the seasons as between 1st April and 30th September for winter, and 1st October to 31st March in the following year for the summer period.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 6.3 Sustained Interruptions

Table 6.3.1 - Sustained Interruptions to Supply

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Only actual information has been used.

Information has been sourced from current systems and management is comfortable that the information is reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Data is sourced from PowerOn Advantage and calculations managed in an Access database. PowerOn makes up the central modules of Essential Energy's power Distribution Management and Outage Management Systems (DMS/OMS).

Data validation is run on the extract from PowerOn throughout the year. Corrections to the data include LV outages (part sub); supply lost times (part supply/brown out calls); short notice planned; and exclusion flags.

The spreadsheet used to collate the data is named “AIO Tables Workpapers 24-25”.

The mapping of the Essential Energy cause list to the AER RIO cause list is contained in the APR database table “ENA Cause List”. Additional updates for Detailed Reasons are through queries “RESET RIN Interruptions List 1-7”.

METHODOLOGY [SECTION 5.2.1 (B)]

The data has been collected and collated in line with the Category Analysis AIO Instructions and Definitions guidance issued by the AER.

In the Reliability Reporting Database AIO 24-25 run the following query for the financial year:

Run and View Monthly Reliability Reporting Data – forms the base for this table query.

This query collates outages by feeder.

Using the group of RESET RIN Interruptions List 1-8, and Avg Cust Base RIN queries:

RESET RIN Interruptions List 1: collates all outages by feeder and maps interruption cause data to the AER RIN cause list.

RESET RIN Interruptions List 2: updates the Detailed Reason for Interruption where:

Cause = Asset failure; Network Type = Zone Sub, then Detailed Reason = Zone substation

Cause = Asset failure; Network Type = Distribution - HV, then Detailed Reason = HV

Cause = Asset failure; Network Type = Distribution - LV, then Detailed Reason = LV

Cause = Asset failure; Network Type = Sub Transmission, then Detailed Reason = Subtransmission

Cause = Asset failure; Transgrid = Y, then Detailed Reason = blank

Cause = Asset failure; Equipment Type = Transformer – Distrib Failed, then Detailed Reason = Distribution substation

Cause = Asset failure; Equipment Type = Transformer – Distribution, then Detailed Reason = Distribution substation

Cause = Asset failure; Zone Sub = Y, then Detailed Reason = Zone substation

Cause = Asset failure; Subtransmission = Y, then Detailed Reason = Subtransmission

RESET RIN Interruptions List 3: updates Detailed Reason for Interruption where:

Cause = Asset failure; Equipment Type = 'includes *LV*, then Detailed Reason = LV

RESET RIN Interruptions List 4: updates Reason for Interruption and Detailed Reason for Interruption where:

Outage Type = Planned, then Cause = Planned and Detailed Reason = blank

RESET RIN Interruptions List 5: updates Reason for Interruption where:

Outage Type = Unplanned; Cause = Planned, then Reason = Other

RESET RIN Interruptions List 6: updates Reason for Interruption where:

Transgrid = Y, then Detailed Reason = 5 - STPIS Exclusion (3.3)(a)

RESET RIN Interruptions List 6_1: updates Reason for Interruption where -

TFB NFF = Y: 7 - STPIS Exclusion (3.3)(a), then Detailed Reason = blank

RESET RIN Interruptions List 6_2: updates Reason for Interruption where –

DDE = Y: 8 – STPIS Exclusion (3.3)(a), then Detailed Reason = blank

RESET RIN Interruptions List 7: rolls up customers affected and customer minutes lost by outage and feeder.

Maps reference for Reason 5,7,8 as per TCS – Update TG, ST, ZS, DDE, TFB Flags table.

When populating the table to Workpapers, check these Reasons for any blank (ie. 5) and update manually.

Please note, in column F of the table, detailed descriptions of reasons for interruptions with a reason of "Other" cannot be entered as the template does not allow it.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

Slight changes to Methodology in line with changes to table format.

Worksheet: 3.1 Revenue

Table 3.1.1 - Revenue Grouping by Chargeable Quantity

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

This section contains data on the revenue allocated to the Distribution business as shown in the 2024-25 regulatory returns as per the requested groupings. The revenue includes amounts billed in FY25 and year end accruals.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

64. Total revenue amounts have been sourced from PEACE (via Network Invoicing Cube) and aligns to Table 8.1 of the Annual AIO and also reconciles back to the internal Management Accounts.
65. Revenue from Distribution Use of Service (DUoS) is sourced from the Annual Regulatory Accounts, which reconciles back to the internal Management Accounts. The Network Invoicing Cube is the reporting tool used to provide the required breakdown by AER category. For the unread meters accrual, the Network Revenue accrual file provides the breakdown required to categorise the data into the AER categories. Thus, no estimation is required.
66. Revenue from Connection Services (Alternative Control) relates to ancillary network services revenue and is sourced from the audited Annual Regulatory Accounts, which reconcile back to the internal Management Accounts.
67. Revenue from Public Lighting Charges (Alternative Control) is sourced from the audited Annual Regulatory Accounts, which reconcile back to the internal Management Accounts.

METHODOLOGY [SECTION 5.2.1 (B)]

Total revenue from Connection and Public Lighting charges is taken from the Annual Regulatory Accounts.

The 3.1.1_3.1.2_3.4.1.1_3.4.1.4_Workpaper_2025_08_25.xlsx provides information included in the Network Revenue accrual. This includes 2024-25 related DUoS revenue, as well as any under/(over) accrual from 2023-24. The table below provides the mapping from the internal Management Accounts to the AER categories:

Table 3.1.1

CATEGORY	TARIFF TYPE	UOM	SEGMENT	TIME OF USE
Revenue from Energy Delivery charges where time of use is not a determinant	ENERGY	KWH	Residential Continuous, Business Continuous	ANYTIME
Revenue from On-Peak Energy Delivery charges	ENERGY	KWH	Exclude Controlled Load & Streetlight NUoS	PEAK
Revenue from Shoulder period Energy Delivery charges	ENERGY	KWH	Exclude Controlled Load & Streetlighting NUoS	SHOULDER
Revenue from Off-Peak Energy Delivery charges	ENERGY	KWH	Exclude Controlled Load & Streetlighting NUoS	OFF-PEAK
Revenue from controlled load customer charges	ENERGY	KWH	Controlled Load 1 & 2	N/A
Revenue from unmetered supplies	ENERGY	KWH	Streetlighting NUoS	N/A
Revenue from Contracted Maximum Demand charges	CAPACITY	KVA	All	All
Revenue from Measured Maximum Demand charges	DEMAND	KVA	All	All

ASSUMPTIONS [SECTION 5.2.1 (C)]

All information for these tables was based on actual data. The data in these tables is considered to be reliable.

ADDITIONAL INFORMATION [SECTION 5.2.3]

Metering revenue classified as Standard Control from FY25. This is not included in tables 3.1, and is included in SCS Legacy Meters tables.

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.1 Revenue

Table 3.1.2 - Revenue Grouping by Customer Type or Class

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

This section contains data on the revenue allocated to the Distribution business as shown in the 2024-25 regulatory returns as per the requested groupings. The revenue includes amounts billed in FY25 and year end accruals.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

- Total revenue amounts have been sourced from PEACE (via Network Invoicing Cube) and aligns to the Statutory Accounts and table 8.1 of the Annual AIO. This also reconciles back to the internal Management Accounts.
- The Network Invoicing Cube is the reporting tool used to provide the required breakdown by AER category. For the unread meters accrual, the Network Revenue accrual file provides the breakdown required to categorise the data into the AER categories. Thus, no estimation is required.
- Revenue from Other Customers relates to charges for Alternative Control (ANS and Public Lighting).

METHODOLOGY [SECTION 5.2.1 (B)]

Total revenue from Connection and Public Lighting charges is taken from the Annual Regulatory Accounts.

The 3.1.1_3.1.2_3.4.1.1_3.4.1.4_Workpaper_2025_08_25.xlsx provides information included in the Network Revenue accrual. This includes 2024-25 related DUoS revenue, as well as any under/(over) accrual from 2023-24. The table below provides the mapping from the internal Management Accounts to the AER categories:

Table 3.1.2

AIO MAPPING TABLE 3.1.2	CUSTOMER SEGMENT
Revenue from residential customers	Residential Continuous
	Residential TOU
	Residential – Opt in Demand
	Residential Sun Soaker
	Controlled Load 1

	Controlled Load 2
Revenue from non-residential customers not on demand tariffs	Business Continuous
	Business – Opt in Demand
	Business Sun Soaker
	Business TOU < 100MWh
	Business TOU > 100MWh
Revenue from non-residential low voltage demand tariff customers	Low Voltage Demand
Revenue from unmetered supplies	Streetlighting NUoS
Revenue from non-residential high voltage demand tariff customers	High Voltage Demand
	Subtransmission
	Site Specific
	Inter Distributor Transfers

ASSUMPTIONS [SECTION 5.2.1 (C)]

All information for these tables was based on actual data. The data in these tables is considered to be reliable.

ADDITIONAL INFORMATION [SECTION 5.2.3]

Metering Revenue classified as Standard Control from FY25. This is not included in tables 3.1, and is included in SCS Legacy Meters tables

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.1 Revenue

Table 3.1.3 - Revenue (Penalties) Allowed (Deducted) Through Incentive Schemes

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

As the data provided in this table is actual, it was not necessary to make any estimations.

The data provided in this table is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Data has been sourced from the incentive scheme payments which Essential Energy has received or paid.

METHODOLOGY [SECTION 5.2.1 (B)]

The STPIS reflects the effect on revenue from the scheme in the year the penalty or reward is applied, i.e. any benefit or penalty resulting from the Scheme in FY23 would be applied to revenue to be recovered in FY25. Essential Energy had a benefit of $10,359,187 for FY23 under the scheme and approved by the AER.

The AER's final decision for the 2024-29 Determination provided allowances for the EBSS, CESS and DMIA incentive schemes. As 2024/25 was the first year of the determination the allowances have been inflated by the CPI as per the Final approved PTRM model. This year the RIO provides lines for both the CESS and DMIA so they are reported separately, rather than the previous years where they were included in the Other incentive schemes. The CESS value also includes the CESS increments true-up for 2018-19.

The allowances and inflation adjustments are shown in the table below.

		2024-25	2025-26	2026-27	2027-28	2028-29
$23-24	EBSS	-67,437,462	-66,072,670	-50,602,217	-76,764,123	-41,168,448
	DMIA	1,063,449	1,095,340	1,138,247	1,129,480	1,175,420
	CESS	-5,287,621	-5,287,621	-5,287,621	-5,287,621	-5,287,621
	CESS increments – true-up for 2018-19	3,902,456	3,902,456	3,902,456	3,902,456	3,902,456
	CPI	2.66%				

$24-25	EBSS	-69,231,136				
	DMIA	1,091,734				
	CESS	-5,428,259				
	CESS increments – true-up for 2018-19	4,006,252				
	CESS Total	*-1,422,006*				

CPI for year one of the Determination is based on the CPI used in the PTRM. Future CPIs are calculated as Dec(t-1) over Dec(t-2) using the weighted average of all capitals as reported by Australian Bureau of Statistics and shown below, no rounding is applied.

ASSUMPTIONS [SECTION 5.2.1 (C)]

All information for these tables was based on actual data. The data in these tables is considered to be reliable.

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.2 Operating expenditure

Table 3.2.1 - Opex Categories

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The data is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Data has been sourced from the general ledger, via the Finance Data Set (Oracle ERP).

METHODOLOGY [SECTION 5.2.1 (B)]

The process for expenditure is the same as prior years. Data is taken from the 2024-25 ERP Projects Subledger from the Finance Golden Dataset (FDS) by regulatory segment and project type. For direct expenditure, categorisation across regulatory segments is based on the regulatory segment assigned against projects. For indirect expenditure, costs are allocated across regulatory segments based on the AER approved CAM methodology.

Manual adjustments were made to reallocate incorrect mapping of minor project expenditure. The details are included in the "FY25_RIN_Reconciliation_2025_08_06" workpaper.

In May 2024, the business began using Oracle WACS as the asset management system. Emergency Response expenditure is not differentiated from Unplanned Corrective Maintenance expenditure in WACS. To separate Emergency Response expenditure for AIO reporting, standing projects for unplanned corrective maintenance (Transmission and Distribution) were reallocated to emergency response, excluding recoverable works. Refer to "FY25 Corrective Maintenance Emergency Response Analysis.xlsx" workpaper for details of the standing projects.

ASSUMPTIONS [SECTION 5.2.1 (C)]

There has been no use of estimated data.

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

In previous years, Emergency Response expenditure was sourced from the WASP Asset Management System. Since switching to Oracle WACS, Emergency Response expenditure was no longer separated from Unplanned Corrective Maintenance expenditure. As a result, standing projects for unplanned corrective maintenance (Transmission and Distribution) were reallocated to emergency response, excluding recoverable works.

Debt raising expenditure is a new item for FY25. The AER defines it as "The transaction costs incurred each time debt is raised or refinanced as well as the costs for maintaining the debt facility." TCorp charges Essential Energy an annual debt fee which is included as the debt raising expenditure.

Worksheet: 3.2 Operating expenditure

Table 3.2.2 - Opex Consistency

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Balanced to amounts reported in 3.2.1 Opex Categories which is classified as actual.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Data has been sourced from the Oracle ERP financial system.

METHODOLOGY [SECTION 5.2.1 (B)]

The data is the same as the figures in Table 3.2.1 (outlined above) and Table 8.4.1 of the Annual Reporting RIO. It has been re-categorised in order to report on the variables requested in this table.

The amount reported for Opex for Network Services DOPEX0201 is the sum of the Standard Control Services categories reported in Table 3.2.1.

Opex for Connection Services DOPEX0203 relates to Ancillary Network Services operating expenditure and is sourced from Table 3.2.1 and the Annual Regulatory Accounts.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

No changes from previous year.

Worksheet: 3.2.3 - PROVISIONS

Table 3.2.3 - Provisions

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Data used to create the provision table is materially dependent on data in Essential Energy's ERP accounting records and is considered actual.

This information is considered reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Data utilised in this return has been sourced from ERP financial system, work files used in preparation of the 2025 statutory financial statements, and work files used in the preparation of the 2025 Annual Regulatory Accounts.

METHODOLOGY [SECTION 5.2.1 (B)]

The sign convention applied is consistent with the Annual Regulatory Accounts where provision values are expressed as negatives, and with provision increases also expressed as negatives.

The methodology and assumptions employed for 2024-25 are similar to those applied in the previous Economic Benchmarking RIN. The Standard Control Services portion of the movement in the respective provision was calculated using the relevant CAM allocation, and a component relating to capital expenditure was calculated on labour related provisions. For 2024-25 where a 100% Standard Control Services allocation method was not applied, the direct spend allocation method was used.

A portion of the increase in employee related provisions (employee entitlements, worker's compensation, and defined benefit superannuation) has been included in capital projects through the labour overhead process. This process allocates various labour overheads (e.g., leave provision increases, superannuation expense, etc.) across operating expenditure and capital expenditure. No allowance has been made for any indirect form of capital allocation of the operating expenditure component of these provisions. Where provisions relate to corporate costs, movements have been classified as being opex in nature. In the financial statements, a portion of corporate overheads is allocated to capex projects.

The above method approximates the allocation of increases and releases in provisions between operating and capital expenditure in the financial statements. The financial statements do not separately disclose the provision movements relating to operating and capital expenditure and these movements are not separately recorded in the accounting records. Australian Accounting Standards do not require this level of disclosure. The allocation of the utilisation of provisions and adjustment of allocation of opening balances between opex and capex components does not affect profit and loss or capital expenditure in the financial statements, so the allocation of these movements is a notional allocation only.

The increase in the provision over time due to interest unwinding and the effect of any change in discount rate have been split out for employee entitlements and the defined benefit superannuation provision. The employee entitlement movement relating to discount rate changes includes some estimation.

The Other Provision category includes asset remediation provisions and miscellaneous minor provisions. In 2024 it included provisions for heritage site remediation, lease make good costs, insurance claims, remediation of master subtractive metering arrangements, and a provision for flood damaged assets.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.3 Assets (RAB)

Table 3.3.1 - Regulatory Asset Base Values

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

This table is a summation of the asset data contained in Table 3.3.2 Asset Value Roll Forward. Formulas have been entered accordingly. The data in this table reconciles to the total of the relevant Roll Forward Models (RFM), i.e., since 2014-15, the values for Network Services and Standard Control Services equal the SCS RFM and the value for Alternative Control Services equals the Metering RFM.

Same as for section 3.3.2

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Same as for section 3.3.2

METHODOLOGY [SECTION 5.2.1 (B)]

Same as for section 3.3.2

ASSUMPTIONS [SECTION 5.2.1 (C)]

Same as for section 3.3.2

ADDITIONAL INFORMATION [SECTION 5.2.3]

Same as for section 3.3.2

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

Same as for section 3.3.2

Worksheet: 3.3 Assets (RAB)

Table 3.3.2 - Asset Value Roll Forward

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The information is obtained from:

Opening value	Last years closing balance
Inflation addition	Inflation rate adjustment
Actual straight line depreciation	RFM 2024-29 (Forecasts)
Gross capex	8.2.4
Capital contributions included in gross capex	Gifted Assets – Type 1
Disposals	Oracle ERP
Capex timing adjustment	Half year WACC Adjustment

Please see the detailed methodology in section 5.2.1 (B)

INFORMATION SOURCE [SECTION 5.1.1 (A)]

RFM 2024-29

Oracle ERP

Information is actual

METHODOLOGY [SECTION 5.2.1 (B)]

As described below, once the proportions for asset categories that required disaggregation had taken place, the data from the relevant RFM was linked into the relevant sections of Table 3.3.2.

Table 3.3.1 - RAB categories that have been directly apportioned

OLD RAB CATEGORY	NEW RAB CATEGORY	ASSUMPTIONS
Customer Metering and Load Control	Meters	Assumed load control is part of Meters category

Easements	Easements	
Communications	Other assets with short lives	
Motor vehicles	Other assets with short lives	Assumed to be a short life asset as standard life is <10 years*
IT systems	Other assets with short lives	
Furniture, fittings, plant & equipment	Other assets with long lives	Assumed to be a long life asset as standard life is >10 years*
Land	Other assets with long lives	Land is assumed to not depreciate
Buildings	Other assets with long lives	
Other non-system assets	Other assets with long lives	Assumed to be a long life asset as standard life is >10 years*
Equity raising costs		Assumed to be a long life asset as standard life is >10 years*

* In line with section 9 of the AER Economic Benchmarking Instructions and Definitions for Essential Energy.

A brief explanation for each line follows:

Information is actual

OPENING RAB VALUE

68. The opening RAB values are linked to the prior year's closing balance with differences due to the start of the new Cycle. This difference was added to ensure the data agrees to the AER RFM.

INFLATION ADDITIONS

69. The inflation additions were taken directly from the relevant RFM for assets that were directly apportioned or were multiplied by the relevant percentage for assets that required disaggregation.

STRAIGHT LINE DEPRECIATION

70. The straight line values were taken directly from the relevant RFM for assets that were directly apportioned or were multiplied by the relevant percentage for assets that required disaggregation. Since 2014-15, the amounts are based on forecast depreciation from the relevant period's final determination PTRM.

REGULATORY DEPRECIATION

71. The sum of the inflation addition and the straight line depreciation rows equals the regulatory depreciation amount for each asset category.

GROSS CAPEX

72. These numbers are net of customer contributions and are taken directly from the Global Capex workpapers aligned to the new RAB categories. The additions reflect the capex in the Annual Reporting RIO (ARR) 8.2.4.
73. The additions in the final year of each regulatory period include the adjustment amounts for that year to give a true picture of the closing RAB for that year (and the opening RAB for the next regulatory period).

CAPITAL CONTRIBUTIONS INCLUDED IN GROSS CAPEX

74. These numbers are taken from the Global Capex workpapers aligned to the new RAB categories. The additions reflect the capex in the Annual Reporting RIO (ARR) 8.2.5. Only Type 1 Contributions are included.

DISPOSALS

75. Disposals were taken directly from the input sheet in the RFM for assets that were directly apportioned or were multiplied by the relevant percentage for assets that required disaggregation.
76. All disposal values have been uplifted by the half-year vanilla WACC rate in line with the RFM.

CAPEX TIMING ADJUSTMENT

77. For each category the resulting dollars have been inflated by the half-year WACC rate to align with the RFM model.

CLOSING RAB VALUE

78. The closing RAB values were calculated using the inputs above and cross-checked to the relevant RFM(s) results to ensure accuracy.

CAPITAL CONTRIBUTIONS

The RAB additions noted are exclusive of capital contributions. For the purpose of updating the RFM, only Type 1 Capital Contributions have been entered in the RFM Input sheet from 2020/21. This aligns with the advice from the AER in their letter to Essential Energy, dated 8 September 2021 which states “A new requirement to disaggregate capital contributions reflecting the Federal Court ruling (October 2020) that the value of assets that are ‘gifted’ to distribution businesses (in effect constituting a capital contribution) are not taxable income”. The variation notice accompanying this letter disaggregates Capital Contributions into Type 1 (Cash Contributions) and Type 2 (any form of capital contributions received by a DNSP (including gifted or cash contributions) that do not meet the definition of Type 1)

For the purposes of the EB RIO 3.3.3, DRAB13 Capital Contributions have been reported as the total of Type 1 and Type 2 Capital Contributions, taken directly from the Annual Reporting RIO.

There have been no Alternative Control Services capital contributions. All capital contributions relate to Standard Control Services (and Network Services) RIO tables.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

Current year additions are shown as Gross Capex, Capital contributions (gifted assets) included in gross capex and Capex Timing Adjustment.

Last year the sum of these three items were shown as additions (Net of Capital Contributions)

Worksheet: 3.3 Assets (RAB)

Table 3.3.4 - Asset Lives

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Other than the data in Table 3.3.4 Asset Lives, which are necessarily estimated, the rest of the data in this sheet meets the AER's guideline definition of actual information.

The assumptions made for each row are included in the Methodology and Assumptions sections.

See "Use of Estimated Information" section below, but generally this information is considered reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

There are eight main sources used to obtain the information for the RAB workings:

1. The Power BI file (containing enriched data from the ODL) used to populate the Annual RIO table 8.2.4 Capex was used as source data.
2. The Final Determination PTRM for Standard Control – used for determining each regulatory period's opening RAB values, standard lives and carried forward residual asset lives in the SCS RFM.
3. The Final Determination PTRM for Metering – used for determining each regulatory period's Metering asset opening RAB values, standard lives and carried forward residual asset lives in the ACS RFM.
4. The SCS RFM for the current regulatory period – based on the prior period's final determination RFM and PTRM and updated for actual CPI, WACC, capex, disposals and capital contributions. Forecast depreciation has been used since FY15. This model also calculates the inflation addition and straight-line depreciation amounts.
5. The Metering RFM for the current regulatory period – based on the final determination PTRM for Metering and the Final Determination Meter Pricing Model, the RFM is updated for actual CPI, WACC, indirect capex, disposals and capital contributions. The model calculates the associated inflation addition and straight-line depreciation amounts.
6. The Fixed Asset Register (FAR) Movements file – for FY25 the closing Fixed Asset net book value (NBV) for FY24 was adjusted for the movements shown in this file to arrive at the closing NBV for FY25. Prior to FY22 the FAR for each financial year end was used as it could be filtered to exclude customer

funded assets. However, with the introduction of the new ERP system, the FAR does not flag the difference between internally funded and customer funded assets (only internally funded assets are relevant for the RAB calculations). The Finance Team was able to produce the FAR Movements file to derive the required information. The closing NBV has been used to determine the percentages to disaggregate RAB categories in the RFM that could not be directly apportioned. The asset splits in the FAR are representative the asset splits in the RAB. Each year, the rates are "sense checked" to prior years' rates.

7. Unit rates – the Asset Management Team prepared this sheet to roll forward unit rates from the Reset RIO that was a part of our 2019-24 Regulatory Determination (to ensure the relevance of asset weightings when determining asset ages). For the 2024-29 period, the unit rates from the AER's Repex Model have been used as the main source of unit rates.
8. Table 5.2.1 Asset Age Profile - from the Category Analysis RIO. This has been used to determine the average asset age by asset category.

METHODOLOGY [SECTION 5.2.1 (B)]

The main assumptions are:

9. FAR splits as at 30 June each year are representative of the RAB asset splits for assets requiring disaggregation. The rates are compared to prior years to ensure they are materially consistent.
10. Other long-life assets comprise: Furniture, Fittings, Plant & Equipment, Buildings, Land (non-system), Other non-system assets and Equity raising costs.
11. Other short life assets comprise: Communications, IT systems, Motor Vehicles and Capitalised Leases.
12. The calculated regulatory period end adjustments to capex, i.e., the difference between actual and forecast net capex and the return on difference of net capex are included in the additions amount for the final year of each regulatory period. This ensures the closing RAB reported in the RAB sheet accurately reflects the actual RAB value at the end of each regulatory period.
13. Actual additions reported in the RAB differ from those reported in the Annual Financial Statements as a result of the inclusion of any non-cash provision adjustments, as well as the half-year of WACC inflation applied to disposals and additions in the RFM.

Table 3.3.4.1 Asset Lives – Estimated Service Life of New Assets

14. The estimated service lives of new assets are based on the standard asset lives from the relevant PTRM model.
15. The Estimated Service Life of New Assets for Standard Control Services and Network Services assets remain unchanged from prior year workings for all asset classes other than "Other assets with long lives" and "Other assets with short lives". This is considered reasonable on the basis that the assets comprising each category would remain in fairly constant proportion over time.
16. The estimated service life of new "Other assets with long lives" and "Other assets with short lives" are based on a weighted average calculation of the standard lives of the assets comprising the closing RAB balance.
17. The standard asset lives are comparable to the asset lives within the PTRM models.

Table 3.3.4.2 Asset Lives – Estimated Residual Service Life

For the disaggregated asset categories:

18. The asset data for the five categories of Poles, Overhead Conductors, Underground Cables, Transformers, and Switchgear was taken from Category Analysis RIO Table 5.2.1 Asset Age Profile.
19. Each line item within these asset categories was aligned to the appropriate RAB category.
20. The Average Age of each line item, based on its installation year, was calculated, along with the Total Asset Quantity.
21. The Unit Cost for each item was taken from the AER's 2019-24 Repex Model for all items except for 3 which were unavailable in this model. For these 3 items, the unit cost was based on the prior year's rate with indexation applied. This approach was discussed with the Asset Management Team and assessed as a reasonable approach to adopt in the 2024-29 regulatory period.
22. The Total Replacement Cost and the Weighted Average Age Replacement Cost were then calculated for each line item by multiplying the Unit Cost by the Total Asset Quantity and the Average Age by the Total Replacement Cost.
23. The sum of the Weighted Average Age Replacement Cost was then divided by the sum of the Total Replacement Costs for each RAB asset category to give the category's Average Asset Age (based on depreciated replacement cost).
24. The Estimated Residual Service Life for each category was then calculated by subtracting the Average Asset Age from the Estimated Service Life of New Assets.
25. Note: Whilst Substation Land is included in the RAB values for Substations, it has been assumed to have an indefinite life. As such, it has not formed part of the residual life calculations.

For Meters, Other Long-Life assets and Other Short Life assets:

26. The opening residual life at the beginning of each regulatory period was taken from the Input sheet in the RFM (based on the Final Determination PTRM). This becomes the starting point for establishing the residual life of each asset class.
27. The proportionate value of each year's opening RAB values and additions amounts for each asset class from the RFM was then calculated.
28. The end of year residual life for each asset class was then established by weighting the RAB proportions for the asset class against the relevant standard life of additions and the rolled forward opening residual life from the RFM.
29. Where there is more than one class of asset comprising a RAB category, i.e. for Other Long Life and Short Life Assets, the resulting residual lives were weighted against the proportionate value of the opening RAB values and additions amounts for each asset class within the entire asset category.
30. Residual asset lives were calculated for both Standard Control Services and Alternative Control Services asset classes.
31. NB. Since Type 5 and 6 Metering became contestable in December 2016, there have been only minimal ACS additions of indirect expenditure. This has simplified the Residual asset life calculation as the relevant lives are now just reduced by one year, each year.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

Compliance with Requirements of the Notice

The following subheadings demonstrate how the information provided is consistent with the requirements of this Notice.

Essential Energy has:

32. Reported its Regulatory Asset Base (RAB) assets in line with the asset input categories for economic benchmarking.
33. Excluded Metering Services from the Network Services data.
34. Reported its RAB values in accordance with the standard approach in section 4.1.1 and the assets (RAB) Financial Reporting Framework in box 7 of the Economic Benchmarking RIO for DNSPs Instructions and Definitions document.
35. Since 2014-15, the amended distribution roll forward model (RFM) for Standard Control Services (SCS) and applied forecast depreciation have been used. A further amended RFM was issued by the AER on 7 April 2020, to give effect to changes made to tax depreciation set out in the AER's final report on the review of the regulatory tax approach. This has been utilised from 2019-20.
36. Included Substation land in the Substation categories.
37. Reported capital contributions as DRAB13.This is the total of Type 1 and Type 2 capital contributions. No dual function assets.
38. Reconciled the data between Tables 3.3.1 and 3.3.2.
39. Reported an Easements value as this data has been previously recorded.
40. Used an average of the opening and closing RAB values for each category in completing Table 3.3.3.
41. Reported asset lives in accordance with the definitions provided in Chapter 9 of the Economic Benchmarking RIO for DNSPs Instructions and Definitions document.
42. Calculated residual asset lives by weighting the lives of individual assets within that category.
43. Whilst Substation Land is included in the RAB values for Substations, it has been assumed to have an indefinite life. As such, it has not formed part of the residual life calculations.

Glossary:

TERM	MEANING
ACS	Alternative Control Services
FY	Financial year
PTRM	Post Tax Revenue Model
RAB	Regulatory Asset Base
RFM	Roll Forward Model
RIO	Regulatory Information Notice

Scope of services

As specified in section 9 of the AER Economic Benchmarking Instructions and Definitions for Essential Energy, Fee Based and Quoted Services costs are already excluded from Essential Energy's RAB values.

Alternative Control numbers

Alternative Control RAB numbers reconcile to the Metering RFM and apply to Metering Types 5 and 6 only.

There is no RAB for public lighting as these costs are built up on an annuity basis.

Network Services & Standard Control numbers

Network Services and Standard Control are the same and exclude Type 5 and 6 meters which are classified as Alternative Control. Since 2014-15, the Network Services and Standard Control Services numbers have matched and are sourced from (and reconciled to) the SCS RFM. Essential Energy still have some meters which are used by the network (not customers) and these are reported under both Network Services and Standard Control.

Allocating the RFM asset category data to the RAB worksheet asset categories

Some RAB financial information can be directly allocated to a group of RAB assets. Other information requires disaggregation. These classes are summarised in the two tables below.

Table 3.3.2 - RAB categories that have been directly apportioned

OLD RAB CATEGORY	NEW RAB CATEGORY	ASSUMPTIONS
Customer Metering and Load Control	Meters	Assumed load control is part of Meters category
Easements	Easements	
Communications	Other assets with short lives	
Motor vehicles	Other assets with short lives	Assumed to be a short life asset as standard life is <10 years*
IT systems	Other assets with short lives	
Furniture, fittings, plant & equipment	Other assets with long lives	Assumed to be a long life asset as standard life is >10 years*
Land	Other assets with long lives	Land is assumed to not depreciate

Buildings	Other assets with long lives	
Other non-system assets	Other assets with long lives	Assumed to be a long life asset as standard life is >10 years*
Equity raising costs		Assumed to be a long life asset as standard life is >10 years*

* In line with section 9 of the AER Economic Benchmarking Instructions and Definitions for Essential Energy.

Table 3.3.3 - RAB categories that required disaggregation

OLD RAB CATEGORIES	NEW AER CATEGORIES
Low voltage lines and cables Distribution lines and cables Subtransmission lines and cables	Overhead network assets <33kV Underground network assets <33kV Overhead network assets 33kV and above Underground network assets 33kV and above
Substations Transformers Land related to Substations	Distribution substations including transformers Zone substations including transformers

The data for directly apportioned RAB categories could be taken directly from the relevant RFMs. The disaggregated RAB categories, however, require disaggregation. This has taken place in a consistent manner with prior year approaches and is described below.

Disaggregating RAB values

44. For opening RAB value, inflation, depreciation and disposals

To disaggregate the RAB categories noted in Table 2 above, a breakdown of the system assets Fixed Asset Register by asset class as at 30 June was obtained. The (more detailed) existing asset classes on this register were then mapped to the new AER RAB categories. The results of this mapping were then summarised in a pivot table to give the depreciated replacement cost by new AER RAB category. The proportions of this analysis were then applied to the inflation, depreciation and disposals data in the SCS RFM.

45. For additions

Additions data for system assets was sourced from the Global Capex working papers. Since FY2019 it has been possible to map the capex in the system to the required RAB disaggregated categories. A PowerBI Report is run which shows the capex by required category.

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.4 Operational data

Table 3.4.1.1 - Energy Grouping – Delivery by Chargeable Quantity

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The data is actual. The amounts reported includes accruals for unbilled amounts for the period and is as provided to the Board and is audited so is considered reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Total energy delivered, including accruals, has been sourced from PEACE billing system using Network Invoicing Cube, and agrees to the Management accounts.

METHODOLOGY [SECTION 5.2.1 (B)]

Table 3.4.1.1 shows total energy delivered as reported in the Management account. Data for the 2024-25 year has been audited as part of the revenue review done on the statutory accounts audit.

ASSUMPTIONS [SECTION 5.2.1 (C)]

Amounts reported includes accruals for unbilled consumption, consistent with prior year methodology

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Table 3.4.1.2 – Energy – received from TNSP and other DNSPs by time of receipt, and

Table 3.4.1.3 – Energy – received into DNSP system from embedded generation by time of receipt

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

This section contains the total energy input into Essential Energy's network and as measured by Bulk Supply points and embedded generator NMIs.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Data has been sourced from an internal reporting system, Spotfire link to EDDIS, for 2024-25.

METHODOLOGY [SECTION 5.2.1 (B)]

Half-hourly NMI data was extracted from the Internal EDDIS Spotfire report for all of the Bulk Supply Point, Cross Border and TUoS pass through NMIs for 2024-25. This was then aggregated to total network load by half hour.

Based on the Essential Energy definition of Peak, Shoulder and Off Peak, as seen in Table 3.4.4 below, the half hourly data was aggregated into Peak, Shoulder and Off Peak buckets in Excel to determine the totals to report in the table.

Table 3.4.1.2 is not total network load, as generation load has not been added back on.

Off peak readings in the spreadsheet exclude Public holidays as this is how the majority of Essential Energy's small customers are billed, as detailed below.

Table 3.4.4 Essential Energy Time Periods

Peak	5pm to 8pm on weekdays
Shoulder	7am to 5pm and 8pm to 10pm on weekdays
Off Peak	all other times

The EDDIS Spotfire report also contains the embedded generation data and this was extracted along with the Bulk Supply Point data and calculated in the same spreadsheet for Table 3.4.1.3.

Table 3.4.1.3 also includes residential embedded generation. This information is only available through the invoicing of customers and was derived through the Finance SBR (Subsequent Billing Report) Accrual process.

ASSUMPTIONS [SECTION 5.2.1 (C)]

All information for these tables was based on actual metered information from the EDDIS Cognos cube at the time of extraction, with the exception of DOPED0408 which was provided through the SBR report.

The data provided is considered reliable.

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Table 3.4.1.4 – Energy grouping – customer type or class

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The data is actual. The amounts reported includes accruals for unbilled amounts for the period and is as provided to the Board and is audited so is considered reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Total energy delivered, including accruals, has been sourced from PEACE billing system using Network Invoicing Cube, and agrees to the Management accounts.

METHODOLOGY [SECTION 5.2.1 (B)]

Table 3.4.1.4 shows total energy delivered as reported in the Management account. Data for the 2024-25 year has been audited as part of the revenue review done on the statutory accounts audit.

The Network Revenue Accrual workpaper is provided by Finance as part of the end of year management accounts and is subject to statutory audit.

ASSUMPTIONS [SECTION 5.2.1 (C)]

Amounts reported includes accruals for unbilled consumption, consistent with prior year methodology. Table 3.4.1.4 below shows how data has been aggregated into the AIO template.

VARIABLE CODE	VARIABLE	SEGMENTS INCLUDED
DOPED0501	Residential customers energy deliveries	Sum of all Residential tariffs including Controlled Load tariffs
DOPED0502	Non-residential customers not on demand tariffs energy deliveries	Business Continuous, Business TOU <100 MWh, Business TOU >100 MWh, Business Sun Soaker , Public Lighting, nightwatch
DOPED0503	Non-residential low voltage demand tariff customers energy deliveries	Low Voltage Demand, Business Opt in Demand

DOPED0504	Non-residential high voltage demand tariff customers energy deliveries	Industrial (incl High Voltage, Subtransmission, Site Specific, Inter Distributor Transfers)
DOPED0505	Other Customer Class Energy Deliveries	Not applicable

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.4 Operational data

Table 3.4.2 - Customer Numbers

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The data is actual. All information for this table was based on information from the Energy billing system.

This information is considered reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Data has been sourced from an internal reporting system and existing query, via Spotfire, which extracts data from the Energy/Peace billing system. For unmetered customer numbers not recorded in Energy/Peace, these were provided by the Billing team through their SUMS report. Deenergised customer numbers were sourced from EDDIS and the market, these are as per what is reported in 3.4B Total customers.

METHODOLOGY [SECTION 5.2.1 (B)]

A list of all Premises with their meter and tariff details was extracted from the billing system, Peace.

The Premises were then counted by the required groupings.

Table 3.4.6 shows the internal groupings aligned with requested Customer type in Table 3.4.2.1.

Table 3.4.6

INTERNAL GROUPINGS	REQUESTED CUSTOMER TYPE

HV Demand	High voltage demand tariff customer numbers
LV Small Business ToU – Sun Soaker	Non-residential customers not on demand tariff customer numbers
LV Business Continuous	Non-residential customers not on demand tariff customer numbers
LV Controlled Load 1	Excluded
LV Controlled Load 2	Excluded
LV Demand	Low voltage demand tariff customer numbers
LV Residential ToU – Sun Soaker	Residential customer numbers
LV Residential Continuous	Residential customer numbers
LV Residential TOU	Residential customer numbers
Residential – Opt in Demand	Residential customer numbers
LV TOU over 100 MWh/yr	Non-residential customers not on demand tariff customer numbers
LV TOU under 100 MWh/yr	Non-residential customers not on demand tariff customer numbers https://essential.rosettaportal.com.au/3_5_physical_assets.php
Small business – Opt in Demand	Low voltage demand tariff customer numbers
Site Specific	High voltage demand tariff customer numbers
Sub transmission	High voltage demand tariff customer numbers

The list of NMIs for the dataset above have been matched to an extract from Smallworld to determine the Feeder the customer is linked too, this feeder is then linked to the definition for Feeder type for 2024/25, ie Urban, Short Rural or Long Rural. For the deenergised sites the proportions of Feeder type has been used to allocate the premises to the reporting requirements.

The counts are as per 1 July and as at 30 June, as requested.

Unmetered customers have been extracted from the Energy/Peace system and through internal reports by the Billing team.

The guidance also required de-energised customer numbers. The de-energised numbers have been provided through another system, EDDIS and as per market, MSaTs. These numbers have been included in the table under the header “Other Customer Numbers” (DOPCN0106) and are as per provided in the table 3.4B Total customers.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

EDDIS has been used for the reporting of de-energised sites, as this also aligns with the Market (MSaTS).

Worksheet: 3.4 Operational data

Table 3.4.3 - System Demand

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Information is based on actual data for demand. Best practise methodology is used for weather corrected demand figures, but these are by their nature estimated.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

The vast majority of sub-transmission substations and zone substations have reliable data recording devices. A minor number of the very small zone substations have limited methods to record the peak demand such as recloser data or maximum demand indicators from which maximum demand has been derived.

The individual zone substation demands are shown in Table 5.4.1 of the Category Analysis AIO.

For DOPSD0107 and DOPSD0110, the transmission connection point data was obtained from demand meters (via Spotfire to EDDIS).

METHODOLOGY [SECTION 5.2.1 (B)]

Private zone substation loads were not included in the zone substation figures.

- DOPSD0101 and DOPSD0104 - Table 3.4.3.1 "Annual system maximum demand characteristics at the zone substation level - MW measure" - These are summations of the data from Table 5.4.1 of the Category Analysis AIO.
- DOPSD0102, DOPSD0103, DOPSD0105, DOPSD0106 – Table 3.4.3.1 “Annual system maximum demand characteristics at the zone substation level – MW measure” - These are summations of the data from Table 5.4.1 of the Category Analysis AIO.

- DOPSD0107 and DOPSD0110 – Table 3.4.3.2 “Annual system maximum demand characteristics at the transmission connection point – MW measure” - These are sourced from raw data obtained from transmission connection points.
- DOPSD0108, DOPSD0109, DOPSD0111, DOPSD0112– Table 3.4.3.2 “Annual system maximum demand characteristics at the transmission connection point – MW measure” - These are calculated using the nationally consistent methodology of weather correction using historical local temperature data.
- All MVA results use the summated MW and summated MVAr in the equation:

  $MVA = SQRT(MW^2 + MVAr^2)$.
- DOPSD0201 and DOPSD0204 - Table 3.4.3.3 "Annual system maximum demand characteristics at the zone substation level - MVA measure" - These are summations of the source data that is used to complete Table 5.4.1 of the Category Analysis AIO
- DOPSD0202, DOPSD0203, DOPSD0205, DOPSD0206 – Table 3.4.3.3 “Annual system maximum demand characteristics at the zone substation level – MVA measure” - These are summations of actual source data that is also used to complete Table 5.4.1 of the Category Analysis AIO.
- DOPSD0207 and DOPSDO210 – Table 3.4.3.4 “Annual system maximum demand characteristics at the transmission connection point – MVA measure” – These are calculated using actual data obtained from transmission connection points and the values obtained in DOPSD0107 and DOPSD0110.
- DOPSD0208, DOPSD0209, DOPSD0211 and DOPSD0212 – Table 3.4.3.4 “Annual system maximum demand characteristics at the transmission connection point – MVA measure” – These are based on the power factor of the ratio of non-coincident peak demand to non-coincident weather corrected peak demand, applied to the DOPSD0108, DOPSD0109, DOPSD0111 and DOPSD0112 MW values.

ASSUMPTIONS [SECTION 5.2.1 (C)]

The maximum demands presented are when operating in their normal network configuration.

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

Higher resolution historic weather data was used to improve the accuracy of POE10 and POE50 calculations. An improved weather correction model was used that reduces error at extreme temperatures.

Worksheet: 3.5 Physical assets

Table 3.5.1 - Network Capacities

TABLE 3.5.1.1 – OVERHEAD NETWORK LENGTH OF CIRCUIT AT EACH VOLTAGE AND

TABLE 3.5.1.2 – UNDERGROUND NETWORK CIRCUIT LENGTH AT EACH VOLTAGE

For Tables 3.5.1.1 and 3.5.1.2, “circuit length” has been determined by considering each circuit (regardless of voltage) as a separate entity.

SOURCE OF INFORMATION

A snapshot of the GIS Smallworld database was taken on 1st July. From this snapshot, overhead line (spans) and underground cable data (i.e. “cables”) were exported from GIS Smallworld using scripts.

METHODOLOGY & ASSUMPTIONS

The Script filtered out all cables that were not owned by Essential Energy, where there was a responsibility value of “Private” or where the operating voltage was equal to “Streetlight” or “Service”. The Nominal Length attribute on the cable was used for the length of each cable and the results were summarised by the cables’ operating voltages.

Figures are obtained from Smallworld, our primary GIS system and the information is considered to be actual.

USE OF ESTIMATED INFORMATION

As described above.

RELIABILITY OF INFORMATION

The data that has been used for the quantities in Tables 3.5.1.1 and 3.5.1.2 has primarily come from Essential Energy’s GIS Smallworld system and it is considered to be reliable. Contributing factors to the degree of accuracy are listed below.

DATA QUALITY:

The quality of the cable information stored in GIS Smallworld has been steadily improving over many years, however the following points describe some of the known data quality issues:

- Data quality checks regularly highlight data quality issues, however certain issues cannot be resolved without field visits, which in many cases are not warranted due to the nature of the issue and the distance required to be travelled;
- There is further work to do to capture services that go from the LV mains to the Smallworld Service Point;
- Some underground cables may be missing or drawn in the incorrect location and may not be detected because it is difficult to know exactly where they are.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Essential Energy's information regarding Tables 3.5.1.3 and 3.5.1.4 was obtained from the following sources:

- Smallworld – specifically for Tables 3.5.1.3 and 3.5.1.4, data was sourced from:
  feeder segment lengths
  feeder phases (i.e. single phase, three phase or SWER)
  feeder conductor type
  feeder type of underground and overhead
  feeder voltage
- EE Subtransmission Feeder Ratings Version Z10.xlsx – specifically for Tables 3.5.1.3 and 3.5.1.4, data was sourced from:
  feeder section lengths
  feeder section ratings
  underground and overhead lengths
  feeder voltage
- Operational Manual: Standard Overhead Conductor: Current Rating Guide CEOM7011– specifically for Tables 3.5.1.3 and 3.5.1.4, data was sourced from:
  Conductor and Cable ratings
- The Handbook, 2013 Edition, Olex - specifically for Tables 3.5.1.3 and 3.5.1.4, data was sourced from:
  Conductor and Cable ratings

METHODOLOGY [SECTION 5.2.1 (B)]

In this section we explain the methodology Essential Energy applied to provide the required information, including any assumptions Essential Energy made.

Essential Energy has used the following methodologies and assumptions in determining the estimated overhead and underground network weighted average MVA capacity by voltage class.

Background:

It should be noted that, as the outcome of this table is a km capacity, the methods used below determine the capacity of the line with respect to the line only.

For example: A feeder is connected to a Zone Substation breaker with a rating of 100A. The feeder is made up of 3 segments - 2 segments with a thermal capacity of 200A, 10km in total, and 1 segment with a thermal capacity of 150A, 5km in total. There are no voltage constraints on the feeder capacity.

Under the weighted average capacity methodology, the feeder capacity is calculated as:

> (200 x 10 + 150 x 5) / 15 = 183A, even though the surrounding infrastructure is not capable of supplying this level of current.

Methodology Part 1:

For the subtransmission network, relatively accurate information is held on feeder sections which includes:

- Region
- Area
- Feeder Number
- From Sub/Tee
- Section Number
- To Sub/Tee
- Operating Voltage (kV)

- Is this the Minimum conductor on the feeder section?
- Summer Day Rating
- Winter Day Rating
- Summer Day Emergency Rating (1.0 m/s wind)
- Winter Day Emergency Rating (1.0 m/s wind)
- Wind and Ambient Temperature Condition
- Alias in ENMAC
- Conductor
- Design Temperature of Line Section (degrees C)
- Section Length (km)
- Construction Type
- Configuration
- Year Line Section Constructed
- OHEW type
- OHEW Dist (km)
- Summer Ambient Temp C
- Winter Ambient Temp C
- Summer Wind Average (m/s)
- Winter Wind Average (m/s)
- Summer Day (A)
- Winter Day (A)
- Summer Day (MVA)
- Winter Day (MVA)
- Diam (mm)
- Rdc 20C (ohm/km)
- 0C k (m Rac/Rdc)
- Coeffic dc resist
- Summer Day (A)
- Winter Day (A)
- Summer Day (MVA)
- Winter Day (MVA)

Derivation of ratings for Subtransmission Feeders

Overhead conductor ratings are calculated using formulas defined in ESAA D(b)5-1988.

Underground cable ratings are defined by the cable manufacturer.

Assumptions under Methodology Part 1:

All subtransmission feeders are to be treated as Summer constrained and therefore Summer ratings have been used, as the Winter constrained feeders will have an insignificant effect on the results.

All subtransmission feeders are to be treated as thermally constrained, as the voltage constrained subtransmission feeders will have an insignificant effect on the results.

Some subtransmission feeder section ratings or lengths were unavailable and hence were not used in the calculations. It has been assumed that the feeders with missing data will not have a significant effect on the results.

Methodology Part 2:

Data quality has improved for HV feeders, allowing the use of all conductor segments in the calculations. Design temperature is still absent from this data so an assumed 50 degree design temperature is applied. Some conductors still have a type of ‘Unknown’, these have been excluded as any default rating allocated to these would have a large impact due to the total length of conductors with this label. Excluding these conductors minimises yearly variation from arbitrary rating adjustments.

For the derivation of the “weighted average MVA capacity” on HV feeders for a given voltage the following data was obtained:

- The length and conductor types of the three phase, single phase, and SWER feeder sections for both overhead and underground have been obtained from Smallworld.
- Isolation transformer sizes per feeder were obtained from Smallworld.

Derivation of ratings

The following calculations were performed on the aforementioned data to determine the rating of each conductor segment in each feeder:

- Taking the thermal rating for all available HV conductor segments based on the conductor type and a 50 degree Celsius rating.
- Taking the average isolation transformer size on each feeder to limit the rating of SWER segments associated with each feeder.

Assumptions under Methodology Part 2:

- All HV feeders have a 50 degree Celsius rating. Whilst this is most likely not the case, Essential Energy believes it to be a reasonable assumption based on the limited data available.
- The isolation transformer is the limiting element in SWER sections of the network. A minimum isolation transformer size of 200kVA was used, and the largest isolation transformer installed is 1000kVA. While there are some SWER segments that do not use an isolation transformer, the 200kVA minimum was added to account for these.
- All conductors with a linetype of 'Unknown' were excluded.

Methodology Part 3:

LV Feeder ratings are virtually non-existent and many LV feeders will be voltage constrained. Based on the limited data available, Essential Energy has provided LV Feeder ratings based solely on the thermal rating of LV conductors. Essential Energy is aiming to improve the methodology for future submissions.

Some conductors still have a type of 'Unknown', these have been excluded as any default rating allocated to these would have a large impact due to the total length of conductors with this label. Excluding these conductors minimises yearly variation from arbitrary rating adjustments. Some conductors have been allocated an 'Assumed' conductor type, these have used the corresponding Olex handbook rating as it was more accurate than the 20A generic rating.

Assumptions under Methodology Part 3:

- All bare OH LV feeders have a 50 degree Celsius rating. Whilst this is most likely not the case, Essential Energy believes it to be a reasonable assumption based on the limited data available.
- The conductor information available is a reasonable sample of the available LV feeder stock.
- The conductors have been assumed to be three phase unless further information was available.
- All insulated overhead cables have a 75 degrees Celsius rating.
- All underground cables:

  In duct, underground, one duct for single and three phase arrangements.

  Where the insulation material is not known, PVC is assumed.
- All conductors with a linetype of 'Unknown' were excluded, and conductors with a linetype containing 'Assumed' used the corresponding Olex handbook rating.

Methodology and Assumptions Part 4:

Calculation of "weighted average MVA capacity"

The "weighted average MVA capacity" for a given voltage is determined by assigning a weight to the rating of each conductor segment based on the segment length divided by the total length for each voltage class and construction type (overhead and underground).

"Weighted average MVA capacity" of the current year compared to previous years

The methodology has changed from previous years where a sample of conductor types were taken along with fault level data to calculate a voltage limited and thermally limited result per feeder. The new method assigns a rating to all available conductor segments, and only considers a thermally constrained scenario. This method is possible due to data quality improvements and will capture more changes to the conductors on the network compared to the previous method.

The asset data used to construct the weighted average MVA capacity is highly variable due to the presence of unknown conductors and ratings within Essential Energy's network and the process of continual data improvement.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.5 Physical assets

Table 3.5.2 - Transformer Capacities

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The information provided reports a breakdown of transformer capacity of distribution transformers owned by Essential Energy, high voltage customers, and spare transformers owned by Essential Energy that are not currently in use.

Essential Energy has used estimated information when there is no 'Date Manufactured' or 'Date Installed' for Transformer asset.

The methodology used to estimate the kVA in these instances is considered to provide a reasonable approximation and was determined using averages and most common kVA by Transformer Type. This logic is consistent with previous years.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

This data has been obtained from:

Distribution Transformer MVA extracted from WACS using SQL.

Distribution Transformer Spare Capacity has been obtained from WACS using SQL and ERP (via the Daily Inventory Valuation Report).

The key data used to determine private HV transformer capacity has been sourced from connection agreements and maximum demand readings for HV customers.

METHODOLOGY [SECTION 5.2.1 (B)]

DPA0501 – Distribution transformer capacity owned by utility including Cold Spares

Step 1: Distribution transformer capacity owned by utility (not including Cold Spares)

- Only Transformer assets with an Owner = "Essential Energy".
- Only Transformer assets with a Service Status = "In Service"
- Excludes Transformers with a Distribution Transformer Type = "Isolator" or "Step Up/Down"
- Excludes Transformers with a SWER Primary Voltage (3.3kV, 6.35kV, 12.7kV, 19.1kV), therefore excluding SWER Isolators in conjunction with the above item.
- Total MVA was calculated as kVA (derived as per below) / 1000 and summed.
  - kVA obtained from the Transformer's Rating attribute that forms part of its Engineering Specification. If this is blank or 0, then kVA has been derived as follows:
    - 'Ground Outdoor/Indoor Chamber Mounted' Mounting Type = 1000kVA
    - 'Kiosk Mounted' Mounting Type = 500kVA
    - All Others (e.g. 'Pole Mounted') based on phases:

      Multiple Phase = 63kVA

      Single Phase = 10kVA

Step 2: Distribution transformer cold spare capacity (added to Total MVA from Step 1)

(1) Determine Cold (Out of Service) Distribution Transformers from WACS

- Only Transformer assets with an Owner = "Essential Energy".
- Only Transformer assets with a Service Status = "Out of Service"
- Excludes Transformers with a Distribution Transformer Type = "Isolator" or "Step Up/Down"
- Excludes Transformers with a SWER Primary Voltage (3.3kV, 6.35kV, 12.7kV, 19.1kV), therefore excluding SWER Isolators in conjunction with the above item.
- Total MVA was calculated as kVA (derived as per below) / 1000 and summed.
  - kVA obtained from the Transformer's Rating attribute that forms part of its Engineering Specification. If this is blank or 0, then kVA has been derived as follows:
    - 'Ground Outdoor/Indoor Chamber Mounted' Mounting Type = 1000kVA
    - 'Kiosk Mounted' Mounting Type = 500kVA
    - All Others (e.g. 'Pole Mounted') based on phases:

      Multiple Phase = 63kVA

      Single Phase = 10kVA

(2) Determine Spare Distribution Transformers (purchased and in stores) from ERP

- This represents distribution transformers stock items booked into depots/stores as "spares" in ERP. Source is the Daily Inventory Valuation Report.
- Only items with Item Group of TX PAD or TX POLE
- Only items with Category Name of INV Transformers
- Total MVA was calculated as kVA (from the Transformer stock item description) / 1000 and summed.

DPA0503 – Cold spare capacity included in DPA0501

Determined as per Step 2 for DPA0501.

DPA0504 – Zone Substation transformer Capacity

This data has been obtained from:

Zone Substation Transformer MVA extracted from the WACS system using SQL.

SQL Logic:

Only Power Transformer assets where the Owner = “Essential Energy”.

Only Power Transformer assets with a Service Status <> “Retired”

Excludes Power Transformers with a Type of:

“Regulators”, “SWER Isolators”

MVA has been obtained from the “Maximum Rating (MVA)” attribute. If blank, it is assumed to be 5 MVA.

The totals for DPA0601, DPA0602 and DPA0603 have been determined based on the “Usage” attribute on the Power Transformer assets as follows:

DPA0601 = “Step 1 of 2 to distribution voltage”

DPA0602 = “Step 2 of 2 to distribution voltage”

DPA0603 = “Step 1 of 1 to distribution voltage”

DPA0604 = All Usage types (therefore providing total transformer capacity)

DPA0605 = Determined using the “AER Cold Standby” attribute where it has a value of ‘Spare’ or ‘Cold Standby’.

ASSUMPTIONS [SECTION 5.2.1 (C)]

Essential Energy has used estimated information when there is no ‘Date Manufactured’ or ‘Date Installed’ for Transformer asset.

For DPA0501 Essential Energy has used estimated information when there is no ‘Rating (kVA)’ for the Transformer as per the logic detailed above. The methodology used to estimate the kVA in these instances is considered to provide a reasonable approximation and was determined using averages and most common kVA by Transformer Type. This logic is consistent with previous years.

The base figures used for the distribution transformer capacity are dependent on the accuracy of the data within the WACS and ERP databases as well as assumptions made as per this Basis of Preparation document for Table 3.5.2.

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.5 Physical assets

Table 3.5.3 - Public Lighting

DATA REPORTING QUALITY

No data has been estimated.

The counts reported are dependent on the accuracy of the data within WACS as well as any assumptions made (see below)

INFORMATION SOURCE

Actual luminaire and pole/column inventory data has been extracted from the WACS system using a series of SQLs.

ASSUMPTIONS

- The designation of an asset as LUMINAIRE in the LIGHT TYPE column of the STL ASSET DATA is based on the presence of a P/L load table code in the STREETLIGHT ALL ASSETS data.
- The designation of DEDICATED STREETLIGHT in the ASSET_CATEGORY of the POLE ASSET DATA is based on the entered pole function in WACS and null S19 – shared/no pole SUPPORT TYPE BILLING data.
- The FUNDED BY fields denote the responsibility to maintain the public lighting asset.
- Assets with the same ASSET LABEL are unique poles in different vicinities.
- COUNT represents the number of unique asset IDs.
- The designation of an asset as a DEDICATED SL COLUMN links the pole to the SUPPORT TYPE BILLING codes: S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11 and S17 as well as dedicated streetlight in POLE FUNCTION as mentioned previously.
- The designation of an asset as a DEDICATED SL POLE links the pole to the SUPPORT TYPE BILLING codes S12, S13, S14, S15 and S16 in SUPPORT TYPE BILLING, as well as dedicated streetlight in POLE FUNCTION as mentioned previously.
- The category NO in PRIVATELY MAINTAINED POLE linked with PRVATE in ASSET OWNER allows private poles that are maintained by Essential Energy to be counted.

METHODOLOGY

DPA0701 – Public Lighting Luminaires

Create a pivot table for the STL ASSET DATA and then

8. Filter in SERVICE STATUS --> IN SERVICE only.
9. In LIGHTING CATEGORY filter out any QUARANTINED assets
10. Filter in LIGHT TYPE --> LUMINAIRE
11. Filter in FUNDED BY --> CUSTOMER, CUSTOMER PRE-2009 and EE only
12. Take the SUM of the COUNT.

DPA0702 & DPA0703 – Public Lighting Poles and Columns

Create a pivot table for the POLE ASSET DATA and then

1. Filter in SERVICE STATUS --> IN SERVICE only.
2. In ASSET CATEGORY filter in DEDICATED SL POLE (minor or major) and DEDICATED SL COLUMN (minor or major) only
3. Filter in ASSET OWNED --> EE and PRIVATE only
4. For PRIVATE MAINT POLE filter in NO only
5. For RETIRED POLE filter in NO only.
6. Take the SUM of the COUNT.

ADDITIONAL INFORMATION

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION

The same methodological basis as last year was used to extract the data, however data for all assets was extracted using SQL logic this year, as opposed to using downloadable asset and activity files from WACS. This was done for consistency with the audit of the wider network's assets. This also enabled a more accurate capture of pole assets, such as those maintained by EE but privately owned.

Worksheet: 3.6 Quality of Service

Table 3.6.1 - Reliability

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

There was no use of estimated information.

Information has been sourced from current systems and management is comfortable that the information is reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Data is sourced from PowerOn Advantage and calculations managed in an Access database. PowerOn makes up the central modules of Essential Energy's power Distribution Management and Outage Management Systems (DMS/OMS).

(DMS/OMS).

Data validation is run on the extract from PowerOn throughout the year. Corrections to the data include LV outages (part sub); supply lost times (part supply/brown out calls); short notice planned; and exclusion flags.

The spreadsheet used to collate the data is titled: "AIO Tables Workpapers 24-25".

METHODOLOGY [SECTION 5.2.1 (B)]

The data has been collected and collated in line with the Economic Benchmarking RIN Instructions and Definitions guidance issued by the AER.

The Threshold for Major Event Days (TMED) for 2024-25 was applied as per the definition.

In the Reliability Reporting Database AIO 24-25, the following query was run for the financial year:

Run and View Monthly Reliability Reporting Data

- This query rolls up all outages into filtered definitions with Customers Affected and Customer Minutes Lost at region and category level.
- RIN Whole Net SAIDI/SAIFI 1 summates the Monthly Reliability Reporting Data.
- RIN Whole Net SAIDI/SAIFI 2 calculates the SAIDI/SAIFI using Avg Cust Base RIN query.

As a cross-reference:

- In the workpaper on sheet '24-25 data' – roll up categories by operational area to total Essential Energy categories and finally into total Essential Energy.
- Using Average Customer Base RIN to calculate SAIDI (Customer Minutes Lost/Ave Cust Count) and SAIFI (Customers Affected/Ave Cust Count).
- DQS0101 & DQS0103 = Total Unplanned SAIDI and SAIFI.
- DQS0102 & DQS0104 = Total Unplanned – Transmission – Directed to De-energise – Total Fire Ban-No Fault Found = DNI Unplanned SAIDI and SAIFI.
- DQS0105 & DQS0107 = Normalised + Transmission + Directed to De-energise + Total Fire Ban-No Fault Found SAIDI and SAIFI.
- DQS0106 & DQS0108 = Normalised SAIDI and SAIFI.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.6 Quality of Service

Table 3.6.2 - Energy Not Supplied

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

All information for these tables was based on an aggregate network level and a best estimate.

The 2025 GWh supplied were as reported in the 2024-25 Annual Regulatory Accounts.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Data has been sourced from reported Planned customer minute off-supply and Unplanned customer minutes off-supply, provided as per previous Annual RIN Table 3.6.8 format (noting this table is no longer requested in the AIO).

METHODOLOGY [SECTION 5.2.1 (B)]

Based on the information available, the estimated kWh was determined by calculating an average kWh use per minute for the financial year. This is based on the total consumption divided by the total number of customers divided by the number of minutes in a year. This average kWh use per minute by feeder was then applied to the recorded Total Planned and Unplanned customer minutes off supply. This information was then applied by Feeder to the data from previous Table 3.6.8 of the annual RIN.

The figures provided here are the sum of the planned and unplanned MWh not supplied for all Feeders.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.6 Quality of Service

Table 3.6.3 - System Losses

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The calculation is based on data provided in other tables. Please refer to the Basis of Preparation relating to Tables 3.4.1 Energy Delivery. These tables are designated as actual, so this formula result is also classified as actual. The data provided is considered reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

The result is formula driven and data utilised in Table 3.6.3 came from Table 3.4.1.2 and Table 3.4.1.3 for Electricity imported, while Electricity delivered was from Table 3.4.1.

METHODOLOGY [SECTION 5.2.1 (B)]

Calculated as:

System losses = {(electricity imported – electricity delivered from table 3.4.1.1) / (electricity imported)} x 100

The electricity imported is the sum of the Energy received from the TNSP (sum of table 3.4.1.2) plus the Energy received into the DNSP system from embedded generation (sum of table 3.4.1.3).

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.6 Quality of Service

Table 3.6.4 - Capacity Utilisation

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The calculation is based on data provided in other tables. Please refer to the Basis of Preparation relating to Tables 3.4.3.3 and 3.5.2.2. These tables are designated as actual, so this formula result is also classified as actual. The data provided is considered reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

The result is formula driven and data utilised in Table 3.6.4 came from Table 3.4.3.3 and Table 3.5.2.2.

Table 3.4.3.3 “Non–coincident Summated Raw System Annual Maximum Demand” divided by Table 3.5.2.2 “Total installed capacity for second step transformation where there are two steps to reach distribution voltage” + “Total zone substation transformer capacity where there is only a single step transformation to reach distribution voltage”.

METHODOLOGY [SECTION 5.2.1 (B)]

Essential Energy has ignored feeder capacity and calculated as:

Capacity Utilisation = Annual Maximum Demand / Total installed capacity for second step transformation where there are two steps to reach distribution voltage + Total zone substation transformer capacity where there is only a single step transformation to reach distribution voltage.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.7 Operating Environment

Table 3.7.2 - Terrain Factors

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

This information includes estimations.

This information includes estimations and caution should be exercised if using this for decision making or benchmarking purposes.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

For the reporting period, the data relating to vegetation has been drawn from the Vegetation Information Management system “Xugo”. The data is made accessible via a number of tables within the Databricks data platform which is brought into a Power BI data model. For information not related to vegetation the data is primarily drawn from SmallWorld.

METHODOLOGY [SECTION 5.2.1 (B)]

Rural proportion

Rural proportion was calculated as Rural Route Line Length divided by Total Route Line Length.

Urban and CBD vegetation maintenance spans

Using the Power BI semantic model (Xugo Databricks v3) which draws vegetation task data from the Xugo veg management system via Databricks we pull together all actionable veg tasks with a completion date sitting within the reporting period. We then do a distinct count of the field “Bay ID” which identifies which network bay the task resides in. This distinct count gives us the number of vegetation maintenance bays for the reporting period. One of the fields within this data set is the rural/urban designation which allows us to split the result across urban and rural.

Total vegetation maintenance spans

This is the sum of Rural and Urban vegetation spans outlined in the previous two metrics (i.e. Urban and CBD Vegetation Maintenance Spans plus Rural Vegetation Maintenance Spans).

Total number of spans

Total number of spans is generated from running a script out of Smallworld.

Average urban and CBD vegetation maintenance span cycle

We have created a pivoted table of all VMAs that are listed in our current five year veg maintenance contract and averaged out their individual cycle times expressed in months and these average values (across both urban and rural) are divided by 12 to arrive at an “average frequency of cutting” measured in years. The data in the pivot is extracted from a single Databricks table which lists all VMAs that are currently loaded in our veg management system called “Xugo”.

Average rural vegetation maintenance span cycle

As per "Average urban and CBD vegetation maintenance span cycle" above.

Average number of trees per urban and CBD vegetation maintenance span

We take LiDAR incursion data where the clearance category runs from A1 to C1. We round the Latitude and Longitude values to 4 decimal places. We then concatenate the rounded Latitude and Longitude into a single field which represents a tree (approx. a 10m square). We then count unique instances of these Lat Long values against a zone and divide that value by the total maintenance span count in the same zone to arrive at the average number of trees per maintenance span. Please note that this process provides an estimate only and is based on data collected in 2018 with no new data being generated since that time.

Average number of trees per rural vegetation maintenance span

We take LiDAR incursion data where the clearance category runs from A1 to C1. We round the Latitude and Longitude values to 4 decimal places. We then concatenate the rounded Latitude and Longitude into a single field which represents a tree (approx. a 10m square). We then count unique instances of these Lat Long values against a zone and divide that value by the total maintenance span count in the same zone to arrive at the average number of trees per maintenance span. Please note that this process provides an estimate only and is based on data collected in 2018 with no new data being generated since that time.

Average number of defects per urban and CBD vegetation maintenance span

We take the total number of veg tasks and divide this by the unique span count in the same data set to derive an average defect per maintenance span. The result is pivoted against the urban/rural classification to produce both an urban and rural result.

Average number of defects per rural vegetation maintenance span

See above "Average number of defects per urban and CBD vegetation maintenance span".

Tropical proportion

Climate data obtained by BOM was overlaid with network spans in Smallworld. Any Span in a Grid Code area 2 (see definitions in table below) was reported as being in a tropical area.

GRID CODE	CLASSIFICATION	GRID CODE	CLASSIFICATION
1	Hot humid Summer	4	Hot dry Summer, cold Winter
2	Warm humid Summer	5	Warm Summer, cool Winter
3	Hot dry Summer, mild Winter	6	Mild warm Summer, cold Winter

http://reg.bom.gov.au/jsp/ncc/climate_averages/climate-classifications/index.jsp

Standard vehicle access

Standard vehicle access data was sourced from Smallworld. A query was run returning line length within 50m of the centreline of selected road classifications which were deemed to be two wheel drive suitable. Classifications selected were Arterial Road, Collector Road, Local Road, Sub-Arterial Road, Highway, Lane/pathways and 2WD Tracks. The method used is sound but only yields an estimate based on the

assumption that if there is a 2WD accessible road within a certain distance of the conductor, then that portion of the network is likely to be accessible from a standard 2WD vehicle.

Bushfire risk

Essential Energy regard all rural VMAs to be a Bushfire Risk.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.7 Operating Environment

Table 3.7.3 - Service Area Factors

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

This information is considered to be actual.

The data that has been used for the quantity in Table 3.7.3 has come from Essential Energy's GIS Smallworld system.

The quality of the span information stored in GIS Smallworld has been steadily improving over many years, however the following points describe some of the known data quality issues:

- Data quality checks regularly highlight data quality issues, however certain issues cannot be resolved without field visits, which in many cases are not warranted due to the nature of the issue and the distance required to be travelled;

The data provided in these tables is based on the current data in the GIS Smallworld system and is generally considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Overhead line route lengths

A snapshot of the GIS Smallworld database was taken on 1st July. From this snapshot, overhead span (i.e. "spans") was exported from GIS Smallworld using scripts.

METHODOLOGY [SECTION 5.2.1 (B)]

Figures obtained from GIS Smallworld are assumed to be actual, even though there are some data inconsistencies. Information in Smallworld is continually being updated and refined and although this may lead to changes year on year, they are considered immaterial, and management are not aware of significant data issues.

Overhead lines

There is a flag on each span which is derived by a database trigger that identifies if spans are underbuilt (i.e. two circuits positioned on top of each other). Spans where underbuilt is set to yes are excluded so as not to overcount multiple circuits.

Route length is limited to spans with the ownership of 'Essential Energy' or 'Private' and includes all service status except for 'Abandoned'.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.6.8 Network Feeders

Table 3.6.8 - Network Feeder Reliability

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

There was no use of estimated information.

Information has been sourced from current systems and management is comfortable that the information is reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Data is sourced from PowerOn Advantage and calculations managed in an Access database. PowerOn makes up the central modules of Essential Energy's power Distribution Management and Outage Management Systems (DMS/OMS).

The spreadsheet used to collate data is named: “AIO Tables Workpapers 24-25”.

Customer numbers from 30 June of the previous year are used as the numbers for the Customers as at 1 July (start of year) with the current feeder categories applied.

Customer number from 30 June of the current year are used as the numbers for the Customers as at 30 June (end of year).

The information on the length of feeders comes from Smallworld and is collated into the Access database mentioned above.

The information on “Maximum demand” is provided by the Network Analytics & Forecast team but entered by the Asset Performance and Reliability (APR) team.

METHODOLOGY [SECTION 5.2.1 (B)]

In the Reliability Reporting Database AIO 24-25 run the following query for the financial year:

- Using the following tables and queries:
    - Feeder Cust Start FY Table – the Customer numbers by feeder and segment as at 30 June (previous year) with current year feeder categories.
    - Network Data Feeder 1_1 – Sums customer numbers from Feeder Cust Start FY Table to Feeder level.

    Network Data Feeder 1_2 – Sums customer numbers, sums OH and UG lengths, and collates MVA from Feeders Segments Master Table to Feeder level for current year.

    Network Data Feeder 1_3 – Maps query 1_1 and 1_2 feeders and customer numbers Start/Finish, OH/UG length, and RIN MVA to Feeder.

    This query is used to populate the table in Workpapers.

- Network Data Feeder 1_4 – sums customer numbers to feeder category for cross-check against 24-25 Data sheet in Workpapers.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

Table format has changed from previous years. Change in BoP reflects the changes in the process to produce the new table format.

Worksheet: 6.2.4 STPIS Customer Summary

Table 6.2.4 – STPIS Customer Summary

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

There was no use of estimated information.

Information has been sourced from current systems and management is comfortable that the information is reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Data is formula driven and sourced from AIO Annual Table 3.6.8 Network Feeders.

METHODOLOGY [SECTION 5.2.1 (B)]

Data is sourced directly from AIO Annual Table 3.6.8.

Average customers is based on the customer numbers as at 1 July and 30 June.

ASSUMPTIONS [SECTION 5.2.1 (C)]

No assumptions included.

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

No change from previous year.

Worksheet: 6.6 STPIS Customer Service

Table 6.6.2 - Inadequately Served Customers

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

There was no use of estimated information.

Information has been sourced from current systems and management is comfortable that the information is reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Data is sourced from PowerOn Advantage and calculations managed in an Access database. PowerOn makes up the central modules of Essential Energy's power Distribution Management and Outage Management Systems (DMS/OMS).

The spreadsheet used to collate data is named: “AIO Tables Workpapers 24-25”.

METHODOLOGY [SECTION 5.2.1 (B)]

In the Reliability Reporting Database AIO 24-25 run the following macro for the financial year – update the final query with the threshold filter:

- Run Monthly Feeder Segment Reliability Reports RIN – macro that calculates SAIDI/SAIFI at feeder segment level. Finishes with query Monthly Reliability Fdr Seg SAIDI&SAIFI RIN – filters feeder segments with SAIDI > threshold.
- These tables are unplanned customer minutes off supply (SAIDI) and unplanned interruptions (SAIFI) including excluded events.

Table A – SAIDI values:

- Threshold SAIDI for inadequately served customers = average 21/22 to 23/24 whole network including excluded events SAIDI * 4. Reported historical actuals from old AR 6.2.1 table.

- Average Unplanned SAIDI – from the macro output, calculate the average SAIDI
- Highest unplanned SAIDI – from the macro output, discern the highest SAIDI

Table B – SAIFI Values:

- Average Unplanned SAIFI – from the macro output, calculate the average SAIFI
- Highest unplanned SAIFI – from the macro output, discern the highest SAIFI

Table C – Top 5 feeders with most inadequately served customers:

- Top 5 SAIDI – sourced from macro output
- Top 5 SAIFI – sourced from macro output
- Number of inadequately served customers – sourced from macro output

Top 5 Zone Substations not completed as Top 5 Feeders has been used.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

Updated phrasing on methodology – tables are based on SAIDI and SAIFI including excluded events – this was the methodology in previous years, however stated that it was after removing excluded events incorrectly.

Worksheet: 6.7 STPIS Daily Performance

Table 6.7.1 - Daily Performance Data - Unplanned

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

There was no use of estimated information.

Each system retains details of each individual call throughout the reporting period with the functionality to also provide statistics about the received calls for a nominated period of time. The data is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Genesys PureCloud was used to collect call data. Outage data for the purpose of calculating excluded events was provided by Network Reliability.

METHODOLOGY [SECTION 5.2.1 (B)]

PureCloud allows for a greater level of detail from the 'Interaction' reports also enabling greater transparency and application of exclusions by excluded events as determined by 5.4a) of the AER's Service target performance incentive scheme Version 2.0.

The Customer service information must be reported as per the definitions in the STPIS Guidelines, that is excluding:

1. calls to payment lines and automated interactive services
2. calls abandoned by the customer within 30 seconds of the call being queued for response by a human operator (where the time in which a telephone call is abandoned is not measured, then an estimate of the number of calls abandoned within 30 seconds will be determined by taking 20 per cent of all calls abandoned).
3. calls occurring during a major event day or STPIS excluded event

All calls (first column in the 6.7) is defined in the same way however not excluding those in dot point 3 above

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

Last year 6.7 did not include the requirement to report on "all calls" which was captured in another, now redundant table. This data forms the bases of the cells in previously required so no significant changes are to the information source or methodology were required.

Worksheet: 6.9 STPIS GSL

Table 6.9.1.1 - Guaranteed Service Levels - GSL Requirements

This table does not apply as Essential Energy has a jurisdictional scheme, information provided in table 6.9.1.2.

Table 6.9.1.2 - Guaranteed Service Levels - Jurisdictional GSL Scheme

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The information is considered reliable.

No estimations are made. The statistics provided are based on the user's input selections and are presented accordingly. Care is taken to ensure that all GSLs are categorised correctly and are regularly scrutinised for accuracy by the Customer Resolutions, Customer Contact Centre and Public Lighting teams.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Public Lighting GSLs: Data is exported directly from the Customer Interaction Management System (ServiceNow CIM), which houses the details of GSL claims including eligibility and details of the assessment process. Data is exported directly from the Oracle ERP system for payment information. For council GSL payments, data is provided directly by the public lighting team as these payments while also processed via OTP through Finance (accounts Payable), the amount paid can be combined with other penalty credits.

Network Reliability GSLs (Frequency and Duration): Data is sourced from a PowerBI report that integrates data from three systems: PowerOn Advantage (POA), the network reliability database (which captures excluded events and major event days), and PeacePlus9 which records the payments.

METHODOLOGY [SECTION 5.2.1 (B)]

Public Lighting GSLs: Data is extracted from the Oracle ERP database by Finance in Excel format. The payments made for the FY are used as the basis for interrogating ServiceNow CIM. Careful attention is paid to crosscheck that all payments were present in ServiceNow CIM including the eligibility status. For council GSL payments, supporting data is provided directly by the public lighting team and integrated with the standard public lighting GSL data.
Network Reliability GSLs (Frequency and Duration): Data is exported from a PowerBI report with a filter applied for the financial year to capture GSL payments made. A separate page within the same PowerBI report provides validation of the threshold requirements for duration vs frequency eligibility.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

From FY25, customers are proactively invited to claim network reliability GSLs rather than relying on customers to self-identify potential eligibility and make a claim, resulting in a significant increase in GSL

payments made. Payments are now credited directly to customer power bills rather than being paid via one-time payment methods such as public lighting GSLs via Finance.

The validation of duration vs frequency eligibility currently requires manual validation of the split. For FY25, all GSL eligible claims except 2 were determined to be duration-based. The 2 frequency-eligible claims were invited to claim after the conclusion of FY25 and therefore are not recorded as paid in FY25.

Council GSL payments are paid each year after the conclusion of the financial year in a single payment request to Accounts Payable, from the Public Lighting team. These payments are often combined e.g. if a given council was eligible for 2 GSL payments they will be combined into a single payment, similarly if a council was also eligible for a payment associated with maintenance penalties the eligible GSL payment is be included in the total of the single payment made to the council.

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

Significant changes implemented in FY25:

- Proactive GSL Payment Process: Network reliability GSLs (frequency and duration) are now paid proactively through automated ServiceNow case triggers, rather than waiting for customer claims to be made.
- Payment Method Change: Network reliability GSL payments are now credited to customer power bills instead of direct payments to bank accounts or cheques.
- Data Source Change: Network reliability GSL payment data is now retrieved via PowerBI report integrating multiple systems (POA, network reliability database, PeacePlus9) rather than Oracle ERP, reflecting the change in payment processing.
- Increased Payment Volume: The proactive approach has resulted in a large increase in the number of GSL payments made.
- New GSL Subset: Council GSL payments were introduced in FY24, first paid in FY25, representing a new subset that was not offered in previous years. These are processed via OTP through Finance, however, are not always paid as distinct payment, cross reference with Public Lighting payment records is necessary to both identify payments made and discern the full quantity & amount of GSL payments made.

Worksheet: 7.10 Juris Scheme

Table 7.10.1 - Jurisdictional Scheme Payments

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

There has been no use of estimated data.

The information provided is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

The figures were sourced from the ERP finance system.

METHODOLOGY [SECTION 5.2.1 (B)]

Amounts were taken from the general ledger for the relevant account codes relating to Climate Change Levy (401010 and 511025) and Queensland Solar Scheme (401011 and 511026) and NSW Roadmap (401012 and 511024). The receipts and payments were netted off against each other for each scheme.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

No changes from the previous year.

Worksheet: 7.11 DMIS-DMIAM

Table 7.11.1 DMIS - Projects Submitted for Approval

There are no DMIS projects for 2024-25.

Worksheet: 7.11 DMIS-DMIAM

Table 7.11.2 DMIAM - Projects Submitted for Approval

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The information was not estimated.

The information is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

The reports for the relevant project codes from the Oracle system have been used to determine the data.

There is one project for the 2024-25 year.

METHODOLOGY [SECTION 5.2.1 (B)]

The project data includes all expenditure relating to the projects for the year.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 8.1 Income

Table 8.1.1 - Income Statement/ 8.1.1.1 – Revenue and 8.1.1.2 - Expenditure

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The data is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Data shown in these tables has been sourced from the general ledger.

METHODOLOGY [SECTION 5.2.1 (B)]

Revenue is separated between Standard Control Services and Alternative Control Services based on the general ledger Regulatory Segment. The general ledger Account was used to map revenue to the AER revenue categories. Gifted Assets were reallocated from Standard Control and Alternative Control Services to the adjustment column.

The resultant revenue information is then reviewed. Other minor adjustments were also made, such as entries required to align the regulatory statements with Essential Energy's statutory accounts and incorrectly mapped product codes. These adjustments are made manually in the workpapers, if applicable.

For expenditure, the financial year trial balance is broken down according to the latest Oracle tree structure by regulatory segment, cost centre, account, product and project number. The process is automated using a set of mapping tables. The enriched Oracle data exists in the "Income Statement RIN" dataset, and logic is applied to allocate the line items across AIO Regulatory Segments. It is then summarised and used to update Rosetta. There were no changes to the data source or mapping tables and logic from the prior year.

Data is allocated according to expenditure type:
- For direct expenditure, categorisation across regulatory segments is based on the project.
- For indirect expenditure, costs are allocated across regulatory segments based on the AER approved Cost Allocation Methodology (CAM).

The resultant expenditure information is then reviewed. Other adjustments may also be made, such as entries required to align the regulatory statements with Essential Energy's statutory accounts or incorrectly mapped project types. These adjustments are all minor in FY25 and are included in the model “FY25 RIN Reconciliation_2025_08_06” which is linked in Rosetta.

Debt raising costs are included in the Finance costs within the general ledger. The amount disclosed is based on the TCorp fee (per the fee schedule) of 10 basis points on the Face value of debt. The 10 basis points is included in the coupon rate that is applied to the face value of debt. The 31 December debt balances were used as a proxy for an average debt for the year, with the Come and Go (working capital loan) balance calculated using the average for the year.

ASSUMPTIONS [SECTION 5.2.1 (C)]

There is no use of estimated data.

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

The methodology applied to revenue and expenditure has not changed from 2023-24 other than the new requirement to disclose the debt raising costs.

Worksheet: 8.2 Capex

Table 8.2.1 - Capex by Purpose - Standard Control Services - Including Total Capital Contributions

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

There has been no use of estimated data.

The data in this table is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

The figures in the "Actual" column were sourced from data that has been derived from the Oracle ERP General Ledger and Asset modules. The model ingests the data and applies mapping tables and limited calculations. There is some use of WASP and WACS derived data held in ERP or ingested from WACS data. Financial Accounting with input from Asset Management, provided input into the mapping. The mapping is based on prior year with minor updates where there are new project types or asset categories. In 2025 additional mapping is being performed using WACS asset information.

The year end CAM rates were used to allocate non-system assets across the business units. The output was adjusted for Property and Fleet capex to account for direct allocations to the Water business.

System asset splits by voltage level were obtained through the mapping of the asset profiles or asset sub-category (lowest asset category) to the Regulatory Categories through a manually prepared mapping table. Changes are made to adjust these where required. Asset profiles are no longer used in ERP but are used for certain mapping as the mapping was available from prior years and these allow some granularity, e.g. customer funded. Asset profiles are determined from the project types except where an estimate is used for projects created in WASP & WACS or where a relevant Task (previously activity) exists for the project. This information is available within ERP for WASP and referenced WACS data for WACS initiated projects. For non-project (direct) capex the asset categories were taken from the fixed asset module, i.e. the asset category applied on capitalisation. A mapping of the ERP asset categories (at the sub-category level) was created similar to the mapping of Asset Profiles to RIO Asset Categories for each table.

METHODOLOGY [SECTION 5.2.1 (B)]

The "Actuals" data for the system asset split is from the Oracle ERP and WACS System. Justify Types, Estimates, Tasks, Activities, Asset Types, Project Types and Resource Categories are applied to the capex transactional data. The transactional data is consistent with the determination of capital expenditure for statutory reporting. In summary the Justify types and resource categories (for overheads) are used to determine the capex RIO purpose and the asset profile (derived from the project type, estimate (resource sub-category), activity data, gift key or asset management transaction) is used to classify the asset by regulatory category and also to distinguish Water and Public Lighting assets. Regulatory Units are used to distinguish Ancillary Capex. Further details are provided in the ETL documentation. All Work In Progress account transactions, other than asset capitalisations and write offs, all direct capitalisations (non-project),

gifted assets capitalised (adjusted for opening and closing accruals) are included. Right of use asset (lease) additions were manually added to the data. The opening and closing gifted asset accruals are classified by Gift Keys provided in the Customer Works Management Database which equate to asset profiles and are used to classify these assets through a manual adjustment. Work in progress write-offs are manually added back, where material, as they are netted from capex in the data.

Overhead figures were derived from the ERP transactional data and collated using the relevant Expense Category codes using a mapping table. Some true ups were performed manually to align overheads with the total overheads (opex and capex) by regulatory unit.

System asset voltage level splits were obtained by mapping asset classes (derived from Profiles) to voltage levels. The figures were added up to obtain totals for the various voltage levels. For generic projects a split by voltage is performed using the same proportions as the prior year on advice from the business. Other specific adjustments were made following review by the business.

A new assets management system (WACS) was implemented in May 2024. The capex on these projects was included in the model by mapping of asset types and target RIO proposes by mapping similar data fields between ERP and WACS.

The forecast data, representing, in total, the capex allowance in the 2014-29 Final Distribution Determination, has been split into regulatory categories based on the category splits in Essential Energy's final submission. The impact of the AER forecast inflation from the 2014-29 Final Distribution Determination has been removed and the data has been re-inflated to take into account the impact of actual inflation outcomes.

The outputs derived from the above were reviewed by relevant sections of the business and adjustments were made to correct incorrect or missing data from project set up. Changes to justify type were made in ERP after the business review. The Connections justify type is not used in the project source systems so these were manually changed after the business review to identify the projects.

Customer Funded capex was previously adjusted to reflect only the value of gifted assets or contributions receivable. The portion of customer funded project spend funded by Essential Energy was transferred to internally funded capex. The revenue recognised is was used to determine this amount. This year the majority of the customer funded capex has been reported as part of the Ancillary Services negotiated services.

ASSUMPTIONS [SECTION 5.2.1 (C)]

Many capex projects are comprised of both Repex and Augex components. Due to system limitations and the resultant inability to capture the required level of detail, those projects are allocated as either Repex or Augex based on their primary driver.

ADDITIONAL INFORMATION [SECTION 5.2.3]

WACS LOGIC

Integration Logic

If no WACS of WASP data exists, only ERP data is returned.

Assets are linked across systems using PAR_ASSET_ID, and all assets from either system are included.

Projects may share numbers between ERP and WACS, but IDs differ.

Capex/Opex distinction is at the Task level in ERP and Activity level in WACS.

A single WACS Work Order can map to multiple ERP Tasks (both Capex and Opex).

ERP Capex tasks are prefixed with "C-".

Special Cases

Some WACS project numbers start with "11" (inflight projects) and can be mapped to ERP projects, but these are not integrated into WACS data due to lack of correspondence.

Some WACS assets (PAR_ASSET_IDs) link to multiple ERP assets; the model joins to the ERP asset with the smallest ID.

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

Except for the Addition of the WACS system the Basis of Preparation stays the same as last year.

Ancillary Services is excluded from this year's results.

SaaS is no longer being capitalised and was fully expensed during the current 2025 year.

Worksheet: 8.2 Capex

Table 8.2.3 - Capex Other - Including Total Capital Contributions (Alternative Control Services)

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

There has been no use of estimated data.

The data in this table is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

The figures in the "Actual" column were sourced from data that has been derived from the Oracle ERP General Ledger, Project Ledger and Asset Management modules. Financial Accounting with input from Asset Management provided input into the mapping.

For project expenditure Asset Profiles are determined from the project types except where an estimate is used for projects created in WASP & WACS and project tasks for projects created using a template that includes relevant tasks (major projects). This information is available within ERP and is a close approximation of the capitalisation principles in ERP. For non-project capex the profiles were taken from the fixed asset module, i.e. the asset category applied on capitalisation. For Gifted Assets the project key provided on estimation is mapped to the asset profile.

METHODOLOGY [SECTION 5.2.1 (B)]

- The "Actuals" data for the system asset split is from the ERP Finance System. Justify Types, Estimates, tasks, Project Types and Expenditure Categories are applied to the capex transactional data. The transactional data is consistent with the determination of capital expenditure for statutory reporting. In summary the Justify types and expenditure categories (for overheads) are used to determine the capex RIO purpose and the asset profile (derived from the project type, estimate (resource sub-category), task, gift key or asset module transaction) is used to classify the asset by regulatory category and also to distinguish Water and Public Lighting assets. All Work In Progress account transactions, other than asset capitalisations and write offs, all direct capitalisations (non-project), gifted assets accrued or capitalised are included. The gifted asset backlog accrual is not included.
- System asset voltage level splits were obtained by mapping asset classes (derived from Profiles) to voltage levels.
- The forecast data, representing, in total, the capex allowance in the 2014-29 Final Distribution Determination, has been split into regulatory categories based on the category splits in Essential Energy's final submission. The impact of the AER forecast inflation from the 2014-29 Final Distribution Determination has been removed and the data has been re-inflated to take into account the impact of actual inflation outcomes.
- The outputs derived from the above were reviewed by relevant sections of the business and adjustments were made to correct incorrect or missing data from project set up, estimates and obsolete mappings.
- Customer Funded capex was adjusted to reflect only the value of gifted assets or contributions receivable. The portion of customer funded project spend funded by Essential Energy was transferred to internally funded capex. The revenue recognised is used to determine this amount.
- Non-system assets that are used across the business are allocated using the CAM rate for direct spend, adjusted for specific assets within the Water business.
- Right of use lease asset additions were added through manual adjustment.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

The basis of Preparation stays the same as last year.

Ancillary Services is excluded from this year’s results.

SaaS is no longer being capitalised and was fully expensed during the current 2025 year.

Worksheet: 8.2 Capex

Table 8.2.4 - Capex By Asset Class - Including Only Type 1 Capital Contributions And Pwc Undergrounding Capex (Equity Funded)

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

There has been no use of estimated data.

The data in this table is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Refer to 8.2.1 - The data is sourced from ERP.

METHODOLOGY [SECTION 5.2.1 (B)]

Refer to the Methodology & Assumptions sections for 8.2.1.

- The forecast data, representing, in total, the capex allowance in the 2014-29 Final Distribution Determination, has been split into regulatory categories based on the category splits in Essential Energy's final submission. The impact of the AER forecast inflation from the 2014-29 Final Distribution Determination has been removed and the data has been re-inflated to take into account the impact of actual inflation outcomes.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

The Basis of Preparation stays the same as last year.

Worksheet: 8.2 Capex

Table 8.2.5 - Capital Contributions by Asset Class

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

There has been no use of estimated data.

The data in this table is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Amounts were sourced from the ERP General Ledger and Asset Module.

METHODOLOGY [SECTION 5.2.1 (B)]

Capital contributions are sourced from the ERP general ledger an adjustment is made to customer funded project totals to agree to the revenue recognised as not all the capex on a customer funded project is recovered from a customer.

The forecast data has been split into regulatory categories based on the category splits in Essential Energy's final submission. The impact of the AER forecast inflations from the 2014-29 Final Distribution Determination has been removed and the data has been re-inflated to take into account the impact of actual inflation outcomes.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

The Basis of Preparation stays the same as last year.

Worksheet: 8.2 Capex

Table 8.2.5(B) - Capital Contributions by Type

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

There has been no use of estimated data.

The data in this table is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Amounts were sourced from the ERP General Ledger and Asset Module.

METHODOLOGY [SECTION 5.2.1 (B)]

Refer to the Methodology & Assumptions sections for 8.2.1.

- The data has been split into regulatory categories based on the category splits in Essential Energy's final submission. Customer Funded Public lighting is split into “Type 1” and “Type 2” Capital Contributions

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

The Basis of Preparation stays the same as last year.

Worksheet: 8.2 Capex

Table 8.2.6 - Disposals by Asset Class

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

There has been no use of estimated data.

The data in this table is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

The figures were sourced from a data set extracted from Oracle and using the Proceeds from disposal account. This was compared to the ERP Disposal listing for August to September. There were immaterial other items included in the account which are not from the Asset Module, eg scrap sales.

METHODOLOGY [SECTION 5.2.1 (B)]

The disposals data was taken from the trial balance and is consistent with the retirements listing from ERP.

The forecast data has been split into regulatory categories based on the category splits in Essential Energy's final submission. The impact of the AER forecast inflations from the 2014-29 Final Distribution Determination has been removed and the data has been re-inflated to take into account the impact of actual inflation outcomes.

System Assets, including system land and buildings have been allocated to the relevant business units, with non-system assets being allocated based on the CAM allocation rates.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

The Basis of Preparation stays the same as last year.

Worksheet: 8.2 Capex

Table 8.2.7 - Immediate Expensing of Capex

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The information was not estimated.

The information is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Essential Energy's lodged Income Tax Return, Oracle ERP data

METHODOLOGY [SECTION 5.2.1 (B)]

Essential Energy claims all replacement expenditure for tax purposes in the year the expense is incurred. This is a change in process from previous years.

Essential Energy currently has one type of expenditure that would be added to the regulatory or tax asset base and treated as immediately deductible for income tax purposes. The type of expenditure is borrowing costs that are capitalised to projects. For income tax purposes, this type of expenditure is considered to be immediately deductible. In order for the borrowing costs to be capitalised, the project must meet the following criteria:

1. Must have commenced after 1 July 2009
2. Be reasonably expected to take greater than 12 months
3. Must have a budgeted spend of greater than $10M

During the 2024/25 financial year, Essential Energy did not have any projects that met the above criteria.

When projects do meet the criteria, the amount of capitalised interest is identifiable from the general ledger in ERP.

For low value assets that are immediately expensed for accounting purposes (tools and equipment under $600), these are not added to the tax Fixed Asset Register within ERP due to the volume of transactions. These are treated as black hole expenses for income tax purposes and a deduction is claimed over 5 years.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

The Basis of Preparation has changed from the prior year. Replacement expenses incurred are immediately expensed for tax purposes.

Worksheet: 8.4 Opex

Table 8.4.1 - Operating & Maintenance Expenditure - By Purpose

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The data is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

The figures were sourced from the general ledger, via the Finance Data Set (Oracle ERP).

METHODOLOGY [SECTION 5.2.1 (B)]

The process for expenditure is the same as prior years. Data is taken from the 2024-25 ERP Projects Subledger from the Finance Golden Dataset (FDS) by regulatory segment and project type. For direct expenditure, categorisation across regulatory segments is based on the regulatory segment assigned against projects. For indirect expenditure, costs are allocated across regulatory segments based on the AER approved CAM methodology.

Manual adjustments were made to reallocate incorrect mapping of minor project expenditure. The details are included in the "FY25_RIN_Reconciliation_2025_08_06" workpaper.

In May 2024, the business began using Oracle WACS as the asset management system. Emergency Response expenditure is not differentiated from Unplanned Corrective Maintenance expenditure in WACS. To separate Emergency Response expenditure for AIO reporting, standing projects for unplanned corrective maintenance (Transmission and Distribution) were reallocated to emergency response, excluding recoverable works. Refer to "FY25 Corrective Maintenance Emergency Response Analysis.xlsx" workpaper for details of the standing projects.

ASSUMPTIONS [SECTION 5.2.1 (C)]

There is no use of estimated data.

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

In previous years, Emergency Response expenditure was sourced from the WASP Asset Management System. Since switching to Oracle WACS, Emergency Response expenditure was no longer separated from Unplanned Corrective Maintenance expenditure. As a result, standing projects for unplanned corrective maintenance (Transmission and Distribution) were reallocated to emergency response, excluding recoverable works.

Debt raising expenditure is a new item for FY25. The AER defines it as “The transaction costs incurred each time debt is raised or refinanced as well as the costs for maintaining the debt facility.” TCorp charges Essential Energy an annual Loan Administration Fee which includes debt management and other administrative services, as well as debt raising costs.

Debt raising costs are included in the finance costs within the general ledger. The amount disclosed is based on the TCorp fee (per the fee schedule) of 10 basis points on the face value of debt. The 10 basis points is included in the coupon rate that is applied to the face value of debt. The 31 December debt balances were used as a proxy for an average debt for the year ($7.2 billion in FY25), with the Come and Go (working capital loan) balance calculated using the average for the year ($43 million in FY25).

Table 8.4.2 - Operating & Maintenance Expenditure - By Purpose - Margins Only

Essential Energy had no related party margin expenditure.

Worksheet: 9.5 TUoS

Table 9.5.1 - TUoS Charges (AEMO)

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The data is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Data shown in these tables has been sourced from the general ledger via the Finance Data Set (Oracle ERP). Reconciles to Table 8.1.1.2 for TUOS Expenditure.

METHODOLOGY [SECTION 5.2.1 (B)]

TUOS Expenditure is based on account 511020 - Direct Transmission, less the avoided TUOS product code which is captured in Table 9.5.4. The workpaper “9.5_TUoS_Workpaper_20250822” shows the TUOS expenses across TNSPs and DNSPs.

ASSUMPTIONS [SECTION 5.2.1 (C)]

There is no use of estimated data.

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

This is a new table for 2024-25.

Worksheet: 9.5 TUoS

Table 9.5.2 - Transmission Connection Fees

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Not required.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

N/A

METHODOLOGY [SECTION 5.2.1 (B)]

N/A

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 9.5 TUoS

Table 9.5.4 - Payments To Embedded Generators

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The data is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Data shown in these tables has been sourced from the general ledger, via the Finance Data Set (Oracle ERP).

METHODOLOGY [SECTION 5.2.1 (B)]

Avoided TUOS expenditure is based on the product code 11221 - TUOS Avoided TUOS Charges.

ASSUMPTIONS [SECTION 5.2.1 (C)]

There is no use of estimated data.

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

This is a new table for 2024-25.

Worksheet: P1.1 Cost Reflective Tariffs

Table P1.1.1 - Energy Delivered by Meter Type - Cost Reflective Tariff Customers

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The information that has been sourced from the billing system is considered to be actual data

The data in this table is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

The figures were sourced from the billing system, Peace.

METHODOLOGY [SECTION 5.2.1 (B)]

A list of all Premises with their meter and tariff details, and invoiced consumption for Financial year 2025 was extracted from the billing system, Peace. The same mapping was applied as per for the customer count data extract.

The Premises were assigned flags for Cost Reflective or Non Cost Reflective based on the assigned Network tariff.

The following splits were based on Cost Reflective tariff customers.

P 1.1.1 provides a split of the customer invoiced consumption by customer segment according to their assigned tariff and meter type, where Type 4 are Interval/Smart meters, Type 6 are Basic meters, and Type 7 are Unmetered, they have a meter in MSATS just not in reality.

Due to this information being based on what has actually been invoiced to date, it does exclude the Basic meters 3 monthly read invoices, so will be understated. The Finance figures for EB 3.4.1 and as per the following table, P 1.1.2 Energy delivered by Tariff, take into account the accrual process. In order to align to these numbers, the Basic meter types have been apportioned to the equivalent residential and non-residential customer not on demand buckets.

Please note that the Controlled load consumption has been included at the Premise level and then by meter Type.

The Meter Type that has been used for reporting is based on what was assigned to the Premise on 30 June 2025, as per the Customer count in Table P 1.1.3. During the Financial year we had 106,014 premises move to a Smart meter.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

This is a new table and has not been provided previously.

Worksheet: P1.1 Cost Reflective Tariffs

Table P1.1.2 - Energy Delivered by Tariff Type - Cost Reflective Tariff Customers

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The data is actual. The amounts reported includes accruals for unbilled consumption for the period and is as provided to the Board and is audited so is considered reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Total energy delivered has been sourced from PEACE billing system using Network Invoicing Cube, and the unread meters accrual at 30 June 2025. Consumption agrees to the Management accounts.

METHODOLOGY [SECTION 5.2.1 (B)]

Categorisation across AER categories based on network tariffs from PEACE and unbilled consumption from the Network Revenue accrual.

ASSUMPTIONS [SECTION 5.2.1 (C)]

Amounts reported includes accruals for unbilled consumption, consistent with prior year methodology

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

This is a new table and has not been provided previously.

Worksheet: P1.1 Cost Reflective Tariffs

Table P1.1.3 - Number Customers by Meter Type - Cost Reflective Tariff Customers

Table P1.1.4 - NMI Count by Tariff Type - Cost Reflective Tariff Customers

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The information that has been sourced from the billing system is considered to be actual data.

The data in this table is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

The figures were sourced from the billing system, Peace.

METHODOLOGY [SECTION 5.2.1 (B)]

A list of all Premises with their meter and tariff details was extracted from the billing system, Peace, as at 30th June. This is the same list that was used for EB Table 3.4.2 Customer Numbers.

The Premises were assigned flags for Cost Reflective or Non Cost Reflective based on the assigned Network tariff.

The following splits were based on Cost Reflective tariff customers.

P 1.1.3 provides a split of the customer numbers by customer segment according to their assigned tariff and meter type, where Type 4 are Interval/Smart meters, Type 6 are Basic meters, and Type 7 are Unmetered, they have a meter in MSATS just not in reality.

R1.1.4 provides a split of all customers split by Customer segment and tariff.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

Cost reflective, non-cost reflective and secondary tariffs have been separated to their own sections for the year, P1.1, P1.2 and P1.3 respectively.

Worksheet: P1.2 NCR tariffs

Table P1.2.1 - Energy Delivered by Meter Type – Non-Cost Reflective Tariff Customers

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The information that has been sourced from the billing system is considered to be actual data

The data in this table is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

The figures were sourced from the billing system, Peace.

METHODOLOGY [SECTION 5.2.1 (B)]

A list of all Premises with their meter and tariff details, and invoiced consumption for Financial year 2025 was extracted from the billing system, Peace. The same mapping was applied as per for the customer count data extract.

The Premises were assigned flags for Cost Reflective or Non Cost Reflective based on the assigned Network tariff.

The following splits were based on Non-cost reflective tariff customers.

P 1.2.1 provides a split of the customer invoiced consumption by customer segment according to their assigned tariff and meter type, where Type 4 are Interval/Smart meters, Type 6 are Basic meters, and Type 7 are Unmetered, they have a meter in MSATS just not in reality.

Due to this information being based on what has actually been invoiced to date, it does exclude the Basic meters 3 monthly read invoices, so will be understated. The Finance figures for EB 3.4.1 and as per the following table, P 1.2.2 Energy delivered by Tariff, take into account the accrual process. In order to align to these numbers, the Basic meter types have been apportioned to the equivalent residential and non-residential customer not on demand buckets.

Please note that the Controlled load consumption has been included at the Premise level and then by meter Type.

The Meter Type that has been used for reporting is based on what was assigned to the Premise on 30 June 2025, as per the Customer count in Table P 1.1.3. During the Financial year we had 106,014 premises move to a Smart meter.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

This is a new table and has not been provided previously.

Worksheet: P1.2 NCR tariffs

Table P1.2.2 - Energy Delivered by Tariff Type - Non-Cost Reflective Tariff Customers

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The data is actual. The amounts reported includes accruals for unbilled consumption for the period and is as provided to the Board and is audited so is considered reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Total energy delivered has been sourced from PEACE billing system using Network Invoicing Cube, and the unread meters accrual at 30 June 2025. Consumption agrees to the Management accounts.

METHODOLOGY [SECTION 5.2.1 (B)]

Categorisation across AER categories based on network tariffs from PEACE and unbilled consumption from the Network Revenue accrual.

ASSUMPTIONS [SECTION 5.2.1 (C)]

Amounts reported includes accruals for unbilled consumption, consistent with prior year methodology

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

This is a new table and has not been provided previously.

Worksheet: P1.2 NCR tariffs

Table P1.2.3 - Number Customers by Meter Type - Non-Cost Reflective Tariff Customers

Table P1.2.4 - Distribution Customer Numbers by Tariff Type - Non-Cost Reflective Tariffs

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The information that has been sourced from the billing system is considered to be actual data

The data in this table is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

The figures were sourced from the billing system, Peace.

METHODOLOGY [SECTION 5.2.1 (B)]

A list of all Premises with their meter and tariff details was extracted from the billing system, Peace, as at 30th June. This is the same list that was used for EB Table 3.4.2 Customer Numbers.

The Premises were assigned flags for cost reflective or non-cost reflective based on the assigned Network tariff.

The following splits were based on Non-cost reflective tariff customers.

P 1.1.3 provides a split of the customer numbers by customer segment according to their assigned tariff and meter type, where Type 4 are Interval/Smart meters, Type 6 are Basic meters, and Type 7 are Unmetered, they have a meter in MSATS just not in reality.

R1.1.4 provides a split of all customers split by Customer segment and tariff.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

Cost reflective, non-cost reflective and secondary tariffs have been separated to their own sections for the year, P1.1, P1.2 and P1.3 respectively.

Worksheet: 3.3LM Assets

Table 3.3.1LM - Regulatory Asset Base Values

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

This table is a summation of the asset data contained in Table 3.3.2 Asset Value Roll Forward. Formulas have been entered accordingly. The data in this table reconciles to the total of the relevant RFMs, i.e., since 2014-15, the values for Network Services and Standard Control Services equal the SCS RFM and the value for Alternative Control Services equals the Metering RFM.

There has been no use of estimated data.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Metering RFM 2024-29
Oracle ERP

METHODOLOGY [SECTION 5.2.1 (B)]

This table follows the same Methodology as with Table 3.3.2

As described below, once the proportions for asset categories that required disaggregation had taken place, the data from the relevant RFM was linked into the relevant sections of Table 3.3.LM.

A brief explanation for each line follows:

OPENING RAB VALUE

The opening RAB values are linked to the prior year's closing balance with differences due to the start of the new Cycle. This difference was added to ensure the data agrees to the AER RFM.

INFLATION ADDITIONS

The inflation additions were taken directly from the relevant RFM for assets that were directly apportioned or were multiplied by the relevant percentage for assets that required disaggregation.

STRAIGHT LINE DEPRECIATION

The straight line values were taken directly from the relevant RFM. The amounts are based on forecast depreciation from the relevant period's final determination PTRM.

REGULATORY DEPRECIATION

The sum of the inflation addition and the straight line depreciation rows equals the regulatory depreciation amount for each asset category.

GROSS CAPEX

These numbers include net of customer contributions and are taken directly from the Global Capex workpapers aligned to the new RAB categories.

The additions in the final year of each regulatory period include the adjustment amounts for that year to give a true picture of the closing RAB for that year (and the opening RAB for the next regulatory period).

CAPITAL CONTRIBUTIONS INCLUDED IN GROSS CAPEX

These numbers are taken from the Global Capex workpapers aligned to the new RAB categories.

DISPOSALS

Disposals were taken directly from the input sheet in the RFM for assets that were directly apportioned or were multiplied by the relevant percentage for assets that required disaggregation.

All disposal values have been uplifted by the half-year vanilla WACC rate in line with the RFM.

CAPEX TIMING ADJUSTMENT

For each category the resulting dollars have been inflated by the half-year WACC rate to align with the RFM model.

CLOSING RAB VALUE

The closing RAB values were calculated using the inputs above and cross-checked to the relevant RFM(s) results to ensure accuracy.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

This is the first year this data is presented in this report.

Worksheet: 3.4B Total Customers

Table 3.4.2.3 Total Customers by Metering and Connection Type

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Actual/Estimate/NULL

All data is Actual

INFORMATION SOURCE [SECTION 5.1.1 (A)]

EDDiS - This system is used by metering services, in its capacity as an accredited Meter Provider and Meter Data Provider in the NEM, to store and process meter readings and meter registry information pertaining to chapter 7 of the NER.

METHODOLOGY [SECTION 5.2.1 (B)]

Customer population volumes for 2024-25 have been produced through automated queries from the EDDiS database, with the queries providing total number of customers by connection type in the categories required for completion of this table

ASSUMPTIONS [SECTION 5.2.1 (C)]

Metered customer (Actual) – Based on Essential Energy being Distribution Network Service Provider.

Unmetered customers (Actual) - Based on Essential Energy being Distribution Network Service Provider and the Meter Install code being NCONUML or UMCP

Energised connection points (Actual) - Based on Essential Energy being Distribution Network Service Provider and the NMI Status Code being Active

Un-energised connection points (Actual) - Based on Essential Energy being Distribution Network Service Provider and the NMI Status Code being De-energised or Green-Field

ADDITIONAL INFORMATION [SECTION 5.2.3]

This information is considered reliable.

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.4B Total Customers

Table 3.4.2.4 Total Customers by Metering Status

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

All data is Actual

INFORMATION SOURCE [SECTION 5.1.1 (A)]

EDDiS - This system is used by metering services, in its capacity as an accredited Meter Provider and Meter Data Provider in the NEM, to store and process meter readings and meter registry information pertaining to chapter 7 of the NER.

METHODOLOGY [SECTION 5.2.1 (B)]

Customer population volumes for 2024-25 have been produced through automated queries from the EDDiS database, with the queries providing total number of customers by connection type in the categories required for completion of this table

ASSUMPTIONS [SECTUIB 5.2.1 (C)]

Customers where meter is provided by retailer or other party (Actual) – Based on Essential Energy being Distribution Network Service Provider and Essential Energy is not the Meter Provider.

Customers where meter is provided by DNSP (Actual) - Based on Essential Energy being Distribution Network Service Provider and Essential Energy is also the Meter Provider.

Unmetered Customers - Residential (Actual) - Based on Essential Energy being Distribution Network Service Provider, the Meter Install code being NCONUML or UMCP and the NMI Classification Code is not BUSINESS

Unmetered Customers - Non Residential LV (Actual) - Based on Essential Energy being Distribution Network Service Provider, the Meter Install code being NCONUML or UMCP, the NMI Classification Code is BUSINESS and there is no voltage ratio connected to the metering details.

Unmetered Customers - Non Residential HV (Actual) - Based on Essential Energy being Distribution Network Service Provider, the Meter Install code being NCONUML or UMCP, the NMI Classification Code is BUSINESS and there is a voltage ratio connected to the metering details

ADDITIONAL INFORMATION [SECTION 5.2.3]

This information is considered reliable.

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Table 3.3.1LM - Regulatory Tax Asset Base Values

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

This table is a summation of the tax data in the Metering RFM

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Metering RFM 2024-29

METHODOLOGY [SECTION 5.2.1 (B)]

These numbers were taken directly from the input sheet in the RFM for assets that were directly apportioned or were multiplied by the relevant percentage for assets that required disaggregation.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

This is the first year this data is presented in this report.

Worksheet: 3.9 Export Services

Table 3.9.1 Net Metered Volume of Energy Exported by Customers with Smart Meters

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The data is actual. The amounts reported includes accruals for unbilled amounts for the period and is as provided to the Board and is audited so is considered reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Total solar export, including accruals, has been sourced from PEACE billing system using Network Invoicing Cube, and agrees to the Management accounts. Premise meter type has also been determined by Peace and the Feeder classification has been mapped using a Smallworld extract.

METHODOLOGY [SECTION 5.2.1 (B)]

This section requests the energy exported for customers for Smart meters only, for the financial year by Feeder Type.

A list of all premises with their export volumes was sourced from the Billing system, Peace, using Spotfire. The meter type for each premise was also sourced from Peace and the HV Feeder was sourced from an extract of Premise to Feeder provided from Smallworld, in order to determine the feeder category.

The individual premise data was then grouped by meter type and category, with proportioning made to ensure the total aligned with the Finance accrued amount.

Reported numbers exclude Basic meter readings.

ASSUMPTIONS [SECTION 5.2.1 (C)]

Total export volume aligns with the Finance SBR (Subsequent Billing Report) Accrual process.

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.9 Export Services

Table 3.9.2.1 - Export Capacity Requested by Customer Type/Feeder Classification

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The data is actual as per the information in the billing system.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Solar details by Premise, meter type, tariff classification and NMI information has been sourced from the Billing system, Peace. The HV Feeder was sourced from an extract of Premise to Feeder provided from Smallworld, in order to determine the feeder category.

METHODOLOGY [SECTION 5.2.1 (B)]

A list of all premises that have been identified as having solar, wind or batteries was sourced from the Billing system, Peace, using Spotfire. Information sourced from Peace included generation/storage type, Panel Capacity, Application date, Export limit, meter type and tariff type, ie. Residential, Non-residential no demand, LV demand and HV demand. The HV Feeder was sourced from an extract of Premise to Feeder provided from Smallworld, and mapped to the dataset in order to determine the feeder category.

For this table only premises that were connected in FY2024/25 were considered, using the application date.

Panel capacity KW was summed by Customer type and Feeder Type for the amount of export capacity requested.

ASSUMPTIONS [SECTION 5.2.1 (C)]

Panel capacity is KW, therefore used 1:1 ratio for KW to kVA

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.9 Export Services

Table 3.9.2.2 - Export Capacity Approved by Customer Type/Feeder Classification

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The data is actual as per the information in the billing system.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Solar details by Premise, meter type, tariff classification and NMI information has been sourced from the Billing system, Peace. The HV Feeder was sourced from an extract of Premise to Feeder provided from Smallworld, in order to determine the feeder category.

METHODOLOGY [SECTION 5.2.1 (B)]

A list of all premises that have been identified as having solar, wind or batteries was sourced from the Billing system, Peace, using Spotfire. Information sourced from Peace included generation/storage type, Panel Capacity, Application date, Export limit, meter type and tariff type, ie. Residential, Non-residential no demand, LV demand and HV demand. The HV Feeder was sourced from an extract of Premise to Feeder provided from Smallworld, and mapped to the dataset in order to determine the feeder category.

For this table only premises that were connected in FY2024/25 were considered, using the application date.

Export limited capacity KW was summed by Customer type and Feeder Type for export capacity approved. Where a premise is not export limited the actual Panel capacity is used.

ASSUMPTIONS [SECTION 5.2.1 (C)]

Export capacity is KW, therefore used 1:1 ratio for KW to kVA

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.9 Export Services

Table 3.9.2.3 - Average Static Export Limit at Year End (Non-Zero)

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The data is actual as per the information in the billing system.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Solar details by Premise, meter type, tariff classification and NMI information has been sourced from the Billing system, Peace. The HV Feeder was sourced from an extract of Premise to Feeder provided from Smallworld, in order to determine the feeder category.

METHODOLOGY [SECTION 5.2.1 (B)]

A list of all premises that have been identified as having solar, wind or batteries was sourced from the Billing system, Peace, using Spotfire. Information sourced from Peace included generation/storage type, Panel Capacity, Application date, Export limit, meter type and tariff type, ie. Residential, Non-residential no demand, LV demand and HV demand. The HV Feeder was sourced from an extract of Premise to Feeder provided from Smallworld, and mapped to the dataset in order to determine the feeder category.

For this table all connected premises at year end were considered.

Where the Grid Export value is not equal to zero.

Export limited capacity KW was averaged by Customer type and Feeder Type for export capacity approved. Where a premise is not export limited the actual Panel capacity is used.

ASSUMPTIONS [SECTION 5.2.1 (C)]

Export capacity is KW, therefore used 1:1 ratio for KW to kVA

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.9 Export Services

Table 3.9.3 - Utilisation and Curtailed Energy

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Estimated the behind the meter usages. Used estimated solar curves.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Peace Billing System

- Embedded generation details
- Customer tariffs codes
- Panel capacity
- Inverter capacity
- Export limit
- Generation system installation date

GIS

- Location (Lat,Long)

Interval customer data (EDDIS)

DOE message events

Average solar generation curve for NSW

Solar insolation at BOM weather stations

- DNI, GHI, DNI
- 10 min timeseries
- Lat, long
- Climate zone

METHODOLOGY [SECTION 5.2.1 (B)]

Total potential customer generation

To estimate solar generation across the network, the process begins by modelling solar output at each Bureau of Meteorology (BOM) weather station using pvlib, an open-source Python library for simulating photovoltaic systems. For each station, solar generation curves are produced based on an unconstrained 1kW system, providing a standardized baseline for energy output under ideal conditions.

These curves are then applied to individual National Metering Identifiers (NMIs) by associating each NMI with its nearest BOM site. The 1kW curve is scaled according to the panel capacity of each NMI. Adjustments are made to reflect real-world constraints, including applying inverter size thresholds and accounting for performance losses due to system aging.

Once generation estimates are tailored to each NMI, the data is segmented by export status—distinguishing between NMIs that export energy to the grid and those that do not. This classification supports more accurate modelling of energy flows and network impacts.

To validate the model, a sense check is performed using standard industry heuristics. This includes comparing the results against an average daily peak sun hour value of approximately 4.5 kWh/m^2/day. Annual unconstrained generation is estimated by multiplying the aggregate panel capacity by the average peak sun hours and the number of days in a year. Additionally, the spatial distribution of generation is reviewed based on latitude and longitude, with an expectation of higher solar insolation in Western NSW due to its climatic characteristics.

Consumer energy resource curtailment

Curtailment due to inverter voltage response is calculated according to the volt_watt response:

1. Volt_watt response
    - No export < 180V
    - Full export =>180V and <= 253V (volt_watt response set points for Australia C region)
    - Partial export > 253 V and < 258 V
    - No export >= 258V (Settings for V nom-max Australia C region)

The “potentially curtailed energy” is calculated for each customer and 30min period and summed across the network. It is a factor of the customers agreed potential and the solar generation curve minus the amount the customer is exporting and the amount of energy the customer is using behind the meter.

We have then applied the percentages of time we measured a sample set of customers as having partial and no access (tables 3.9.7.1 & 3.9.7.2) to the total potentially curtailed energy to return the curtailment due to inverter voltage response.

As battery behaviour is driven by tariffs it will mean that there is unlikely to be any curtailment.

Curtailment due to static export limits was calculated only for those customers where there is a specific export limit imposed. At each 30min period the kW exported was compared to the export limit. If the kW export was approximately equal to the limit, then the export amount and an estimate of the behind the meter consumption was subtracted from the maximum potential output, a factor of the system size, the performance ratio, and the solar production curve. This was then converted to energy.

Curtailment due to dynamic export limits was calculated for each 5-minute period. Given the current makeup of customers operating on dynamic limits this was simply the difference between the DOE message and the maximum export limit. This method will need to be revised in following years.

ASSUMPTIONS [SECTION 5.2.1 (C)]

1. All tables include Customers with “active” NMI status and export tariffs.
2. Solar system efficiency is 0.80 (CSIRO).
3. NSW solar exposure ranges translates to 4.2 to 6.9 kWh/m2/day.

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.9 Export Services

Table 3.9.4.1 - Exporting Customer Capacity by Customer (Export Services) Type

Table 3.9.4.2 - Exporting Customer Capacity by Feeder Classification

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The data is actual as per the information in the billing system.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Solar details by Premise, meter type, tariff classification and NMI information has been sourced from the Billing system, Peace. The HV Feeder was sourced from an extract of Premise to Feeder provided from Smallworld, in order to determine the feeder category.

METHODOLOGY [SECTION 5.2.1 (B)]

A list of all premises that have been identified as having solar, wind or batteries was sourced from the Billing system, Peace, using Spotfire. Information sourced from Peace included generation/storage type, Panel Capacity, Application date, Export limit, meter type and tariff type, ie. Residential, Non-residential no demand, LV demand and HV demand. The HV Feeder was sourced from an extract of Premise to Feeder provided from Smallworld, and mapped to the dataset in order to determine the feeder category.

For this table all connected premises at year end were considered.

Total installed Panel capacity KW was summed by Export type, for just Solar PV, Solar PV and Battery, and Battery only. This was then split by Customer type and Feeder Type for all export types.

Wind sites were not included in this section.

ASSUMPTIONS [SECTION 5.2.1 (C)]

Panel capacity is KW, therefore used 1:1 ratio for KW to kVA

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.9 Export Services

Table 3.9.5.1 - Exporting Customers with Smart Meters by Feeder Classification/Equipment Type

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The data is actual as per the information in the billing system.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Solar details by Premise, meter type, tariff classification and NMI information has been sourced from the Billing system, Peace. The HV Feeder was sourced from an extract of Premise to Feeder provided from Smallworld, in order to determine the feeder category.

METHODOLOGY [SECTION 5.2.1 (B)]

A list of all premises that have been identified as having solar, wind or batteries was sourced from the Billing system, Peace, using Spotfire. Information sourced from Peace included generation/storage type, Panel Capacity, Application date, Export limit, meter type and tariff type, ie. Residential, Non-residential no demand, LV demand and HV demand. The HV Feeder was sourced from an extract of Premise to Feeder provided from Smallworld, and mapped to the dataset in order to determine the feeder category.

For this table all connected premises at year end were considered.

Only sites **with** a Smart meter were considered.

This is a count of customers by Feeder Type and Export type, for Solar PV, Solar PV and Battery, Battery only and without solar PV or batteries.

Wind sites were included in this section.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.9 Export Services

Table 3.9.5.2 - Exporting Customers Without Smart Meters by Feeder Classification/Equipment Type

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The data is actual as per the information in the billing system.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Solar details by Premise, meter type, tariff classification and NMI information has been sourced from the Billing system, Peace. The HV Feeder was sourced from an extract of Premise to Feeder provided from Smallworld, in order to determine the feeder category.

METHODOLOGY [SECTION 5.2.1 (B)]

A list of all premises that have been identified as having solar, wind or batteries was sourced from the Billing system, Peace, using Spotfire. Information sourced from Peace included generation/storage type, Panel Capacity, Application date, Export limit, meter type and tariff type, ie. Residential, Non-residential no demand, LV demand and HV demand. The HV Feeder was sourced from an extract of Premise to Feeder provided from Smallworld, and mapped to the dataset in order to determine the feeder category.

For this table all connected premises at year end were considered.

Only sites **without** a Smart meter were considered.

This is a count of customers by Feeder Type and Export type, for Solar PV, Solar PV and Battery, Battery only and without solar PV or batteries.

Wind sites were included in this section.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.9 Export Services

Table 3.9.5.3 - Exporting Customers with Static Zero Limits by Feeder Classification/Export Service Type

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The data is actual as per the information in the billing system.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Solar details by Premise, meter type, tariff classification and NMI information has been sourced from the Billing system, Peace. The HV Feeder was sourced from an extract of Premise to Feeder provided from Smallworld, in order to determine the feeder category.

METHODOLOGY [SECTION 5.2.1 (B)]

A list of all premises that have been identified as having solar, wind or batteries was sourced from the Billing system, Peace, using Spotfire. Information sourced from Peace included generation/storage type, Panel Capacity, Application date, Export limit, meter type and tariff type, ie. Residential, Non-residential no demand, LV demand and HV demand. The HV Feeder was sourced from an extract of Premise to Feeder provided from Smallworld, and mapped to the dataset in order to determine the feeder category.

For this table all connected premises at year end were considered.

Only sites **with** a Grid Export limit of zero were considered.

This is a count of customers by Feeder Type and customer type.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.9 Export Services

Table 3.9.5.4 - Exporting Customers with Static Non-Zero Limits By Feeder Classification/Export Service

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The data is actual as per the information in the billing system.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Solar details by Premise, meter type, tariff classification and NMI information has been sourced from the Billing system, Peace. The HV Feeder was sourced from an extract of Premise to Feeder provided from Smallworld, in order to determine the feeder category.

METHODOLOGY [SECTION 5.2.1 (B)]

A list of all premises that have been identified as having solar, wind or batteries was sourced from the Billing system, Peace, using Spotfire. Information sourced from Peace included generation/storage type, Panel Capacity, Application date, Export limit, meter type and tariff type, ie. Residential, Non-residential no demand, LV demand and HV demand. The HV Feeder was sourced from an extract of Premise to Feeder provided from Smallworld, and mapped to the dataset in order to determine the feeder category.

For this table all connected premises at year end were considered.

Only sites **without** a Grid Export limit of zero were considered.

This is a count of customers by Feeder Type and customer type.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.9 Export Services

Table 3.9.5.5 - Exporting Customers Requesting Capacity by Feeder Classification/Export Service Type

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The data is actual as per the information in the billing system.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Solar details by Premise, meter type, tariff classification and NMI information has been sourced from the Billing system, Peace. The HV Feeder was sourced from an extract of Premise to Feeder provided from Smallworld, in order to determine the feeder category.

METHODOLOGY [SECTION 5.2.1 (B)]

A list of all premises that have been identified as having solar, wind or batteries was sourced from the Billing system, Peace, using Spotfire. Information sourced from Peace included generation/storage type, Panel Capacity, Application date, Export limit, meter type and tariff type, ie. Residential, Non-residential no demand, LV demand and HV demand. The HV Feeder was sourced from an extract of Premise to Feeder provided from Smallworld, and mapped to the dataset in order to determine the feeder category.

For this table all connected premises at year end were considered.

This is a count of all export customers by Feeder Type and customer type.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.9 Export Services

Table 3.9.5.6 - Exporting Customers with Flexible Limits by Feeder Classification/Export Service Type

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Actual data has been used.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Customers signed up on flexible agreements.

Peace Billing System – Customer tariffs codes

Feeder classification – Urban, Short Rural and Long Rural (table 2.3.3 HV/LV Feeders and distribution substations.

METHODOLOGY [SECTION 5.2.1 (B)]

Allocate each customer on flexible agreement to feeder classification and customer type and sum to those allocations.

ASSUMPTIONS [SECTION 5.2.1 (C)]

- All tables include Customers with “active” NMI status and export tariffs.
- Customers are allocated to customer type using their primary tariff.

Worksheet: 3.9 Export Services

Table 3.9.5.7 - Exporting Customers with Measured Voltage Data by Feeder Classification/Export Service

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Actual data has been used.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Export Customer Power quality metering data purchased from meter providers.

Peace Billing System – Customer tariffs codes

Feeder classification – Urban, Short Rural and Long Rural (table 2.3.3 HV/LV Feeders and distribution substations.

METHODOLOGY [SECTION 5.2.1 (B)]

Allocate exporting customers with purchased power quality data into feeder classifications and service types. Sum to those allocations.

ASSUMPTIONS [SECTION 5.2.1 (C)]

- All tables include Customers with “active” NMI status and export tariffs.
- Customers are allocated to customer type using their primary tariff.

Worksheet: 3.9 Export Services

Table 3.9.5.8 - Exporting Customers with Measured Overvoltage by Feeder Classification/Export Service

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Actual data has been used.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Export Customer Power quality metering data purchased from meter providers – five-minute instantaneous voltage readings.

Peace Billing System – Customer tariffs codes

Feeder classification – Urban, Short Rural and Long Rural (table 2.3.3 HV/LV Feeders and distribution substations.

METHODOLOGY [SECTION 5.2.1 (B)]

All available voltage measurements for the customer are considered, with zero and null values removed to ensure data quality and accuracy. Over-voltage evens are defined as excursions above 254 volts. If any phase at the customer's site breaches this threshold at least once during the financial year, the site is flagged as having an exceedance. Allocate customers flagged as having an exceedance into feeder classifications and service types. Sum to those allocations.

ASSUMPTIONS [SECTION 5.2.1 (C)]

4. All tables include Customers with “active” NMI status and export tariffs.
5. Customers are allocated to customer type using their primary tariff.

Worksheet: 3.9 Export Services

Table 3.9.5.9 - Exporting Customers Estimated with Overvoltage by Feeder Classification/Export Service

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Estimated. Actual power quality information used to extrapolate to total customer base.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Export Customer Power quality metering data purchased from meter providers – five-minute instantaneous voltage readings.

Peace Billing System – Customer tariffs codes

Feeder classification – Urban, Short Rural and Long Rural (table 2.3.3 HV/LV Feeders and distribution substations.

METHODOLOGY [SECTION 5.2.1 (B)]

Extrapolate the findings of measured overvoltage to estimate over-voltage exposure across the broader population of export customers. This is done by applying the percentage of customers with measured over-voltage exceedances in each of the feeder classes and customer types to those customers who export energy but do not have direct voltage measurements available.

ASSUMPTIONS [SECTION 5.2.1 (C)]

6. All tables include Customers with “active” NMI status and export tariffs.
7. Customers are allocated to customer type using their primary tariff.

Worksheet: 3.9 Export Services

Table 3.9.6 - AS4777.2 Measures - Compliant Inverters

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Estimated. Actual power quality information used to extrapolate to total customer base.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Peace Billing System – Installation date

METHODOLOGY [SECTION 5.2.1 (B)]

All export connections post 18/12/2021 are required to be compliant to AS4777.2. The number of systems installed after 18/12/2021 are expected to be compliant and those before this date are not expected to be compliant.

Any connection with a null generation install date is considered to be not required to be compliant.

We have used our visibility platform (FG Compass) to get the proportion of those we have data for as an estimate of how many we think are not compliant of those that should be.

ASSUMPTIONS [SECTION 5.2.1 (C)]

8.All tables include Customers with “active” NMI status and export tariffs.

Worksheet: 3.9 Export Services

Table 3.9.7.1 - Average Duration of Full Export to Agreed Limit by Customer (Export Services) Type

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Estimated. Calculations are done on a subset of the population.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Peace Billing System

- Embedded generation details
- Customer tariffs codes

Export Customer Power quality metering data purchased from meter providers.

METHODOLOGY [SECTION 5.2.1 (B)]

Customers are characterised as those with export services, solar, solar and battery and battery only and into the Customer types Residential, Non-Residential HV and Non-Residential LV using the Peace billing system. Conditions of full export access were measured against AS4777.2 (2020). Full access occurring at voltages greater or equal to 180V and less than or equal to 253V.

Five-minute instantaneous voltage data at the meter is available for a subset of customers with embedded generation. This data is used to estimate the percentage of time customers were able to fully export solar energy. For each combination of export service type and customer type, the method calculates the proportion of time where voltage levels supported full export –excluding any zero or null values. The percentages time was converted into hours and minutes to represent the average annual duration of full export per customer, based on a total of 8,760 hours in a year.

ASSUMPTIONS [SECTION 5.2.1 (C)]

9. All tables include Customers with “active” NMI status and export tariffs.
10. Customers are allocated to customer type using their primary tariff.
11. Volt_watt response
    - No export < 180V
    - Full export =>180V and <= 253V (volt_watt response set points for Australia C region)
    - Partial export > 253 V and < 258 V
    - No export >= 258V (Settings for V nom-max Australia C region)

Worksheet: 3.9 Export Services

Table 3.9.7.2 - Average Duration of No Export Access by Customer (Export Services) Type

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Estimated. Calculations are done on a subset of the population.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Peace Billing System

- Embedded generation details
- Customer tariffs codes

Export Customer Power quality metering data purchased from meter providers.

METHODOLOGY [SECTION 5.2.1 (B)]

Customers are characterised as those with export services, solar, solar and battery and battery only and into the Customer types Residential, Non-Residential HV and Non-Residential LV using the Peace billing system. Conditions of no export access were measured against AS4777.2 (2020). No access occurring when voltage is less than 180V or greater than 258V.

Five-minute instantaneous voltage data at the meter is available for a subset of customers with embedded generation. This data is used to estimate the percentage of time customers were not able to export solar energy. For each combination of export service type and customer, the method calculates the proportion of time where voltage levels do not allow any export – excluding any zero or null values. The percentage time was converted into hours and minutes to represent the average annual duration of no export per customers based on a total of 8,760hrs in a year.

ASSUMPTIONS [SECTION 5.2.1 (C)]

12. All tables include Customers with “active” NMI status and export tariffs.
13. Customers are allocated to customer type using their primary tariff.
14. Volt_watt response
    - No export < 180V
    - Full export =>180V and <= 253V (volt_watt response set points for Australia C region)
    - Partial export > 253 V and < 258 V
    - No export >= 258V (Settings for V nom-max Australia C region)

Worksheet: 3.9 Export Services

Table 3.9.7.3 - Average Upper Limit - Customers with Flexible Limits by Feeder Classification/Export Service

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Actual data has been used.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Customers signed up on flexible agreements.

Peace Billing System – Customer tariffs codes

Feeder classification – Urban, Short Rural and Long Rural (table 2.3.3 HV/LV Feeders and distribution substations)

METHODOLOGY [SECTION 5.2.1 (B)]

Upper limit is current the capacity of the device. Averages for the feeder classification and export service type are taken.

ASSUMPTIONS [SECTION 5.2.1 (C)]

15. All tables include Customers with “active” NMI status and export tariffs.
16. Customers are allocated to customer type using their primary tariff.

Worksheet: 3.9 Export Services

Table 3.9.7.4 - Average Time Upper Limit Unavailable to Customers with Flexible Limits by Feeder Classification/Export Service Type

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Only part of the year that dynamic limits was operational was estimated

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Customers signed up on flexible agreements.

Peace Billing System – Customer tariffs codes

DOE message events

Feeder classification – Urban, Short Rural and Long Rural (table 2.3.3 HV/LV Feeders and distribution substations.

METHODOLOGY [SECTION 5.2.1 (B)]

Given that customers on dynamic limits operated only during part of the year, the available data was used to estimate how often the DOE (Dynamic Operating Envelope) message was below the device’s capacity. This proportion was then extrapolated to represent a full year.

ASSUMPTIONS [SECTION 5.2.1 (C)]

17. All tables include Customers with “active” NMI status and export tariffs.
18. Customers are allocated to customer type using their primary tariff.

Worksheet: 3.9 Export Services

Table 3.9.8.1 - Export Limit Compliance

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Actual data has been used.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Customers export load, Customer DER details

METHODOLOGY [SECTION 5.2.1 (B)]

The count of customers with at least one interval of exceeding the export limit divided by the count of customers with embedded generation is calculated as the percentage compliance with static export limits.

Panel capacity, Inverter size and export limit are stored in the Peace billing system as kW. The static export limit for each customer is the minimum of the assigned export limit, the sum of inverter size and the sum of the panel capacity at the premise.

ASSUMPTIONS [SECTION 5.2.1 (C)]

Inputs are customer interval data over the period FY25 and static export limits of the customers connection agreement.

A customer is considered to have exceeded their limit when the recorded net export exceeds the export limit in any single half hourly interval.

Worksheet: 3.9 Export Services

Table 3.9.8.2 - Export Service Complaints by Feeder Classification/Export Service Type

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Actual data sourced

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Data sourced from Essential Connections Power Quality Data Base via linked PowerBI report.

METHODOLOGY [SECTION 5.2.1 (B)]

The raw data is downloaded via a PowerBI report that is directly linked to the Power Quality data base contained in Essential Connections. The excel data is then filtered to find the required data sets.

ASSUMPTIONS [SECTION 5.2.1 (C)]

As the data is not identified as rural or urban, an assumption was made that any addresses identified as street are urban and any premises identified as road are rural.

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.9 Export Services

Table 3.9.8.3 - Overvoltage Complaints by Feeder Classification/Export Service Type

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Actual

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Data sourced from Essential Connections Power Quality Data Base via linked PowerBI report.

METHODOLOGY [SECTION 5.2.1 (B)]

The raw data is downloaded via a PowerBI report that is directly linked to the Power Quality data base contained in Essential Connections. The excel data is then filtered to find the required data sets.

ASSUMPTIONS [SECTION 5.2.1 (C)]

As the data is not identified as rural or urban, an assumption was made that any addresses identified as street are urban and any premises identified as road are rural.

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.9 Export Services

Table 3.9.9 - Average Time of Offer

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The data is actual as per information from Essential Connections (Salesforce).

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Average Time of Offer has been extracted from Contestable Works Power BI report "Salesforce Application Averages" sourced from Essential Connections (Salesforce).

This contains all connection applications with an MSO (Model Standing Offer) of Basic & EBG and Standard & EBG.

METHODOLOGY [SECTION 5.2.1 (B)]

A list of connection applications submitted duration the financial year 2024/2025 where the connection application was with Essential Energy for processing.

- Case Record Type: Application
- (MSO) Model Standing Offer: Basic & EBG or Standard & EBG
- Duration: Based on time with Essential Energy
- No of Case: Count of case for the financial year
- Average Days: Sum Duration divided by No of Cases

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 3.9 Export Services

Table 3.9.10 - Export Services Opex

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Information is based on actual information, with best practise methodology used to apportion actual non-network expenditure across some RIO categories.

This information is considered reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Opex data was sourced from ERP.

METHODOLOGY [SECTION 5.2.1 (B)]

2024-25 Opex data was sourced from Oracle ERP. Export Services operating costs were based on project expenditure, as captured in 3.9.10_Export_Services_Opex workpaper

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

New table required for 2024-25 to capture Export Services. To avoid double counting, any Export Services has been removed from Tables 2.6

Worksheet: 3.9 Export Services

Table 3.9.11 - Export Services Capex

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Information is based on actual information, with best practise methodology used to apportion actual non-network expenditure across some RIO categories.

This information is considered reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Capex data was sourced from ERP.

METHODOLOGY [SECTION 5.2.1 (B)]

2024-25 Capex data was sourced from Oracle ERP.

Export Services capex costs were based on project expenditure, as captured in 3.9.10_Export_Services_Opex workpaper

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

New table required for 2024-25 to capture Export Services. Export Services non-network expenditure direct costs are shown separately in Tables 2.6.1. and included in table 8.2.4.

Worksheet: 5.4 MD & utilisation - spatial

Table 5.4.1 Non-Coincident & Coincident Maximum Demand - Subtransmission Substation & Zone Substation

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

Data is actual.

The Weather corrected 10% and 50% POEs are based on best practise methodology in line with AER guidelines and although some calculations are performed it is considered to meet the requirements of actual information.

Most data for the 2024/25 year has been gathered from raw metering data and is therefore considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

The individual STS data and individual zone substation data was obtained from demand meters (via EDDIS) and from SCADA. The calculation of weather corrected POE values requires weather station temperature measurements or daily maximum temperatures.

METHODOLOGY [SECTION 5.2.1 (B)]

MW and MVA

There is a simple relationship between components of supplied electrical power, including MW, MVAr, MVA and pf. Some of these components include MW, MVAr, MVA and pf. These values can be calculated when two or more components are known by using fundamental equations for electrical properties. MW is the real power supplied, MVAr is reactive power, MVA is apparent power and pf is the power factor. The two most relevant equation for this section are to calculate the pf and determining MVA from MW and MVAr

The equation for determining pf is:

$$\frac{MW}{MVA} = pf$$

In this equation power factor equals a value between 0 and 1, so MVA is always equal to or greater than MW.

To calculate MVA from MW and MVAr, the equation is:

$$MVA = SQRT(MW^2 + MVAr^2)$$

The data measured is typically MW and MVAr, so this equation is used to determine the MVA for each site. The summation of MVA also uses this equation, where the sum of MW and sum of MVAr are determined. This equation is then used to calculate the MVA sum.

Change to timing arrangements

In order to provide the actual loads for 2024/25, the winter of 2024 and the summer of 2024/25 was used, which included loads from April 1st 2024 to March 31st 2025. An example of the reasoning behind this method is where there is a very high load winter, with a large peak in June and another in July. A financial year split will count these events as two separate years, so the data misses the previous and next summer peaks. Essential Energy does not consider the use of financial years to be adequate for use in forecasting.

Raw Adjusted MD

Non – coincident Maximum Demand

The vast majority of STSs and ZSs have reliable data recording devices. A minor number of the very small ZSs have limited methods to record the peak demand such as recloser data or maximum demand indicators from which maximum demand has been derived. The raw data from each substation is collated into a common format and is compared against network configuration changes and filtered where an absence or abnormality is present. The peak demand is then screened and further cleansed if required to eliminate abnormal peaks to determine the true peak demand.

Coincident Maximum Demand

The raw coincident maximum demand for the 2024/25 year was extracted from each site after it has been compiled into the common format required for screening the non-coincident maximum demand.

Adjustments – Embedded Generation

Only discrete embedded generation units that impact the demand of the STSs or ZSs are included in the table. Rooftop photovoltaic generation is not shown as its impact is included in the actual and forecast demand of the individual ZSs. There are other discrete generation units that connect via Essential Energy's subtransmission network to a TNSP's connection point but they have no impact on the demand of Essential Energy owned STSs or ZSs.

Non-Coincident Weather Corrected MD

The weather corrected data for 50% PoE or 10% PoE has been calculated for the vast majority of STSs and ZSs based on the nationally consistent methodology of using regression with historical local temperature data. A very small number of sites did not have sufficient history of demand data to accurately produce PoE values. The raw adjusted MD was used where PoE data could not be produced. The main variables that influence the POE calculation for each site include:

1. The number of years of historical data used – some sites use less than the full dataset due to network configuration changes.
2. The primary weekdays used – many sites have a variation between their weekday and weekend loads, others are consistent every day.
3. The weather station used – most sites use the closest weather station, but some correlate better to stations further away and some station data is unreliable.
4. The data points used – each site has a unique list of data points used to calculate the site totals. These can change each year due to metering issues or site reconfiguration.
5. Outliers – days that include switching or poor metering data are excluded.

Coincident Weather Corrected MD

Coincident weather correction is based on the ratio of non-coincident peak demand to non-coincident weather corrected peak demand.

Date MD Occurred

The date and time of the coincident and non-coincident peak demands were identified during data extraction, where the peak MW and corresponding MVA demand was recorded in this table. Several sites have been identified where the raw adjusted MVA maximum demand occurred at a different time to the raw adjusted MW maximum demand. These situations occur when the site is not quite at the MW peak and the loads have a worse total power factor than at the peak MW time, resulting in a higher MVA than at the peak MW time.

Table 5.4.1 Subtransmission and Zone Substations with MVA Peak different to MW Peak

SUBSTATION	NON-COINCIDENT MVA PEAK	DATE AND TIME OF MVA PEAK
Ashley	3.643	29/07/2024 20:00
Ballina 132kV	31.018	13/06/2024 16:30

Boggabri	4.735	04/08/2024 20:00
Bermagui	3.237	15/07/2024 18:30
Cobar CSA	28.414	16/12/2024 20:00
Cobar Elura	4.118	27/03/2025 10:30
Cobar Peak	15.212	28/12/2024 00:30
Deniliquin	21.284	16/12/2024 18:00
Edrom	3.023	03/04/2024 10:30
Googong Town	13.138	15/07/2024 18:30
Girilambone	1.78	06/07/2024 03:00
Geurie	1.586	05/01/2025 17:30
Hawks Nest 132/33kV	9.088	28/01/2025 17:30
Jerilderie	4.076	27/01/2025 19:00
Koolkhan 11kV	2.653	07/11/2024 17:30
Koraleigh	4.883	12/03/2025 19:30
Leeton	19.647	07/02/2025 15:00
Mumbil	1.396	26/01/2025 19:00
Monteagle	0.895	19/06/2024 18:30
Moulamein	2.803	27/04/2024 08:00
Murrumburrah	4.595	16/12/2024 18:30
Merrywinebone	2.917	23/07/2024 07:00

Moruya Town	7.163	12/06/2024 18:00
Ringwood Road	3.815	03/02/2025 13:00
Snowy Adit 11kV	0.454	19/07/2024 20:30
Talbingo	1.191	19/11/2024 18:30
Thredbo	14.173	14/07/2024 22:00
Upper Manilla	0.637	01/01/2025 23:00
Warrawidgee	1.293	23/02/2025 15:30
Wallangra	0.307	21/05/2024 10:00
Walcha South 66/22kV	2.087	16/07/2024 18:30
Wenna	2.78	21/07/2024 21:00
Young	17.529	29/07/2024 19:00

Changes to sites reported

2024/25 changes;

6 There are no changes that affect the number of sites reported in this year.

2023/24 changes;

7 There are no changes that affect the number of sites reported in this year.

2022/23 changes;

8 There are no changes that affect the number of sites reported in this year.

2021/22 changes;

9 There are no changes that affect the number of sites reported in this year.

2020/21 changes;

10 Carrathool spelling was corrected, is Carathool in previous years

2019/20 changes; Boundary Street has been decommissioned.

11 Maher Street has changed its configuration to now include both 33kV and 11kV outgoing feeders, still supplied from the 66kV network. The Maher Street site reported in previous RINs is now Maher Street 11, and Maher Street 33 has been added.

2018/19 changes;

12 There are no changes that affect the number of sites reported in this year.

2017/18 changes;

13 Marulan South is a new zone substation to replace the old Marulan South zone substation.

2016/17 changes;

- Junee Zone Substation changed its configuration to now be supplied from the 132kV network, with both 66kV and 11kV outgoing feeders. The Junee site reported in previous RINs is now Junee 11kV, and Junee 66kV has been added.
- Shannon Creek was identified as an eligible zone substation, so it is now included in this table.
- Steeple Flat 22kV has been reported in prior RINs, however it has now been removed as it does not satisfy the zone substation definition.
- Thredbo had previously been reported as two separate sites - the snowmaker and the village. The site is now combined in line with the forecasting performed by Essential Energy, as there was no benefit in performing the weather correction and load forecasting separately.

Winter/Summer Peaking

Essential Energy defines the seasons as between 1st April and 30th September for winter, and 1st October to 31st March in the following year for the summer period.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Worksheet: 7.4 Shared Assets

Table 7.4.1 Total Unregulated Revenue Earned with Shared Assets

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The data is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Data shown in these tables has been sourced from the general ledger, via the Finance Data Set (Oracle ERP).

METHODOLOGY [SECTION 5.2.1 (B)]

Revenue by shared assets is driven by product code and is comprised of the following product codes:

PRODUCT CODE	DESCRIPTION
20020 Comms	Optical fibre leasing.
20065 NCBNN Carrier Access	Telecommunications companies using Essential Energy's network assets.
20055 NCBT Radio Sites	Property leasing and tower access for third parties to install radio frequency equipment.
20115 Profit Share Arrangement	Battery revenue.

ASSUMPTIONS [SECTION 5.2.1 (C)]

There is no use of estimated data.

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

This table is new in 2024-25.

Worksheet: 7.5 Large Projects

Table 7.5.1 - Large Project Expenditure

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The data is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Data shown in this table has been sourced from the Projects subledger, via the Finance Data Set (Oracle ERP).

METHODOLOGY [SECTION 5.2.1 (B)]

As per the Large Project definition by the AER, a Large Project is any project that has commenced with an expected total expenditure over the life of the project that exceeds either $30 million or 5% of the value of the annual revenue requirement for the first year of the relevant regulatory control period (2024-29), whichever is the larger amount.

The threshold for Essential Energy is $57.3M, being 5% of the FY25 annual revenue requirement which is $1,145.6M.

As per AER instructions, the expenditure to be reported in Table 7.5 relates to expenditure incurred in the reporting year only.

There is only one project that currently meets the criteria to be considered a Large Project: Market Systems, Network Billing and Meter Data (also known as the Meter to Cash project). The expenditure incurred for this project for FY25 was sourced from the Projects Subledger, through the Finance Data Set (Oracle ERP) using the project number E6542.

ASSUMPTIONS [SECTUIB 5.2.1 (C)]

There is no use of estimated data.

ADDITIONAL INFORMATION [SECTION 5.2.3]

None.

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

This table is new for 2024-25.

Worksheet: 8.1LM Income statement

Table 8.1.1.1LM – Revenue/Table 8.1.1.2LM - Expenditure

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The data is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Data shown in these tables has been sourced from the general ledger.

METHODOLOGY [SECTION 5.2.1 (B)]

Revenue for Metering is based on the general ledger Regulatory Segment. The general ledger Account was used to map revenue to the AER revenue categories.

The resultant revenue information is then reviewed. Other minor adjustments were also made, such as entries required to align the regulatory statements with Essential Energy's statutory accounts and incorrectly mapped product codes. These adjustments are made manually in the workpapers, if applicable.

For expenditure, the financial year trial balance is broken down according to the latest Oracle tree structure by regulatory segment, cost centre, account, product and project number. The process is automated using a set of mapping tables. The enriched Oracle data exists in the "Income Statement RIN" dataset, and logic is applied to allocate the line items across RIN Regulatory Segments. It is then summarised and used to update Rosetta. There were no changes to the data source or mapping tables and logic from the prior year.

Data is allocated according to expenditure type:
• For direct expenditure, categorisation across regulatory segments is based on the project.
• For indirect expenditure, costs are allocated across regulatory segments based on the AER approved Cost Allocation Methodology (CAM).

The resultant expenditure information is then reviewed. Other adjustments may also be made, such as entries required to align the regulatory statements with Essential Energy's statutory accounts or incorrectly mapped project types. These adjustments are all minor in FY25 and are included in the model “FY25 RIN Reconciliation_2025_08_06” which is linked in Rosetta.

ASSUMPTIONS [SECTION 5.2.1 (C)]

There is no use of estimated data.

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

The methodology applied to revenue and expenditure has not changed from 2023-24.

Table 3.1.2LM - Revenue Grouping by Customer Type or Class

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

This section contains data on the revenue allocated to the Metering business as shown in the 2024-25 regulatory returns as per the requested groupings. The revenue includes amounts billed in FY25 and year end accruals.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

• Total revenue amounts have been sourced from PEACE (via Network Invoicing Cube) and aligns to the Statutory Accounts and Table 8.1.1.1LM of the SCS Legacy Meters table. This also reconciles back to the internal Management Accounts.

• The Network Invoicing Cube is the reporting tool used to provide the required breakdown by AER category. For the unread meters accrual, the Network Revenue accrual file provides the breakdown required to categorise the data into the AER categories.

METHODOLOGY [SECTION 5.2.1 (B)]

The 8.1LM_3.1.2LM_Workpaper_2025_08_20 provides information included in the Network Revenue accrual. This includes 2024-25 related Metering revenue. The table below provides the mapping from the internal Management Accounts to the AER categories:

RIN MAPPING TABLE 3.1.2	CUSTOMER SEGMENT
Revenue from residential customers	Residential Continuous
	Residential TOU
	Residential – Opt in Demand
	Residential Sun Soaker
	Controlled Load 1
	Controlled Load 2
Revenue from non-residential customers not on demand tariffs	Business Continuous
	Business – Opt in Demand

	Business Sun Soaker
	Business TOU < 100MWh
	Business TOU > 100MWh
Revenue from non-residential low voltage demand tariff customers	Low Voltage Demand
Revenue from unmetered supplies	Streetlighting NUoS
Revenue from non-residential high voltage demand tariff customers	High Voltage Demand
	Subtransmission
	Site Specific
	Inter Distributor Transfers

ASSUMPTIONS [SECTION 5.2.1 (C)]

All information for these tables was based on actual data.

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

New table for 2024-25.

Worksheet: 8.4LM Operating expenditure

Table 8.4.1LM - Operating & Maintenance Expenditure - By Purpose

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The information is considered to be actual data.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

The figures were sourced from the general ledger, via the Finance Data Set (Oracle ERP).

METHODOLOGY [SECTION 5.2.1 (B)]

Data is taken from the 2024-25 ERP Projects Subledger from the Finance Golden Dataset (FDS) by regulatory segment and project type. For direct expenditure, categorisation across regulatory segments is based on the regulatory segment assigned against projects. For indirect expenditure, costs are allocated across regulatory segments based on the AER approved CAM methodology.

Manual adjustments were made to reallocate incorrect mapping of minor project expenditure. The details are included in the "FY25_RIN_Reconciliation_2025_08_06" workpaper.

ASSUMPTIONS [SECTION 5.2.1 (C)]

There is no use of estimated data.

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

This table is new for 2024-25.

Worksheet: 8.4LM Operating expenditure

Table 8.4.2LM - Operating & Maintenance Expenditure - By Purpose - Margins Only

Essential Energy had no related party margin expenditure.

Worksheet: 8.4LM Operating expenditure

Table 2.8.2LM - Cost Metrics For Routine And Non-Routine Maintenance

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The information is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

The figures were sourced from the project subledger, via the Finance Data Set (Oracle ERP). Expenditure is split between routine and non-routine based on the project type.

METHODOLOGY [SECTION 5.2.1 (B)]

Expenditure is split between routine and non-routine based on the project type.

ASSUMPTIONS [SECTION 5.2.1 (C)]

There is no use of estimated data.

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

This table is new for 2024-25.

Worksheet: 8.4LM Operating expenditure

Table 2.11.3LM - Labour / Non-Labour Expenditure Split - Standard Control Services

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The figures were sourced from the general ledger and project subledger, via the Finance Data Set (Oracle ERP).

Estimated data

There is no use of estimated data.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Labour related data has been sourced from the following files, which are all based on actual data from Oracle ERP general ledger:

- Labour_Totex_by_Regulatory_Segment_FY25_20250806.xlsx model
- ARR Calculations_V01_2025_08_26.xlsx
- Agency_Workings_2025_08_19.xlsx

METHODOLOGY [SECTION 5.2.1 (B)]

In-house labour expenditure

Comprises direct opex, direct capex and support labour and is sourced from the:

- Labour_Totex_by_Regulatory_Segment.xlsx model
- Direct Opex reflects all 'Direct Labour (Account Level 6) filtered on Metering (Regulatory Tree, Regulatory_Description)
- Direct Capex reflects Project Capex, Labour and Labour Burdens (Expenditure Categories), filtered on Cost Type (Direct) and Expenditure Type, filtered on Regular, OT and Allow; and if applicable Temporary Staff.
- Support Labour reflects spend within 'Labour' accounts (Account Level 6) as opposed to "Direct labour" accounts above. Support spend, allocated to 310 - Metering, is based on the CAM (Cost Allocation Methodology), which has been applied in the 'Labour_totex_by_Regulatory_Segment.xlsx' model
- The percentage of support labour allocated to Metering was 1.9%.
- Temp agency costs (GL account 512135) are excluded, as these are captured in labour expenditure outsourced.
- Labour support costs allocations to opex and capex is sourced from:
    - ARR Calculations workbook which in turn sourced from 'Labour_Totex_by_Regulatory_Segment workbook'
    - These models include the breakdown of support spend allocated to opex and capex and what portion of support spend is allocated to opex only.

ASSUMPTIONS [SECTION 5.2.1 (C)]

There is no use of estimated data.

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

New table for 2024-25

Worksheet: 8.4LM Operating expenditure

Table 2.10.1LM - Network Overheads Expenditure and Table 2.10.2LM - Corporate Overheads Expenditure

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The information is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Data has been sourced from the Finance Data Set in the Oracle ERP system.

METHODOLOGY [SECTION 5.2.1 (B)]

- Expenditure classified as 'Indirect" based on the project expenditure type "Corporate Burden", "Network Burden", "Corporate Other Burden" and "Water Burden".
- "Corporate Other Burden" and "Water Burden" categorised as "Network Burden" in the workpaper.
- Regulatory Segment used to separate overheads across each regulatory business.
- Support cost adjustments from the management accounts are included in the "2.Indirect_Expenditure (FDS)" tab against the cost centre where the costs were incurred.
- Direct cost aligns to what is included in the workpaper FY25_RIN_Reconciliation_2025_08_06.

ASSUMPTIONS [SECTION 5.2.1 (C)]

There is no use of estimated data.

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

New table for 2024-25.

Worksheet: 8.6 Asset Base Roll Forward

Table 8.6.1 Asset Base Roll Forward - SCS

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

This table is a summation of the asset data contained in Table 3.3.2 Asset Value Roll Forward. Formulas have been entered accordingly. The data in this table reconciles to the total of the relevant RFMs, i.e., since 2014-15, the values for Network Services and Standard Control Services equal the SCS RFM and the value for Alternative Control Services equals the Metering RFM.

Same as for section 3.3.2

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Same as for section 3.3.2

METHODOLOGY [SECTION 5.2.1 (B)]

Same as for section 3.3.2

ASSUMPTIONS [SECTION 5.2.1 (C)]

Same as for section 3.3.2

ADDITIONAL INFORMATION [SECTION 5.2.3]

Same as for section 3.3.2

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

Same as for section 3.3.2

Worksheet: 8.6.1 - Tax Asset Base Values

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

This table is a summation of the tax data in the Essential Energy RFM

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Essential Energy RFM 2024-29

METHODOLOGY [SECTION 5.2.1 (B)]

These numbers were taken directly from the input sheet in the RFM for assets that were directly apportioned or were multiplied by the relevant percentage for assets that required disaggregation.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

This is the first year this data is presented in this report.

Worksheet: 8.6 Asset Base Roll Forward

Table 8.6.2 Asset Base Roll Forward – ACS (indicative Metering)

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

All metering falls under Standard control

Estimated data

N/A

INFORMATION SOURCE [SECTION 5.1.1 (A)]

N/A

METHODOLOGY [SECTION 5.2.1 (B)]

N/A

ASSUMPTIONS [SECTUIB 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

N/A

Table 8.6.2 Asset Base Roll Forward – ACS (indicative Public Lighting)

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

This table is a summation of the public lighting assets in the records

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Oracle ERP

METHODOLOGY [SECTION 5.2.1 (B)]

A brief explanation for each line follows:

OPENING RAB VALUE

There is no historical RAB in the AER documents. The opening RAB values are calculated using information from EDDIS. The RAB is based on future capital revenue for each asset and component. This number is based on an calculation and can be considered an estimate.

INFLATION ADDITIONS

The inflation additions were calculated from the opening Rab value and were multiplied by the relevant percentage for assets.

STRAIGHT LINE DEPRECIATION

The straight line values were recalculated for the current year using the same data that was used to calculate the opening book value.

REGULATORY DEPRECIATION

The sum of the inflation addition and the straight line depreciation rows equals the regulatory depreciation amount for each asset category.

GROSS CAPEX

These numbers include net of customer contributions and are taken directly from the Global Capex workpapers aligned to the new RAB categories. The additions reflect the capex in the Annual Reporting RIO (ARR) 8.2.4.

The additions in the final year of each regulatory period include the adjustment amounts for that year to give a true picture of the closing RAB for that year (and the opening RAB for the next regulatory period).

CAPITAL CONTRIBUTIONS INCLUDED IN GROSS CAPEX

These numbers are taken from the Global Capex workpapers aligned to the new RAB categories.

DISPOSALS

There were no disposals in the current year.

CAPEX TIMING ADJUSTMENT

For each category the resulting dollars have been inflated by the half-year WACC rate to align with the RFM model.

CLOSING RAB VALUE

The closing RAB values were calculated using the inputs above and cross-checked to the relevant RFM(s) results to ensure accuracy.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

This is the first year this data is presented in this report.

Worksheet: 8.7 Profitability Tax Data

Table 8.7.1 - Profitability Tax Data

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

No information has been estimated.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

Ownership Structure:

The NTER is an administrative arrangement between the various State and Federal governments, under which relevant taxation laws will be applied notionally to the NTER entities as if they are subject to those laws. The NTER entities to which this applies, are the State and Territory government-owned business enterprises which are listed in the NTER entity register.

Tax Related Information:

Essential Energy's draft income tax return workings.

Interest Expense:

Debt was sourced from the financial statement source model file – agreeing to the financial statements for the respective year.

METHODOLOGY [SECTION 5.2.1 (B)]

Ownership Structure:

Essential Energy does not hold an interest in a flow-through entity.

Tax Related Information:

The information has been taken directly from Essential Energy's draft income tax returns for the standard control business. No assumptions have been made.

- The Tax Asset Base depreciation reported is the total company amount as calculated within the audited financial statement workings. This has not been apportioned across regulatory units as there is currently no reliable basis to allocate this and the significant majority relates to Standard Control.

- Revenue from customer contributions is accounted for in Ancillary Services and therefore no revenue is reflected in the table. This is consistent with 8.1. Gifted assets are not being treated as assessable while the ATO determines the application of the Victoria Power Networks (VPN) case to Essential Energy.
- Rows pertaining to permanent differences due to disallowed interest expense and adjustments to prior year returns, have been left blank as they were Nil
- The tax loss carried forward relates primarily to immediate deductions of Standard Control replacement assets and therefore all of the Company loss has been allocated to Standard Control. The loss is based on the audited Company level tax calculations.

Interest Expense:

Debt and Equity

A portion of the total debt and finance costs of Essential Energy is allocated to the standard control business.

Debt

The debt is allocated based on the overall Cost Allocation Method (CAM) rate for 2025. The CAM allocation method is used as Essential Energy does not allocate debt to the individual business classifications in our financial records and Essential Energy does not have a record of the debt relating to each business classification. The opening debt is used for this disclosure as advised by the AER. This was confirmed by the AER in an issues register:

We acknowledge the definition of interest bearing liabilities refers to the beginning of the period and a better definition would not reference the reporting period at all.
The AER is requesting the electricity transmission networks report interest-bearing liabilities held at the beginning of the reporting period in table 8.7.1 and interest bearing liabilities held at the end of the reporting period in table 8.7.2.

Interest

The CAM allocation method is used as Essential Energy does not allocate finance costs to the individual business classifications in our financial records. The method is the primary allocation method used for RIO reporting. Related party interest is the interest and indexation costs on debt facilities provided by NSW Treasury Corporation (as a wholly owned NSW state owned corporation) and the government guarantee fee charged by NSW Treasury as a competitive neutrality fee for their services of providing a guarantee on borrowings. These make up almost all our finance costs with non-related party interest being lease finance costs and discount unwinding on provisions.

ASSUMPTIONS [SECTUIB 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

None

Worksheet: P1.3 Secondary Tariffs

Table P1.3.3 - Customer Numbers By Meter Type - Secondary Tariff Customers

Table P1.3.4 - Customer Numbers By Tariff Type - Secondary Tariffs

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

The information that has been sourced from the billing system is considered to be actual data

The data in this table is considered to be reliable.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

The figures were sourced from the billing system, Peace.

METHODOLOGY [SECTION 5.2.1 (B)]

A list of all Premises with their meter and tariff details was extracted from the billing system, Peace, as at 30th June. This is the same list that was used for EB Table 3.4.2 Customer Numbers.

The Premises were assigned flags for Cost Reflective or Non Cost Reflective based on the assigned Network tariff.

The following splits were based on the secondary tariffs, Controlled load 1 and Controlled load 2.

P 1.1.3 provides a split of the customer numbers by customer segment according to their assigned tariff and meter type, where Type 4 are Interval/Smart meters, Type 6 are Basic meters, and Type 7 are Unmetered, they have a meter in MSATS just not in reality.

R1.1.4 provides a split of all customers split by Customer segment and tariff.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

Cost reflective, non-cost reflective and secondary tariffs have been separated to their own sections for the year, P1.1, P1.2 and P1.3 respectively.

Worksheet: Customer Service Incentive Scheme (CSIS) Model

DATA REPORTING QUALITY [SECTION 5.2.1 (D)]

All CSIS metrics are derived from actual operational data extracted from production systems rather than estimates or projections. PowerOn Advantage ADMS provides actual outage events and restoration communications as they occur in real-time network operations. ServiceNow CSM captures actual customer complaints lodged through all service channels. Genesys Cloud records actual customer survey responses collected following contact center interactions. The integrated PowerBI reporting framework aggregates these actual operational records to calculate CSIS performance metrics, ensuring all reported values reflect genuine operational performance rather than modeled or estimated figures.

INFORMATION SOURCE [SECTION 5.1.1 (A)]

The CSIS metrics are derived from three operational systems:

1. **PowerOn Advantage ADMS** - Outage management data including unplanned outages and Estimated Time to Restore (ETR) percentages, accessed via SQL query to the distribution management database
2. **ServiceNow Customer Service Management (CSM)** - Customer complaints data extracted from the SaaS platform through scheduled manual extracts
3. **Genesys Cloud** - Customer experience survey data (Ease scores) retrieved via API from the contact center platform

All three data sources are consolidated and analysed through a PowerBI report using integrated PowerQuery transformations.

METHODOLOGY [SECTION 5.2.1 (B)]

CSIS performance metrics are calculated using an integrated ETL (Extract, Transform, Load) framework within PowerBI:

ETR% Metric: A production-grade SQL query, extracts outage event data from the PowerOn Advantage database. This query has been operationalised for several years in internal performance tracking and

calculates the percentage of unplanned outages with an Estimated Time to Restore communicated to customers.

Complaints Metric: Manual extracts are performed from ServiceNow CSM and integrated into PowerBI via PowerQuery. Data undergoes multi-step verification including duplicate checking and categorical alignment before integration. The data is transformed using standardised aggregation methodology to calculate average time to resolve complaint by the month of complaint resolution.

Ease Metric: API calls retrieve individual call-level survey response data from Genesys Cloud. The data is transformed using standardised aggregation methodology to calculate average customer ease scores.

Temporal Aggregation: All metrics are plotted and aggregated by the month in which they are resolved or completed (rather than by opening or start date). This approach minimises ongoing changes to historical reporting periods, as aggregation by opening date would result in constant revisions as events progress through their lifecycle and reach resolution in subsequent periods.

Validation Process: Each metric undergoes cross-system reconciliation where PowerBI outputs are validated against native system reporting.

Data Aggregation and Final Calculation: The PowerBI report aggregates the three component metrics and produces outputs formatted for ingestion into the "Essential Energy - 6.03 Customer Service Incentive Scheme (CSIS) Reporting Model - Aug25" Excel workbook. This reporting model receives the performance data from PowerBI and calculates the final CSIS performance score according to the agreed regulatory guidelines and weighting methodology specified by the AER.

ASSUMPTIONS [SECTION 5.2.1 (C)]

N/A

ADDITIONAL INFORMATION [SECTION 5.2.3]

N/A

CHANGES FROM PREVIOUS YEAR BASIS OF PREPARATION [SECTION 5.2.1 (G)]

This is a new reporting requirement for 2024-25.