2017 RIN

Basis of Preparation

Category Analysis

Document No: 2017 [UE] [CA] RIN BOP

Revision: 1.0

Overview

United Energy is required to prepare a Basis of Preparation document which must,

a) demonstrate how the information provided is consistent with the requirements of the Notice;

b) explain the source from which United Energy obtained the information provided;

c) explain the methodology United Energy applied to provide the required information, including any assumptions United Energy made;

d) advise if the information is actual or estimate;

e) explain circumstances where United Energy cannot provide input for a variable using actual information, and therefore must provide estimated information:

    i. why an estimate was required, including why it was not possible for United Energy to use actual information;

    ii. the basis for the estimate, including the approach used, assumptions made and reasons why the estimate is United Energy's best estimate, given the information sought in the Notice.

In accordance with the requirements above, this document provides details to support the information provided by United Energy in the Microsoft Excel workbooks titled:

- 2017 [UE] [CA] RIN Template Export - Actual
- 2017 [UE] [CA] RIN Template Export - Estimated
- 2017 [UE] [CA] RIN Template Export - Consolidated

To satisfy the requirements of the *Notice*, the following information has been provided for each RIN table:

- classification of actual or estimated information;
- if estimated, appropriate justification provided;
- data source;
- methodology and assumptions adopted to prepare the information;
- any additional comments to support the basis of preparation.

Where estimates have been provided, United Energy is currently considering the feasibility of improvement opportunities to allow actual information to be provided in the future.

BOP ID	Tab ID	Tab Name	Table and Rule Allocation	Estimated / Actual	Data Source	Why Estimated?	Methodology	Assumptions	Additional Comments
CAUE2.1BOP1	2.1	Expenditure Summary	TABLE 2.1.1 - STANDARD CONTROL SERVICES CAPEX	Actual	Category Analysis RIN	N/A	Replacement expenditure, connections and augmentation expenditure are calculated based on the sum of the relevant direct material expenditure, direct labour expenditure, contract expenditure and other expenditure amounts in Tab 2.12. Connections. Non-network is the sum of capex amounts in Tab 2.6.	N/A	N/A
CAUE2.1BOP2	2.1	Expenditure Summary	TABLE 2.1.2 - STANDARD CONTROL SERVICES OPEX	Actual	Category Analysis RIN	N/A	Vegetation management, maintenance, emergency response, network overheads, corporate overheads, metering and public lighting Opex are calculated by summing the operating expenditure amounts in the relevant tabs adjusted by contestable services. Non-network includes IT and Other Opex in Tab 2.6. Motor vehicles and Buildings and property Opex are reported in both non-network and overheads, therefore this amount was removed to avoid double-counting. SCADA/Network Control is from Annual RIN 8.4.1.	N/A	N/A
CAUE2.1BOP3	2.1	Expenditure Summary	TABLE 2.1.3 - ALTERNATIVE CONTROL SERVICES CAPEX	Estimated	Category Analysis RIN	The codes in SAP are not directly attributable to all categories in the Annual RIN template; therefore, assumptions have been developed to allocate expenditure to the appropriate categories.	Metering, public lighting are calculated from annual RIN tab 8.2. Ancillary and connections ACS are calculated based on quantities derived from ACS revenue extracted from UE's general ledger multiplied by unit cost rates.	N/A	N/A
CAUE2.1BOP4	2.1	Expenditure Summary	TABLE 2.1.4 - ALTERNATIVE CONTROL SERVICES OPEX	Estimated	Category Analysis RIN	The codes in SAP are not directly attributable to all categories in the Annual RIN template; therefore, assumptions have been developed to allocate expenditure to the appropriate categories.	Metering, public lighting are calculated from annual RIN tab 8.4. Ancillary and connections ACS are calculated based on quantities derived from ACS revenue extracted from UE's general ledger multiplied by unit cost rates. Overheads are from Tab 2.10 adjusted for metering overheads which has been included in Metering.	N/A	N/A
CAUE2.2BOP1	2.2	Repex	TABLE 2.2.1 - REPLACEMENT EXPENDITURE, VOLUMES AND ASSET FAILURES BY ASSET CATEGORY POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - Staking of a wooden pole [Asset Replacements - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - < = 1 kV; Wood [Asset Replacements - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 1 kV & < = 11 kV; Wood [Asset Replacements - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 11 kV & < = 22 kV; Wood [Asset Replacements - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 22 kV & < = 66 kV; Wood [Asset Replacements - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 66 kV & < = 132 kV; Wood [Asset Replacements - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 132 kV; Wood [Asset Replacements - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - < = 1 kV; Concrete [Asset Replacements - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 1 kV & < = 11 kV; Concrete [Asset Replacements - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL	Actual	DMS/OMS	N/A	Asset failure data is captured and stored in UEs DMS/OMS system. The data is surfaced in SAP HANA and reported on through Tableau. A Purpose built report on Asset failures was used to complete this information requirement.	N/A	Refer to Document UE PR 2329 Procedure to Extract Asset Failures. Refers to 'Asset Failures' column.

			TYPE; STAKING (IF WOOD) - > 11 kV & < = 22 kV; Concrete [Asset Replacements - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 22 kV & < = 66 kV; Concrete [Asset Replacements - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 66 kV & < = 132 kV; Concrete [Asset Replacements - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 132 kV; Concrete [Asset Replacements - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - < = 1 kV; Steel [Asset Replacements - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 1 kV & < = 11 kV; Steel [Asset Replacements - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 11 kV & < = 22 kV; Steel [Asset Replacements - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 22 kV & < = 66 kV; Steel [Asset Replacements - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 66 kV & < = 132 kV; Steel [Asset Replacements - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 132 kV; Steel [Asset Replacements - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - Other [Asset Replacements - faults only] POLE TOP STRUCTURES BY: HIGHEST OPERATING VOLTAGE - < = 1 kV [Asset Replacements - faults only] POLE TOP STRUCTURES BY: HIGHEST OPERATING VOLTAGE - > 1 kV & < = 11 kV [Asset Replacements - faults only] POLE TOP STRUCTURES BY: HIGHEST OPERATING VOLTAGE - > 11 kV & < = 22 kV [Asset Replacements - faults only] POLE TOP STRUCTURES BY: HIGHEST OPERATING VOLTAGE - > 22 kV & < = 66 kV [Asset Replacements - faults only] POLE TOP STRUCTURES BY: HIGHEST OPERATING VOLTAGE - > 66 kV & < = 132 kV [Asset Replacements - faults only] POLE TOP STRUCTURES BY: HIGHEST OPERATING VOLTAGE - > 132 kV [Asset Replacements - faults only] POLE TOP STRUCTURES BY: HIGHEST OPERATING VOLTAGE - Other [Asset Replacements - faults only] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 22 kV & < = 66 kV [Asset Replacements - faults only] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 66 kV & < = 132 kV [Asset Replacements - faults only] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 132 kV [Asset Replacements - faults only] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - Other [Asset Replacements - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Subdivision ; Complex Type [Asset Replacements - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER					

			TYPE; CONNECTION COMPLEXITY - > 11 kV & < = 22 kV ; Commercial & Industrial ; [Asset Replacements - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 11 kV & < = 22 kV ; Subdivision ; [Asset Replacements - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 22 kV & < = 33 kV ; Commercial & Industrial ; [Asset Replacements - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 22 kV & < = 33 kV ; Subdivision ; [Asset Replacements - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 33 kV & < = 66 kV ; Commercial & Industrial ; [Asset Replacements - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 33 kV & < = 66 kV ; Subdivision ; [Asset Replacements - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 66 kV & < = 132 kV ; Commercial & Industrial ; [Asset Replacements - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 66 kV & < = 132 kV ; Subdivision ; [Asset Replacements - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 132 kV ; Commercial & Industrial ; [Asset Replacements - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 132 kV ; Subdivision ; [Asset Replacements - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - Other [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; < = 60 kVA ; Single Phase [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; > 60 kVA and < = 600 kVA ; Single Phase [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; > 600 kVA ; Single Phase [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; < = 60 kVA ; Multiple Phase [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; > 60 kVA and < = 600 kVA ; Multiple Phase [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; > 600 kVA ; Multiple Phase [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; < = 60 kVA ; Single Phase [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; > 60 kVA and < = 600 kVA ; Single Phase [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF					

			PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; > 600 kVA ; Single Phase [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; < = 60 kVA ; Multiple Phase [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; > 60 kVA and < = 600 kVA ; Multiple Phase [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; > 600 kVA ; Multiple Phase [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; < = 60 kVA ; Single Phase [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; > 60 kVA and < = 600 kVA ; Single Phase [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; > 600 kVA ; Single Phase [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; < = 60 kVA ; Multiple Phase [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; > 60 kVA and < = 600 kVA ; Multiple Phase [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; > 600 kVA ; Multiple Phase [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > = 22 kV & < = 33 kV ; < = 15 MVA [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > = 22 kV & < = 33 kV ; > 15 MVA and < = 40 MVA [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > = 22 kV & < = 33 kV ; > 40 MVA [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 33 kV & < = 66 kV ; < = 15 MVA [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST					

			OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 33 kV & < = 66 kV ; > 15 MVA and < = 40 MVA [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 33 kV & < = 66 kV ; > 40 MVA [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 66 kV & < = 132 kV ; < = 100 MVA [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 66 kV & < = 132 kV ; > 100 MVA [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 132 kV ; < = 100 MVA [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 132 kV ; > 100 MVA [Asset Replacements - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Other [Asset Replacements - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - < = 11 kV ; FUSE [Asset Replacements - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - < = 11 kV ; Switch [Asset Replacements - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - < = 11 kV ; Circuit Breaker [Asset Replacements - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 11 kV & < = 22 kV ; Switch [Asset Replacements - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 11 kV & < = 22 kV ; Circuit Breaker [Asset Replacements - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 22 kV & < = 33 kV ; Switch [Asset Replacements - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 22 kV & < = 33 kV ; Circuit Breaker [Asset Replacements - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 33 kV & < = 66 kV ; Switch [Asset Replacements - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 33 kV & < = 66 kV ; Circuit Breaker [Asset Replacements - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 66 kV & < = 132 kV ; Switch [Asset Replacements - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 66 kV & < = 132 kV ; Circuit Breaker [Asset Replacements - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH					

			FUNCTION - > 132 kV ; Switch [Asset Replacements - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 132 kV ; Circuit Breaker [Asset Replacements - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - Other [Asset Replacements - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Luminaires ; Major Road [Asset Replacements - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Luminaires ; Minor Road [Asset Replacements - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Brackets ; Major Road [Asset Replacements - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Brackets ; Minor Road [Asset Replacements - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Lamps ; Major Road [Asset Replacements - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Lamps ; Minor Road [Asset Replacements - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Poles / Columns ; Major Road [Asset Replacements - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Poles / Columns ; Minor Road [Asset Replacements - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Other [Asset Replacements - faults only] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: FUNCTION - Field Devices [Asset Replacements - faults only] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: FUNCTION - Local Network Wiring Assets [Asset Replacements - faults only] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: FUNCTION - Communications Network Assets [Asset Replacements - faults only] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: FUNCTION - Master Station Assets [Asset Replacements - faults only] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: FUNCTION - Communications Site Infrastructure [Asset Replacements - faults only] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: FUNCTION - Communications Linear Assets [Asset Replacements - faults only] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: FUNCTION - AFLC [Asset Replacements - faults only] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: FUNCTION - Other [Asset Replacements - faults only] Buildings [Asset Replacements - excluding faults] Civil [Asset Replacements - excluding faults] Capacitor Banks - Large [Asset Replacements - excluding faults] Fences [Asset Replacements - excluding faults] CTs and VTs [Asset Replacements - excluding faults] NERs [Asset Replacements - excluding faults] Bunding/Noise [Asset Replacements - excluding faults] Asbestos [Asset Replacements - excluding faults]						
CAUE2.2BOP2	2.2	Repex	TABLE 2.2.1 - REPLACEMENT EXPENDITURE, VOLUMES AND ASSET FAILURES BY ASSET CATEGORY POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - Staking of a wooden pole [Expenditure - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - Staking of a wooden pole [Expenditure - excluding faults]	Actual	SAP and GIS	N/A	Asset replacement activity is captured in UEs SAP system. Different type Work orders are raised for the various replacement activity that occurs on the network. Work orders capture the costs incurred and quantity of work delivered. The concept of Activity Codes (MAT codes) are used to distinguish between the type of work and assets	N/A	Refer to Document UE PR 2327 Extraction Methodology of REPEX. Refers to column, 'Expenditure' and 'Asset Replacements'.

			POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - < = 1 kV; Wood [Expenditure - excluding faults] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 1 kV & < = 11 kV; Wood [Expenditure - excluding faults] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 11 kV & < = 22 kV; Wood [Expenditure - excluding faults] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 22 kV & < = 66 kV; Wood [Expenditure - excluding faults] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 66 kV & < = 132 kV; Wood [Expenditure - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 66 kV & < = 132 kV; Wood [Expenditure - excluding faults] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 132 kV; Wood [Expenditure - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 132 kV; Wood [Expenditure - excluding faults] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - < = 1 kV; Concrete [Expenditure - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - < = 1 kV; Concrete [Expenditure - excluding faults] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 1 kV & < = 11 kV; Concrete [Expenditure - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 1 kV & < = 11 kV; Concrete [Expenditure - excluding faults] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 11 kV & < = 22 kV; Concrete [Expenditure - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 11 kV & < = 22 kV; Concrete [Expenditure - excluding faults] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 22 kV & < = 66 kV; Concrete [Expenditure - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 22 kV & < = 66 kV; Concrete [Expenditure - excluding faults] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 66 kV & < = 132 kV; Concrete [Expenditure - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 66 kV & < = 132 kV; Concrete [Expenditure - excluding faults] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 132 kV; Concrete [Expenditure - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 132 kV; Concrete [Expenditure - excluding faults] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - < = 1 kV; Steel [Expenditure - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - < = 1 kV; Steel [Expenditure - excluding faults]				worked on: (a) Where there is a one-one mapping between MAT code and RIN category the expenditure and volume of assets can be directly allocated (b) Where there is a many-one mapping between MAT code and RIN category (i.e. RSA and RCA projects) then engineering knowledge and statistical Key Figure (SKF) postings have been applied in SAP to allocate the expenditure and volume of work for these activities.		

			POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 1 kV & < = 11 kV; Steel [Expenditure - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 1 kV & < = 11 kV; Steel [Expenditure - excluding faults] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 11 kV & < = 22 kV; Steel [Expenditure - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 11 kV & < = 22 kV; Steel [Expenditure - excluding faults] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 22 kV & < = 66 kV; Steel [Expenditure - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 22 kV & < = 66 kV; Steel [Expenditure - excluding faults] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 66 kV & < = 132 kV; Steel [Expenditure - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 66 kV & < = 132 kV; Steel [Expenditure - excluding faults] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 132 kV; Steel [Expenditure - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 132 kV; Steel [Expenditure - excluding faults] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - Other [Expenditure - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - Other [Expenditure - excluding faults] POLE TOP STRUCTURES BY: HIGHEST OPERATING VOLTAGE - < = 1 kV [Expenditure - faults only] POLE TOP STRUCTURES BY: HIGHEST OPERATING VOLTAGE - < = 1 kV [Expenditure - excluding faults] POLE TOP STRUCTURES BY: HIGHEST OPERATING VOLTAGE - > 22 kV & < = 66 kV [Expenditure - faults only] POLE TOP STRUCTURES BY: HIGHEST OPERATING VOLTAGE - > 22 kV & < = 66 kV [Expenditure - excluding faults] POLE TOP STRUCTURES BY: HIGHEST OPERATING VOLTAGE - > 66 kV & < = 132 kV [Expenditure - faults only] POLE TOP STRUCTURES BY: HIGHEST OPERATING VOLTAGE - > 66 kV & < = 132 kV [Expenditure - excluding faults] POLE TOP STRUCTURES BY: HIGHEST OPERATING VOLTAGE - > 132 kV [Expenditure - faults only] POLE TOP STRUCTURES BY: HIGHEST OPERATING VOLTAGE - > 132 kV [Expenditure - excluding faults] POLE TOP STRUCTURES BY: HIGHEST OPERATING VOLTAGE - Other [Expenditure - faults only] POLE TOP STRUCTURES BY: HIGHEST OPERATING VOLTAGE - Other [Expenditure - excluding faults] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - < = 1 kV [Expenditure - faults only] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - < = 1 kV [Expenditure - excluding faults] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 1 kV & < = 11 kV [Expenditure - excluding faults]						

			OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 11 kV & < = 22 kV ; SWER [Expenditure - excluding faults] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 11 kV & < = 22 kV ; Single-Phase [Expenditure - excluding faults] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 11 kV & < = 22 kV ; Multiple-Phase [Expenditure - excluding faults] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 22 kV & < = 66 kV [Expenditure - excluding faults] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 66 kV & < = 132 kV [Expenditure - faults only] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 66 kV & < = 132 kV [Expenditure - excluding faults] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 132 kV [Expenditure - faults only] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 132 kV [Expenditure - excluding faults] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - Other [Expenditure - faults only] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - Other [Expenditure - excluding faults] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - < = 1 kV [Expenditure - faults only] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - < = 1 kV [Expenditure - excluding faults] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 1 kV & < = 11 kV [Expenditure - faults only] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 1 kV & < = 11 kV [Expenditure - excluding faults] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 11 kV & < = 22 kV [Expenditure - faults only] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 11 kV & < = 22 kV [Expenditure - excluding faults] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 22 kV & < = 33 kV [Expenditure - faults only] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 22 kV & < = 33 kV [Expenditure - excluding faults] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 33 kV & < = 66 kV [Expenditure - faults only] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 33 kV & < = 66 kV [Expenditure - excluding faults] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 66 kV & < = 132 kV [Expenditure - faults only] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 66 kV & < = 132 kV [Expenditure - excluding faults] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 132 kV [Expenditure - faults only] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 132 kV [Expenditure - excluding faults] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - Other [Expenditure - faults only] UNDERGROUND CABLES BY: HIGHEST OPERATING					

			VOLTAGE - Other [Expenditure - excluding faults] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Residential ; Simple Type [Expenditure - excluding faults] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Commercial & Industrial ; Simple Type [Expenditure - excluding faults] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Residential ; Complex Type [Expenditure - excluding faults] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Commercial & Industrial ; Complex Type [Expenditure - excluding faults] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Subdivision ; Complex Type [Expenditure - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Subdivision ; Complex Type [Expenditure - excluding faults] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 11 kV & < = 22 kV ; Commercial & Industrial ; [Expenditure - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 11 kV & < = 22 kV ; Commercial & Industrial ; [Expenditure - excluding faults] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 11 kV & < = 22 kV ; Subdivision ; [Expenditure - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 11 kV & < = 22 kV ; Subdivision ; [Expenditure - excluding faults] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 22 kV & < = 33 kV ; Commercial & Industrial ; [Expenditure - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 22 kV & < = 33 kV ; Commercial & Industrial ; [Expenditure - excluding faults] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 22 kV & < = 33 kV ; Subdivision ; [Expenditure - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 22 kV & < = 33 kV ; Subdivision ; [Expenditure - excluding faults] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 33 kV & < = 66 kV ; Commercial & Industrial ; [Expenditure - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 33 kV & < = 66 kV ; Commercial & Industrial ; [Expenditure - excluding faults] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 33 kV & < = 66 kV ; Subdivision ; [Expenditure - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 33 kV & < = 66 kV ; Subdivision ; [Expenditure - excluding faults] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 66 kV & < = 132 kV ; Commercial & Industrial ; [Expenditure - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 66 kV & < = 132 kV ; Commercial & Industrial ; [Expenditure - excluding faults] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 66 kV & < = 132 kV ; Subdivision ; [Expenditure - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 66 kV & < = 132 kV ;					

			Subdivision ; [Expenditure - excluding faults] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 132 kV ; Commercial & Industrial ; [Expenditure - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 132 kV ; Commercial & Industrial ; [Expenditure - excluding faults] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 132 kV ; Subdivision ; [Expenditure - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 132 kV ; Subdivision ; [Expenditure - excluding faults] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - Other [Expenditure - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - Other [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; < = 60 kVA ; Single Phase [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; < = 60 kVA ; Single Phase [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; > 60 kVA and < = 600 kVA ; Single Phase [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; > 60 kVA and < = 600 kVA ; Single Phase [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; > 600 kVA ; Single Phase [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; > 600 kVA ; Single Phase [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; < = 60 kVA ; Multiple Phase [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; < = 60 kVA ; Multiple Phase [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; > 60 kVA and < = 600 kVA ; Multiple Phase [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; > 60 kVA and < = 600 kVA ; Multiple Phase [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; > 600 kVA ; Multiple Phase [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; > 600 kVA ;						

			Multiple Phase [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; < = 60 kVA ; Single Phase [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; < = 60 kVA ; Single Phase [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; > 60 kVA and < = 600 kVA ; Single Phase [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; > 60 kVA and < = 600 kVA ; Single Phase [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; > 600 kVA ; Single Phase [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; > 600 kVA ; Single Phase [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; < = 60 kVA ; Multiple Phase [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; < = 60 kVA ; Multiple Phase [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; > 60 kVA and < = 600 kVA ; Multiple Phase [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; > 60 kVA and < = 600 kVA ; Multiple Phase [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; > 600 kVA ; Multiple Phase [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; > 600 kVA ; Multiple Phase [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; < = 60 kVA ; Single Phase [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; < = 60 kVA ; Single Phase [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; > 60 kVA and < = 600 kVA ; Single Phase [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF					

			PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; > 60 kVA and < = 600 kVA ; Single Phase [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; > 600 kVA ; Single Phase [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; > 600 kVA ; Single Phase [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; < = 60 kVA ; Multiple Phase [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; < = 60 kVA ; Multiple Phase [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; > 60 kVA and < = 600 kVA ; Multiple Phase [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; > 60 kVA and < = 600 kVA ; Multiple Phase [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; > 600 kVA ; Multiple Phase [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; > 600 kVA ; Multiple Phase [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > = 22 kV & < = 33 kV ; < = 15 MVA [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > = 22 kV & < = 33 kV ; < = 15 MVA [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > = 22 kV & < = 33 kV ; > 15 MVA and < = 40 MVA [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > = 22 kV & < = 33 kV ; > 15 MVA and < = 40 MVA [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber					

			Mounted; > = 22 kV & < = 33 kV ; > 40 MVA [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > = 22 kV & < = 33 kV ; > 40 MVA [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 33 kV & < = 66 kV ; < = 15 MVA [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 33 kV & < = 66 kV ; < = 15 MVA [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 33 kV & < = 66 kV ; > 15 MVA and < = 40 MVA [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 33 kV & < = 66 kV ; > 15 MVA and < = 40 MVA [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 33 kV & < = 66 kV ; > 40 MVA [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 33 kV & < = 66 kV ; > 40 MVA [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 66 kV & < = 132 kV ; < = 100 MVA [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 66 kV & < = 132 kV ; < = 100 MVA [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 66 kV & < = 132 kV ; > 100 MVA [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 66 kV & < = 132 kV ; > 100 MVA [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 132 kV ; < = 100 MVA [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 132 kV ; < = 100 MVA [Expenditure - excluding faults]					

			TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 132 kV ; > 100 MVA [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 132 kV ; > 100 MVA [Expenditure - excluding faults] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Other [Expenditure - faults only] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Other [Expenditure - excluding faults] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - < = 11 kV ; FUSE [Expenditure - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - < = 11 kV ; FUSE [Expenditure - excluding faults] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - < = 11 kV ; Switch [Expenditure - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - < = 11 kV ; Switch [Expenditure - excluding faults] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - < = 11 kV ; Circuit Breaker [Expenditure - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - < = 11 kV ; Circuit Breaker [Expenditure - excluding faults] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 11 kV & < = 22 kV ; Switch [Expenditure - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 11 kV & < = 22 kV ; Switch [Expenditure - excluding faults] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 11 kV & < = 22 kV ; Circuit Breaker [Expenditure - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 11 kV & < = 22 kV ; Circuit Breaker [Expenditure - excluding faults] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 22 kV & < = 33 kV ; Switch [Expenditure - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 22 kV & < = 33 kV ; Switch [Expenditure - excluding faults] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 22 kV & < = 33 kV ; Circuit Breaker [Expenditure - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 22 kV & < = 33 kV ; Circuit Breaker [Expenditure - excluding faults] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 33 kV & < = 66 kV ; Switch [Expenditure - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 33 kV & < = 66 kV ; Switch [Expenditure - excluding faults] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 33 kV & < = 66 kV ; Circuit Breaker [Expenditure - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 33 kV & < = 66 kV ; Circuit Breaker [Expenditure - excluding faults]					

			SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 66 kV & < = 132 kV ; Switch [Expenditure - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 66 kV & < = 132 kV ; Switch [Expenditure - excluding faults] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 66 kV & < = 132 kV ; Circuit Breaker [Expenditure - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 66 kV & < = 132 kV ; Circuit Breaker [Expenditure - excluding faults] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 132 kV ; Switch [Expenditure - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 132 kV ; Switch [Expenditure - excluding faults] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 132 kV ; Circuit Breaker [Expenditure - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 132 kV ; Circuit Breaker [Expenditure - excluding faults] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - Other [Expenditure - faults only] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - Other [Expenditure - excluding faults] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Luminaires ; Major Road [Expenditure - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Luminaires ; Major Road [Expenditure - excluding faults] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Luminaires ; Minor Road [Expenditure - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Luminaires ; Minor Road [Expenditure - excluding faults] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Brackets ; Major Road [Expenditure - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Brackets ; Major Road [Expenditure - excluding faults] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Brackets ; Minor Road [Expenditure - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Brackets ; Minor Road [Expenditure - excluding faults] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Lamps ; Major Road [Expenditure - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Lamps ; Major Road [Expenditure - excluding faults] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Lamps ; Minor Road [Expenditure - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Lamps ; Minor Road [Expenditure - excluding faults] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Poles / Columns ; Major Road [Expenditure - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Poles / Columns ; Major Road [Expenditure - excluding faults] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Poles / Columns ; Minor Road [Expenditure - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Poles / Columns ; Minor Road [Expenditure - excluding faults] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Other [Expenditure - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Other [Expenditure - excluding faults] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS						

			BY: FUNCTION - Field Devices [Expenditure - faults only] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: FUNCTION - Field Devices [Expenditure - excluding faults] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: FUNCTION - Local Network Wiring Assets [Expenditure - faults only] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: FUNCTION - Local Network Wiring Assets [Expenditure - excluding faults] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: FUNCTION - Communications Network Assets [Expenditure - faults only] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: FUNCTION - Communications Network Assets [Expenditure - excluding faults] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: FUNCTION - Master Station Assets [Expenditure - faults only] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: FUNCTION - Master Station Assets [Expenditure - excluding faults] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: FUNCTION - Communications Site Infrastructure [Expenditure - faults only] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: FUNCTION - Communications Site Infrastructure [Expenditure - excluding faults] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: FUNCTION - Communications Linear Assets [Expenditure - faults only] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: FUNCTION - Communications Linear Assets [Expenditure - excluding faults] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: FUNCTION - AFLC [Expenditure - faults only] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: FUNCTION - AFLC [Expenditure - excluding faults] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: FUNCTION - Other [Expenditure - faults only] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: FUNCTION - Other [Expenditure - excluding faults] Buildings [Expenditure - excluding faults] Buildings [Asset Replacements - faults only] Civil [Expenditure - excluding faults] Civil [Asset Replacements - faults only] Capacitor Banks - Large [Expenditure - excluding faults] Capacitor Banks - Large [Asset Replacements - faults only] Fences [Expenditure - excluding f						
CAUE2.2BOP3	2.2	Repex	Table 2.2.2 - SELECTED ASSET CHARACTERISTICS TOTAL POLES BY: FEEDER TYPE - Total urban poles [Asset Volumes Currently in Commission] TOTAL POLES BY: FEEDER TYPE - Total urban poles [Asset Replacements] TOTAL POLES BY: FEEDER TYPE - Total rural short poles [Asset Volumes Currently in Commission] TOTAL POLES BY: FEEDER TYPE - Total rural short poles [Asset Replacements]	Actual	SAP	N/A	Asset data stored in UE SAP is surfaced in SAP HANA and reported through Tableau. Feeder classification Information on URBAN/RURAL is stored against the feeder [SORT] field in SAP. A relationship from Feeder to Pole is made through the technical hierarchy in SAP. Poles can then be spit by URBAN/RURAL .	Assumed the URBAN/RURAL fields held against each feeder is updated.	N/A
CAUE2.2BOP4	2.2	Repex	Table 2.2.2 - SELECTED ASSET CHARACTERISTICS OVERHEAD CONDUCTORS BY:CONDUCTOR LENGTH BY FEEDER TYPE - Conductors urban (km) [Asset Volumes Currently in Commission] OVERHEAD CONDUCTORS BY:CONDUCTOR LENGTH BY FEEDER TYPE - Conductors urban (km) [Asset Replacements] OVERHEAD CONDUCTORS BY:CONDUCTOR LENGTH BY FEEDER TYPE - Conductors rural short (km) [Asset Volumes Currently in Commission]	Actual	SAP and GIS	N/A	Asset data stored in UE SAP and GIS is surfaced in SAP HANA and reported through Tableau. Feeder classification Information on URBAN/RURAL is stored against the feeder [SORT] field in SAP. A relationship from Feeder to Conductor is made through table joins in Tableau. Conductor can then be spit by URBAN/RURAL.	Assumed the URBAN/RURAL fields held against each feeder is updated.	N/A

			OVERHEAD CONDUCTORS BY:CONDUCTOR LENGTH BY FEEDER TYPE - Conductors rural short (km) [Asset Replacements]						
CAUE2.2BOP5	2.2	Repex	Table 2.2.2 - SELECTED ASSET CHARACTERISTICS OVERHEAD CONDUCTORS BY: CONDUCTOR LENGTH MATERIAL TYPE - OH conductor steel [Asset Volumes Currently in Commission] OVERHEAD CONDUCTORS BY: CONDUCTOR LENGTH MATERIAL TYPE - OH conductor ACSR [Asset Volumes Currently in Commission]	Actual	GIS	N/A	Asset data stored in GIS is surfaced in SAP HANA and reported through Tableau. Conductor length and material type is stored in GIS and reported through Tableau.	N/A	N/A
CAUE2.2BOP6	2.2	Repex	Table 2.2.2 - SELECTED ASSET CHARACTERISTICS UNDERGROUND CABLES BY: CABLE LENGTH BY FEEDER TYPE - Cable urban (km) [Asset Volumes Currently in Commission] UNDERGROUND CABLES BY: CABLE LENGTH BY FEEDER TYPE - Cable rural short (km) [Asset Volumes Currently in Commission]	Actual	SAP and GIS	N/A	Asset data stored in UE SAP and GIS is surfaced in SAP HANA and reported through Tableau. Feeder classification Information on URBAN/RURAL is stored against the feeder [SORT] field in SAP. A relationship from Feeder to Cable is made through table joins in Tableau. Cable can then be spit by URBAN/RURAL	Assumed the URBAN/RURAL fields held against each feeder is updated.	N/A
CAUE2.2BOP7	2.2	Repex	Table 2.2.2 - SELECTED ASSET CHARACTERISTICS TRANSFORMERS BY: TOTAL MVA - Total MVA replaced [Asset Volumes Currently in Commission] TRANSFORMERS BY: TOTAL MVA - Total MVA replaced [Asset Replacements] TRANSFORMERS BY: TOTAL MVA - Total MVA disposed of [Asset Volumes Currently in Commission] TRANSFORMERS BY: TOTAL MVA - Total MVA disposed of [Asset Replacements]	Actual	SAP	N/A	Transformer assets that have been recorded in replacement work orders are stored in SAP and reported through Tableau. Transformer ratings are also stored in SAP. The total MVA of replaced Transformers can then be aggregated and reported.	N/A	N/A
CAUE2.2BOP8	2.2	Repex	TABLE 2.2.1 - REPLACEMENT EXPENDITURE, VOLUMES AND ASSET FAILURES BY ASSET CATEGORY POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - < = 1 kV; Wood [Expenditure - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 1 kV & < = 11 kV; Wood [Expenditure - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 11 kV & < = 22 kV; Wood [Expenditure - faults only] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 22 kV & < = 66 kV; Wood [Expenditure - faults only]	Estimated	SAP	Allocation of unknown pole expenditure based on asset age profile split.	Asset replacement activity is captured in UEs SAP system. Different type Work orders are raised for the various replacement activity that occurs on the network. Work orders capture the costs incurred and quantity of work delivered. The concept of Activity Codes (MAT codes) are used to distinguish between the type of work and assets worked on: (a) Where there is a one-one mapping between MAT code and RIN category the expenditure and volume of assets can be directly allocated (b) Where there is a many-one mapping between MAT code and RIN category (i.e. RSA and RCA projects) then engineering knowledge and statistical Key Figure (SKF) postings have been applied in SAP to allocate the expenditure and volume of work for these activities. Due to some of the data being un-categorised, an apportionment method was used to allocate the unknown data to the most likely category.	N/A	N/A
CAUE2.2BOP9	2.2	Repex	TABLE 2.2.1 - REPLACEMENT EXPENDITURE, VOLUMES AND ASSET FAILURES BY ASSET CATEGORY POLE TOP STRUCTURES BY: HIGHEST OPERATING VOLTAGE - > 1 kV & < = 11 kV [Expenditure - faults only] POLE TOP STRUCTURES BY: HIGHEST OPERATING VOLTAGE - > 1 kV & < = 11 kV [Expenditure - excluding faults] POLE TOP STRUCTURES BY: HIGHEST OPERATING VOLTAGE - > 11 kV & < = 22 kV [Expenditure - faults only] POLE TOP STRUCTURES BY: HIGHEST OPERATING VOLTAGE - > 11 kV & < = 22 kV [Expenditure - excluding faults]	Estimated	SAP	- Allocation for RXI and RXP MAT Codes expenditure based on RXH split - Allocation for RXI and RXP MAT Codes volume based on RXH split	Asset replacement activity is captured in UEs SAP system. Different type Work orders are raised for the various replacement activity that occurs on the network. Work orders capture the costs incurred and quantity of work delivered. The concept of Activity Codes (MAT codes) are used to distinguish between the type of work and assets worked on: (a) Where there is a one-one mapping between MAT code and RIN category the expenditure and volume of assets can be directly allocated	N/A	N/A

							(b) Where there is a many-one mapping between MAT code and RIN category (i.e. RSA and RCA projects) then engineering knowledge and statistical Key Figure (SKF) postings have been applied in SAP to allocate the expenditure and volume of work for these activities. Due to some of the data being un-categorised, an apportionment method was used to allocate the unknown data to the most likely category.		
CAUE2.2BOP10	2.2	Repex	TABLE 2.2.1 - REPLACEMENT EXPENDITURE, VOLUMES AND ASSET FAILURES BY ASSET CATEGORY OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 1 kV & < = 11 kV [Expenditure - faults only] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 11 kV & < = 22 kV ; SWER [Expenditure - faults only] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 11 kV & < = 22 kV ; Single-Phase [Expenditure - faults only] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 11 kV & < = 22 kV ; Multiple-Phase [Expenditure - faults only] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 22 kV & < = 66 kV [Expenditure - faults only]	Estimated	SAP	Allocation of unknown overhead conductors expenditure based on asset age profile split.	Asset replacement activity is captured in UEs SAP system. Different type Work orders are raised for the various replacement activity that occurs on the network. Work orders capture the costs incurred and quantity of work delivered. The concept of Activity Codes (MAT codes) are used to distinguish between the type of work and assets worked on: (a) Where there is a one-one mapping between MAT code and RIN category the expenditure and volume of assets can be directly allocated (b) Where there is a many-one mapping between MAT code and RIN category (i.e. RSA and RCA projects) then engineering knowledge and statistical Key Figure (SKF) postings have been applied in SAP to allocate the expenditure and volume of work for these activities. Due to some of the data being un-categorised, an apportionment method was used to allocate the unknown data to the most likely category.	N/A	N/A
CAUE2.2BOP11	2.2	Repex	TABLE 2.2.1 - REPLACEMENT EXPENDITURE, VOLUMES AND ASSET FAILURES BY ASSET CATEGORY OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - < = 1 kV [Asset Replacements - faults only] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 1 kV & < = 11 kV [Asset Replacements - faults only] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 11 kV & < = 22 kV ; SWER [Asset Replacements - faults only] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 11 kV & < = 22 kV ; Single-Phase [Asset Replacements - faults only] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 11 kV & < = 22 kV ; Multiple-Phase [Asset Replacements - faults only]	Estimated	SAP	Estimated length based on standard length per event * number of events	Asset failure data is captured and stored in UEs DMS/OMS system. The data is surfaced in SAP HANA and reported on through Tableau. A Purpose built report on Asset failures was used to complete this information requirement. Due to some of the data being un-categorised, an apportionment method was used to allocate the unknown data to the most likely category.	N/A	N/A
CAUE2.2BOP12	2.2	Repex	TABLE 2.2.1 - REPLACEMENT EXPENDITURE, VOLUMES AND ASSET FAILURES BY ASSET CATEGORY UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - < = 1 kV [Asset Replacements - faults only] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 1 kV & < = 11 kV [Asset Replacements - faults only] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 11 kV & < = 22 kV [Asset Replacements - faults only] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 22 kV & < = 33 kV [Asset Replacements - faults only] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 33 kV & < = 66 kV [Asset Replacements - faults	Estimated	SAP	Estimated length based on standard length per event * number of events.	Asset failure data is captured and stored in UEs DMS/OMS system. The data is surfaced in SAP HANA and reported on through Tableau. A Purpose built report on Asset failures was used to complete this information requirement. Due to some of the data being un-categorised, an apportionment method was used to allocate the unknown data to the most likely category.	N/A	N/A

			only] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 66 kV & < = 132 kV [Asset Replacements - faults only] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 132 kV [Asset Replacements - faults only] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - Other [Asset Replacements - faults only]						
CAUE2.2BOP13	2.2	Repex	TABLE 2.2.1 - REPLACEMENT EXPENDITURE, VOLUMES AND ASSET FAILURES BY ASSET CATEGORY SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Residential ; Simple Type [Expenditure - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Residential ; Simple Type [Asset Replacements - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Commercial & Industrial ; Simple Type [Expenditure - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Commercial & Industrial ; Simple Type [Asset Replacements - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Residential ; Complex Type [Expenditure - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Residential ; Complex Type [Asset Replacements - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Commercial & Industrial ; Complex Type [Expenditure - faults only] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Commercial & Industrial ; Complex Type [Asset Replacements - faults only]	Estimated	SAP	- Allocation of unknown service line expenditure based on asset age profile split - Allocation of total service lines volume based on asset age profile split	Asset replacement activity is captured in UEs SAP system. Different type Work orders are raised for the various replacement activity that occurs on the network. Work orders capture the costs incurred and quantity of work delivered. The concept of Activity Codes (MAT codes) are used to distinguish between the type of work and assets worked on: (a) Where there is a one-one mapping between MAT code and RIN category the expenditure and volume of assets can be directly allocated. (b) Where there is a many-one mapping between MAT code and RIN category (i.e. RSA and RCA projects) then engineering knowledge and statistical Key Figure (SKF) postings have been applied in SAP to allocate the expenditure and volume of work for these activities. Asset failure data is captured and stored in UEs DMS/OMS system. The data is surfaced in SAP HANA and reported on through Tableau. A Purpose built report on Asset failures was used to complete this information requirement. Due to some of the data being un-categorised, an apportionment method was used to allocate the unknown data to the most likely category.	N/A	N/A
CAUE2.2BOP14	2.2	Repex	Table 2.2.2 - SELECTED ASSET CHARACTERISTICS OVERHEAD CONDUCTORS BY: CONDUCTOR LENGTH MATERIAL TYPE - OH conductor LV ABC [Asset Volumes Currently in Commission] OVERHEAD CONDUCTORS BY: CONDUCTOR LENGTH MATERIAL TYPE - OH conductor AAAC [Asset Volumes Currently in Commission] OVERHEAD CONDUCTORS BY: CONDUCTOR LENGTH MATERIAL TYPE - OH conductor AAC [Asset Volumes Currently in Commission] OVERHEAD CONDUCTORS BY: CONDUCTOR LENGTH MATERIAL TYPE - OH conductor HDBC [Asset Volumes Currently in Commission] OVERHEAD CONDUCTORS BY: CONDUCTOR LENGTH MATERIAL TYPE - Other [Asset Volumes Currently in Commission]	Estimated	SAP and GIS	Allocation of OH conductors with unknown materials allocated per 2016 split with unknown basis.	Asset data stored in GIS is surfaced in SAP HANA and reported through Tableau. Conductor length and material type is stored in GIS and reported through Tableau. Where conductor material type is unknown the unknown length is allocated as a over the population. Due to some of the data being un-categorised, an apportionment method was used to allocate the unknown data to the most likely category.	N/A	N/A
CAUE2.2BOP15	2.2	Repex	Table 2.2.2 - SELECTED ASSET CHARACTERISTICS OVERHEAD CONDUCTORS BY: CONDUCTOR LENGTH MATERIAL TYPE - OH conductor LV ABC [Asset Replacements] OVERHEAD CONDUCTORS BY: CONDUCTOR LENGTH MATERIAL TYPE - OH conductor steel [Asset Replacements] OVERHEAD CONDUCTORS BY: CONDUCTOR LENGTH MATERIAL TYPE - OH conductor ACSR [Asset Replacements] OVERHEAD CONDUCTORS BY: CONDUCTOR LENGTH MATERIAL TYPE - OH conductor AAAC [Asset Replacements] OVERHEAD CONDUCTORS BY: CONDUCTOR LENGTH MATERIAL TYPE - OH conductor AAC [Asset Replacements]	Estimated	SAP and GIS	Allocation of volume of replacements based proportion of OH conductors in commission.	Asset data stored in GIS is surfaced in SAP HANA and reported through Tableau. Conductor length and material type is stored in GIS and reported through Tableau. Where conductor material type is unknown the unknown length is allocated as a over the population. Due to some of the data being un-categorised, an apportionment method was used to allocate the unknown data to the most likely category.	N/A	N/A

			OVERHEAD CONDUCTORS BY: CONDUCTOR LENGTH MATERIAL TYPE - OH conductor HDBC [Asset Replacements] OVERHEAD CONDUCTORS BY: CONDUCTOR LENGTH MATERIAL TYPE - Other [Asset Replacements]						
CAUE2.2BOP16	2.2	Repex	Table 2.2.2 - SELECTED ASSET CHARACTERISTICS UNDERGROUND CABLES BY: CABLE LENGTH BY FEEDER TYPE - Cable urban (km) [Asset Replacements] UNDERGROUND CABLES BY: CABLE LENGTH BY FEEDER TYPE - Cable rural long (km) [Asset Replacements] UNDERGROUND CABLES BY: CABLE LENGTH BY FEEDER TYPE - Cable rural short (km) [Asset Replacements]	Estimated	SAP and GIS	Allocation of volume of replacements based proportion of UG cables in commission.	Asset data stored in UE SAP and GIS is surfaced in SAP HANA and reported through Tableau. Feeder classification Information on URBAN/RURAL is stored against the feeder [SORT] field in SAP. A relationship from Feeder to Cable is made through table joins in Tableau. Cable can then be spit by URBAN/RURAL. Due to some of the data being un-categorised, an apportionment method was used to allocate the unknown data to the most likely category.	N/A	N/A
CAUE2.2BOP17	2.2	Repex	TABLE 2.2.1 - REPLACEMENT EXPENDITURE, VOLUMES AND ASSET FAILURES BY ASSET CATEGORY SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: FUNCTION - Communications Linear Assets [Expenditure - excluding faults]	Actual	Project Documentation	N/A	Data on Fibre length usually comes from GIS, however when new projects are constructed there is a natural latency between work being completed in the field and the time it takes to update UE systems. Due to this latency, our systems are not yet been updated with the new Fibre Cable and thus taken from the project paperwork rather than GIS.	N/A	The comms infrastructure was upgraded and replaced with Fibre optic cable.
CAUE2.2BOP18	2.2	Repex	TABLE 2.2.1 - REPLACEMENT EXPENDITURE, VOLUMES AND ASSET FAILURES BY ASSET CATEGORY POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - Staking of a wooden pole [Expenditure - excluding faults]	Actual	SAP	N/A	All Pole asset data stored in SAP has been surfaced in SAP HANA then aggregated and reported through Tableau. The installation date is held against the Equipment "STARTUP DATE" in the SAP Equipment Record. Equipment records are assigned a RIN code by virtue of characteristics associated with that equipment record. i.e. Voltage, Material and whether or not the pole is reinforced	N/A	Refer to procedure UE-PR-2345 Poles.
CAUE2.2BOP19	2.2	Repex	TABLE 2.2.1 - REPLACEMENT EXPENDITURE, VOLUMES AND ASSET FAILURES BY ASSET CATEGORY Buildings [Asset Replacements - faults only] CTs and VTs [Asset Replacements - faults only] NERs [Asset Replacements - faults only]	Actual	SAP	N/A	Aligned with TAB 5.2 Asset Age Profiles for: -CTs and VTs -Buildings -NERs	N/A	N/A
CAUE2.2BOP20	2.2	Repex	PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Luminaires ; Major Road [Expenditure - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Luminaires ; Major Road [Expenditure - excluding faults] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Luminaires ; Major Road [Asset Replacements - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Luminaires ; Minor Road [Expenditure - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Luminaires ; Minor Road [Expenditure - excluding faults] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Luminaires ; Minor Road [Asset Replacements - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Brackets ; Major Road [Expenditure - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Brackets ; Major Road [Expenditure - excluding faults] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Brackets ; Major Road [Asset Replacements - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Brackets ; Minor Road [Expenditure - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Brackets ; Minor Road [Expenditure - excluding faults] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Brackets ; Minor Road [Asset Replacements - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Lamps ; Major Road [Expenditure - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION	Actual	SAP, GIS, Invoices	N/A	Expenditure - Extracted from SAP and based on CY17 costs for particular CAPEX Activity Codes relating to Public Lighting. Volumes - Extracted from Contractor invoices and based on CY17 for particular Activity Codes relating to Public Lighting. Replacements - Assets are replaced on failure and therefore failure assumed to be analogous to replacement volumes	Asset failure assumed to be analogous to replacement volumes	N/A

			- Lamps ; Major Road [Expenditure - excluding faults] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Lamps ; Major Road [Asset Replacements - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Lamps ; Minor Road [Expenditure - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Lamps ; Minor Road [Expenditure - excluding faults] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Lamps ; Minor Road [Asset Replacements - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Poles / Columns ; Major Road [Expenditure - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Poles / Columns ; Major Road [Expenditure - excluding faults] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Poles / Columns ; Major Road [Asset Replacements - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Poles / Columns ; Minor Road [Expenditure - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Poles / Columns ; Minor Road [Expenditure - excluding faults] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Poles / Columns ; Minor Road [Asset Replacements - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Other [Expenditure - faults only] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Other [Expenditure - excluding faults] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Other [Asset Replacements - faults only]					
CAUE2.3(a)BOP 1	2.3(a)	Augex A	TABLE 2.3.1 - AUGEX ASSET DATA - SUBTRANSMISSION SUBSTATIONS, SWITCHING STATIONS AND ZONE SUBSTATIONS	Actual	AMP Demand Project List, Scope of works, Business Cases.	NA	Zone substation ID and project description information has been obtained from the AMP Project Demand List. All proposed projects are listed and are filtered for the AER categories. The project folders contain business cases, detailed scopes of work and Statement of Work documents. Equipment volumes have been extracted from the detailed scope of work and business case documents. The Project ID is the SAP project Code. The project trigger and project type have been selected based on the business case and scope of the project.	This data is filled in on an as commissioned basis.	UE PR 2212 Population of Augex Data for CA RIN.
CAUE2.3(a)BOP 2	2.3(a)	Augex A	TABLE 2.3.1 - AUGEX ASSET DATA - SUBTRANSMISSION SUBSTATIONS, SWITCHING STATIONS AND ZONE SUBSTATIONS	Actual	Load Forecast Spreadsheet Ratings Database	NA	Substation ratings are extracted from either Rating Database or Load Forecasting spreadsheet.	This data is filled in on an as commissioned basis.	UE PR 2212 Population of Augex Data for CA RIN.
CAUE2.3(A)BOP 3	2.3(a)	Augex A	TABLE 2.3.1 - AUGEX ASSET DATA - SUBTRANSMISSION SUBSTATIONS, SWITCHING STATIONS AND ZONE SUBSTATIONS	Actual	SAP Service Delivery Service Providers Finance	NA	The cost description in SAP and the information provided by the Service Providers have been used to break the total project expenditure (apart from UE overheads) into the RIN categories. The service provider of the project is used to determine whether it is a related party or not. ZNX is a related party and others are considered to be a non-related party. The Transformer and switchgear expenditure has been recorded from the Free Issue Materials incurred across the project excluding the installation costs. The Other Plant Item expenditure has been recorded from the costs which have been provided by the Service Providers and any residual material costs incurred by UE. The Installation Hours have been provided by the Service Providers based upon total hours worked. The total labour expenditure charged by the Service Provider has been proportionated based on the on-site/off-site labour cost ratio provide in the SOW to	This data is filled in on an as commissioned basis.	UE PR 2212 Population of Augex Data for CA RIN.

							calculate the on-site installation cost. Further, the installation costs for the transformer and switchgear has also been recorded. The Civil Works have been recorded from the costs provided by the Service Provider, based upon their costs incurred for activities designated to be Civil Works. The other direct costs incurred are recorded from the costs provided by the Service Provider including ZSS Subcontract, ZSS Plant & Equipment, ZSS Downer Overheads and ZSS Downer Margin, additional off-site Downer labour cost and any other direct overhead costs which were not incurred by the service provider. There has been no related party costs incurred, as the applicable service provider for the project was Downer.		
CAUE2.3(a)BOP 4	2.3(a)	Augex A	TABLE 2.3.1 - AUGEX ASSET DATA - SUBTRANSMISSION SUBSTATIONS, SWITCHING STATIONS AND ZONE SUBSTATIONS	Actual	AMP Demand Project List Project Folders Business Case Documents SAP Service Providers	N/A	The allocation of augmentation categories has been made according to projects and volumes to MAT codes. Line ID and project description information has been obtained from the AMP Project Demand List. All proposed projects are listed and are filtered for the AER categories. The project folders contain business cases, detailed scopes of work and Statement of Work documents. Equipment volumes have been extracted from the detailed scope of work and business case documents. The Project ID is the SAP project Code and is included in the AMP Demand Project List. The project trigger and project type have been selected based on the business case and scope of the project.	This data is filled in on an as commissioned basis.	UE PR 2212 Population of Augex Data for CA RIN.
CAUE2.3(a)BOP 5	2.3(a)	Augex A	TABLE 2.3.2 - AUGEX ASSET DATA - SUBTRANSMISSION LINES	Actual	SAP	N/A	The cost description in SAP and the information provided by the Service Providers have been used to break the total project expenditure (apart from UE overheads) into the RIN categories. The service provider of the project is used to determine whether it is a related party or not. ZNX is a related party and others are considered to be a non-related party. The number of installation hours has been provided by the Service Providers. The expenditure recorded for labour has been provided from the related labour expenditure data taken from SAP. The Other Direct expenditure has been provided from the contract expenses, the direct overhead, material plant and fleet and sub contractor costs data taken from SAP. The Related Party Margins has been provided from the Related Party Margins data taken from SAP. The total Related Party Costs are the totals of the ZNX/Zinfra Direct Overhead, Labour, LIMB 2, material, plant and fleet and sub contractor costs taken from SAP.	This data is filled in on an as commissioned basis.	UE PR 2212 Population of Augex Data for CA RIN.
CAUE2.3(a)BOP 6	2.3(a)	Augex A	TABLE 2.3.2 - AUGEX ASSET DATA - SUBTRANSMISSION LINES	Actual	SAP	NA	Land and easement costs associated with each project are obtained from SAP project IDs with activity classifications 'GP'. Land purchase expenditures are costs associated with the purchase of land for a new line or an upgrade of an existing line. Easement expenditures are costs associated with compensating land owners for easement acquisition.	This data is filled in on an as commissioned basis.	UE PR 2212 Population of Augex Data for CA RIN.
CAUE2.3(b)BOP 1	2.3(b)	Augex B	TABLE 2.3.3 - AUGEX DATA - HV/LV FEEDERS AND DISTRIBUTION SUBSTATIONS Table 2.3.3.1 Descriptor Metrics	Actual	AMP Demand Project List Project Folders Business Case Documents. SAP	N/A	HV feeder lengths have been taken directly from the Project Scope of Works. LV underground feeder lengths are actual data taken from SAP. LV overhead feeder lengths are calculated from SAP. This length should be the material length (4	N/A	UE PR 2212 Population of Augex Data for CA RIN.

							conductors are used for an overhead line, therefore the route length is the total material length divided by 4). However sometimes the route length has been entered instead. Therefore the total length can be slightly lower than actual. Distribution substation units added/upgraded is determined for each individual project based on scope of works.		
CAUE2.3(b)BOP 2	2.3	Augex B	TABLE 2.3.3 - AUGEX DATA - HV/LV FEEDERS AND DISTRIBUTION SUBSTATIONS Table 2.3.3.2 Cost Metrics	Actual	AMP Demand Project List, Project Folders, Business Case Documents, SAP	N/A	Material and non-material HV feeder expenditure are actual data taken from SAP. LV feeder expenditure is all non-material and is actual data taken from SAP. Distribution substation expenditure is actual data taken from SAP. The only project expenditure not captured in this table is UE overheads attributed to the project.	N/A	UE PR 2212 Population of Augex Data for CA RIN.
CAUE2.3(b)BOP 3	2.3	Augex B	TABLE 2.3.3 - AUGEX DATA - HV/LV FEEDERS AND DISTRIBUTION SUBSTATIONS TABLE 2.3.4 - AUGEX DATA - TOTAL EXPENDITURE	Actual	AMP Demand Project List, Project Folders, Business Case Documents, SAP	N/A	Zone substation expenditure is the calculated 2017 component of the commissioned zone substation projects in 2.3.1 plus the actual expenditure of all other zone substation projects from SAP. Sub transmission line expenditure is the calculated 2017 sub transmission line component of the commissioned zone substation projects in 2.3.1 plus the actual expenditure of all other sub transmission line projects from SAP. HV feeder expenditure is the non material HV feeder expenditure in 2.3.3, plus the calculated 2017 HV feeder component from the zone substation projects commissioned in 2.3.1. LV feeder expenditure is the non material LV feeder expenditure in 2.3.3. Distribution substation expenditure is the total distribution substation expenditure from 2.3.3. Other assets expenditure is actual project expenditure from SAP.	N/A	UE PR 2212 Population of Augex Data for CA RIN.
CAUE2.5BOP1	2.5	Connections	TABLE 2.5.1 DESCRIPTOR METRICS RESIDENTIAL - Underground connections (0's) [VOLUMES AND EXPENDITURE] RESIDENTIAL - Overhead connections (0's) [VOLUMES AND EXPENDITURE] COMMERCIAL/INDUSTRIAL - Underground connections (0's) [VOLUMES AND EXPENDITURE] COMMERCIAL/INDUSTRIAL - Overhead connections (0's) [VOLUMES AND EXPENDITURE] SUBDIVISION - Underground connections (0's) [VOLUMES AND EXPENDITURE] SUBDIVISION - Overhead connections (0's) [VOLUMES AND EXPENDITURE] EMBEDDED GENERATION - Underground connections (0's) [VOLUMES AND EXPENDITURE] EMBEDDED GENERATION - Overhead connections (0's) [VOLUMES AND EXPENDITURE]	Actual	SAP HANA & Tableau	N/A	The total number of connections for the residential, subdivisions and commercial/industrial category have been obtained from SAP. New customers data were extracted from SAP and sorted based on customer class (Residential, Subdivisions, Commercial and Industrial). SAP/HANA model was built to extract data in relation to work orders produced in RIN year 2017. These numbers are extracted into the RIN categories from Tableau, with the SAP/HANA data model parameters created in accordance with the requirements of the regulatory RIN category.	N/A	N/A
CAUE2.5BOP2	2.5	Connections	TABLE 2.5.1 DESCRIPTOR METRICS RESIDENTIAL - Distribution substation installed (MVA added) [VOLUMES AND EXPENDITURE] RESIDENTIAL - Distribution substations installed (0's) [VOLUMES AND EXPENDITURE] RESIDENTIAL - Distribution substation installed (total spend $0's) [VOLUMES AND EXPENDITURE] COMMERCIAL/INDUSTRIAL - Distribution substation installed (MVA added) [VOLUMES AND EXPENDITURE] COMMERCIAL/INDUSTRIAL - Distribution substations installed (0's) [VOLUMES AND EXPENDITURE] COMMERCIAL/INDUSTRIAL - Distribution substation installed total spend ($0's) [VOLUMES AND EXPENDITURE] SUBDIVISION - Distribution substation installed (MVA	Actual	SAP, SAP HANA & Tableau	N/A	The distribution substation installations have been obtained from actual data in SAP. The information has been extracted into spreadsheets and has been mapped to their related projects. There are no installations of substations for residential or embedded generator connections, only for subdivision and commercial/industrial. SAP Settlement rules were used to extract projects with transformers installed. The expenditure on these projects (extracted from SAP) has been posted. The allocation of these connections to residential, commercial/industry and subdivision has been according to expenditure recorded against MAT codes. The allocation of the MAT codes to the RIN	N/A	N/A

			added) [VOLUMES AND EXPENDITURE] SUBDIVISION - Distribution substations installed (0's) [VOLUMES AND EXPENDITURE] SUBDIVISION - Distribution substation installed (total spend $0's) [VOLUMES AND EXPENDITURE] EMBEDDED GENERATION - Distribution substation installed (MVA added) [VOLUMES AND EXPENDITURE] EMBEDDED GENERATION - Distribution substations installed (0's) [VOLUMES AND EXPENDITURE] EMBEDDED GENERATION - Distribution substation installed (total spend $0's) [VOLUMES AND EXPENDITURE]				categories has been made in accordance to the professional judgement of UED Asset Management according to prior period expenditure and projects undertaken during the calendar year.		
CAUE2.5BOP3	2.5	Connections	TABLE 2.5.1 DESCRIPTOR METRICS RESIDENTIAL - Augmentation HV (net circuit KM added) [VOLUMES AND EXPENDITURE] RESIDENTIAL - Augmentation HV (total spend $0's) [VOLUMES AND EXPENDITURE] RESIDENTIAL - Augmentation LV (total spend $0's) [VOLUMES AND EXPENDITURE] COMMERCIAL/INDUSTRIAL - Augmentation HV (net circuit KM added) [VOLUMES AND EXPENDITURE] COMMERCIAL/INDUSTRIAL - Augmentation HV (total spend $0's) [VOLUMES AND EXPENDITURE] COMMERCIAL/INDUSTRIAL - Augmentation LV (net circuit KM added) [VOLUMES AND EXPENDITURE] COMMERCIAL/INDUSTRIAL - Augmentation LV (total spend $0's) [VOLUMES AND EXPENDITURE] SUBDIVISION - Augmentation HV (net circuit KM added) [VOLUMES AND EXPENDITURE] SUBDIVISION - Augmentation HV (total spend $0's) [VOLUMES AND EXPENDITURE] SUBDIVISION - Augmentation LV (total spend $0's) [VOLUMES AND EXPENDITURE] EMBEDDED GENERATION - Augmentation HV (net circuit KM added) [VOLUMES AND EXPENDITURE] EMBEDDED GENERATION - Augmentation HV (total spend $0's) [VOLUMES AND EXPENDITURE] EMBEDDED GENERATION - Augmentation LV (net circuit KM added) [VOLUMES AND EXPENDITURE] EMBEDDED GENERATION - Augmentation LV (total spend $0's) [VOLUMES AND EXPENDITURE]	Actual	SAP	N/A	SAP Settlement rules were used to extract data for (HV & LV) conductor lengths for residential, commercial/industrial and Subdivision categories (CS and CH). Additional conductor length for Subdivision (CD) LV connections was calculated using an average of 20 meter for overhead connections and 26 meter for underground connection provided by Service Provider records. Volume of connections were derived from the SAP. The conductor length for Residential LV connections was calculated using an average of 20 meter for overhead connections and 26 meter for underground connection as per above calculation. Volume of connections were derived from the SAP. The allocation of these connections to residential, commercial/industry, subdivision and embedded generation has been according to expenditure and volumes recorded against MAT codes. The allocation of the MAT codes to the RIN categories has been made in accordance to the professional judgement of UED Asset Management according to prior period expenditure and volumes and projects undertaken during the calendar year.	N/A	N/A
CAUE2.5BOP4	2.5	Connections	TABLE 2.5.1 DESCRIPTOR METRICS RESIDENTIAL - Mean days to connect residential customer with LV single phase connection (0's) [VOLUMES AND EXPENDITURE]	Actual	SAP	N/A	SAP/HANA data model was built in accordance to related GSL late connections procedure. These numbers are extracted into the RIN categories from Tableau, with the SAP/HANA data model parameters build in accordance with the requirements of the regulatory RIN category.	N/A	N/A
CAUE2.5BOP5	2.5	Connections	TABLE 2.5.1 DESCRIPTOR METRICS RESIDENTIAL - Volume of GSL breaches for residential customers (0's) [VOLUMES AND EXPENDITURE] RESIDENTIAL - Volume of customer complaints relating to connection services (0's) [VOLUMES AND EXPENDITURE] RESIDENTIAL - GSL payments ($0's) [VOLUMES AND EXPENDITURE]	Actual	SAP HANA & Tableau	N/A	SAP/HANA data model was built in accordance to related GSL late connections procedure. These numbers are extracted into the RIN categories from Tableau, with the SAP/HANA data model parameters created in accordance with the requirements of the regulatory RIN category.	N/A	N/A
CAUE2.5BOP6	2.5	Connections	TABLE 2.5.1 DESCRIPTOR METRICS SUBDIVISION - Cost per lot ($0'S) [VOLUMES AND EXPENDITURE]	Actual	SAP HANA & Tableau	N/A	SAP/HANA data model was built to determine 'cost per lot' based on SAP and GIS data. These numbers are extracted into the RIN categories from Tableau, with the SAP/HANA data model parameters created in accordance with the requirements of the regulatory RIN category.	N/A	N/A
CAUE2.5BOP7	2.5	Connections	TABLE 2.5.2 COST METRICS BY CONNECTION CLASSIFICATION RESIDENTIAL - Simple connection LV [EXPENDITURE] RESIDENTIAL - Simple connection LV [VOLUMES] RESIDENTIAL - Complex connection LV [EXPENDITURE] RESIDENTIAL - Complex connection LV [VOLUMES] RESIDENTIAL - Complex connection HV [EXPENDITURE]	Actual	SAP	N/A	Data has been extracted from SAP for financial data, New Connections data, and settlement data. The data is exported to spreadsheets for filtering. Project codes within SAP have been used to allocate assets and costs for each connection category. The allocation of these connections to residential, commercial/industry, subdivision and embedded	ACS expenditure (if any) is deducted from the relevant classifications.	N/A

			RESIDENTIAL - Complex connection HV [VOLUMES] COMMERCIAL/INDUSTRIAL - Simple connection LV [EXPENDITURE] COMMERCIAL/INDUSTRIAL - Simple connection LV [VOLUMES] COMMERCIAL/INDUSTRIAL - Complex connection HV (customer connected at LV, minor HV works) [EXPENDITURE] COMMERCIAL/INDUSTRIAL - Complex connection HV (customer connected at LV, minor HV works) [VOLUMES] COMMERCIAL/INDUSTRIAL - Complex connection HV (customer connected at LV, upstream asset works) [EXPENDITURE] COMMERCIAL/INDUSTRIAL - Complex connection HV (customer connected at LV, upstream asset works) [VOLUMES] COMMERCIAL/INDUSTRIAL - Complex connection HV (customer connected at HV) [EXPENDITURE] COMMERCIAL/INDUSTRIAL - Complex connection HV (customer connected at HV) [VOLUMES] COMMERCIAL/INDUSTRIAL - Complex connection sub-transmission [EXPENDITURE] COMMERCIAL/INDUSTRIAL - Complex connection sub-transmission [VOLUMES] SUBDIVISION - Complex connection LV [EXPENDITURE] SUBDIVISION - Complex connection LV [VOLUMES] SUBDIVISION - Complex connection HV (no upstream asset works) [EXPENDITURE] SUBDIVISION - Complex connection HV (no upstream asset works) [VOLUMES] SUBDIVISION - Complex connection HV (with upstream asset works) [EXPENDITURE] SUBDIVISION - Complex connection HV (with upstream asset works) [VOLUMES]				generation has been according to expenditure and volumes recorded against MAT codes. The allocation of the MAT codes to the RIN categories has been made in according to the professional judgement of UED Asset Management according to prior period expenditure and volumes and projects undertaken during the calendar year.		
CAUE2.5OP8	2.5	Connections	TABLE 2.5.2 COST METRICS BY CONNECTION CLASSIFICATION EMBEDDED GENERATION - Simple connection LV [EXPENDITURE] EMBEDDED GENERATION - Simple connection LV [VOLUMES] EMBEDDED GENERATION - Complex connection HV (small capacity) [EXPENDITURE] EMBEDDED GENERATION - Complex connection HV (small capacity) [VOLUMES] EMBEDDED GENERATION - Complex connection HV (large capacity) [EXPENDITURE] EMBEDDED GENERATION - Complex connection HV (large capacity) [VOLUMES]	Actual	SAP HANA & Tableau	N/A	SAP/HANA model was built to extract data in relation to embedded generation, refer to RIN Connections Procedure. These numbers are extracted into the RIN categories from Tableau, with the SAP/HANA data model parameters created in accordance with the requirements of the regulatory RIN category.	N/A	N/A
CAUE2.5BOP9	2.5	Connections	TABLE 2.5.1 DESCRIPTOR METRICS RESIDENTIAL - Augmentation LV (net circuit KM added) [VOLUMES AND EXPENDITURE] SUBDIVISION - Augmentation LV (net circuit KM added) [VOLUMES AND EXPENDITURE]	Estimated	SAP	Uses average meters per connection in order to determine total circuit length added.	SAP Settlement rules were used to extract data for (HV & LV) conductor lengths for residential, commercial/industrial and Subdivision categories (CS and CH). Additional conductor length for Subdivision (CD) LV connections was calculated using an average of 20 meter for overhead connections and 26 meter for underground connection provided by Service Provider records. Volume of connections were derived from the SAP. The conductor length for Residential LV connections was calculated using an average of 20 meter for overhead connections and 26 meter for underground connection as per above calculation. Volume of connections were derived from the SAP. The allocation of these connections to residential, commercial/industry, subdivision and embedded generation has been according to expenditure and volumes recorded against MAT codes. The allocation of the MAT codes to the RIN categories has been	N/A	N/A

							made in accordance to the professional judgement of UED Asset Management according to prior period expenditure and volumes and projects undertaken during the calendar year.		
CAUE2.6BOP1	2.6	Non-Network	CAPEX IT & COMMUNICATIONS - Client device expenditure - Capex [Expenditure] IT & COMMUNICATIONS - Recurrent expenditure - Capex [Expenditure] IT & COMMUNICATIONS - Non-recurrent expenditure - Capex [Expenditure] OPEX IT & COMMUNICATIONS - Client device expenditure - Opex [Expenditure] IT & COMMUNICATIONS - Recurrent expenditure - Opex [Expenditure] IT & COMMUNICATIONS - Non-recurrent expenditure - Opex [Expenditure]	Actual	SAP	N/A	Data is extracted from SAP based on the AER definition. According to the AER, 'recurrent expenditure' is expenditure that returns time after time with respect to the particular category of expenditure.	N/A	N/A
CAUE2.6BOP2	2.6	Non-Network	CAPEX MOTOR VEHICLES - Car - Capex [Expenditure] MOTOR VEHICLES - Light commercial vehicle - Capex [Expenditure] MOTOR VEHICLES - Elevated work platform (LCV) - Capex [Expenditure] MOTOR VEHICLES - Elevated work platform (HCV) - Capex [Expenditure] MOTOR VEHICLES - Heavy commercial vehicle - Capex [Expenditure] OPEX MOTOR VEHICLES - Car - Opex [Expenditure] MOTOR VEHICLES - Light commercial vehicle - Opex [Expenditure] MOTOR VEHICLES - Elevated work platform (LCV) - Opex [Expenditure] MOTOR VEHICLES - Elevated work platform (HCV) - Opex [Expenditure] MOTOR VEHICLES - Heavy commercial vehicle - Opex [Expenditure]	Actual	SAP Capital Additions SAP Opex GL accounts for Motor Vehicle All Capex is from SAP purchase orders for vehicles. Opex is from fleet card report for internal vehicles and data from 2 x service providers (Zinfra & Downer).	N/A	Extracted a list of statutory capital additions from SAP categorised into the Annual RIN schedule '8.2 Capex' against row 'Non-network - other'. Identified the motor vehicle related capex within this annual RIN category from the SAP description of the capital project manually. The motor vehicles operating expenditure (OPEX) for vehicles operated by UE was actual data and was sourced from the UE GL.	N/A	N/A
CAUE2.6BOP3	2.6	Non-Network	CAPEX BUILDINGS AND PROPERTY - Total buildings and property expenditure - Capex [Expenditure] OPEX BUILDINGS AND PROPERTY - Total buildings and property expenditure - Opex [Expenditure]	Actual	SAP Capital Additions SAP Opex GL accounts for Buildings & Property	NA	Extracted a list of capital additions from SAP categorised into the Annual RIN schedule '8.2 Capex' against row 'Non-network - other'. Identified the building & property related capex within this annual RIN category from the SAP description of the capital project manually. The building and property Opex figure was extracted from a SAP cost centre report of GL accounts relevant to buildings and property.	N/A	N/A
CAUE2.6BOP4	2.6	Non-Network	Table 2.6.2 - ANNUAL DESCRIPTOR METRICS - IT & COMMUNICATIONS EXPENDITURE IT & COMMUNICATIONS - Employee numbers [Volumes (0's)]	Actual	HR Employee file	N/A	Based on HR employee listing as at 31 December 2017	N/A	N/A
CAUE2.6BOP5	2.6	Non-Network	Table 2.6.2 - ANNUAL DESCRIPTOR METRICS - IT & COMMUNICATIONS EXPENDITURE IT & COMMUNICATIONS - User numbers [Volumes (0's)]	Actual	IAM (Identity Access Management) System	N/A	Contains active users only and is for users both employed by UE and for external parties accessing UE systems.	N/A	N/A
CAUE2.6BOP6	2.6	Non-Network	Table 2.6.2 - ANNUAL DESCRIPTOR METRICS - IT & COMMUNICATIONS EXPENDITURE IT & COMMUNICATIONS - Number of devices [Volumes (0's)]	Actual	IT SCCM system	N/A	No. of devices was based on a report generated from SCCM. Microsoft System Centre Configuration Manager (SCCM) is a product that enables administrators to manage the deployment and security of devices and applications across an enterprise.	N/A	N/A
CAUE2.6BOP7	2.6	Non-Network	Table 2.6.3 - ANNUAL DESCRIPTOR METRICS - MOTOR VEHICLES	Actual	Motor Vehicle data was obtained from internal records.	N/A	Fleet numbers were determined by counting vehicles listed in OPEX reports, km travelled were determined using odometer readings, purchases were determined	N/A	N/A

							using CAPEX reports.		
CAUE2.7BOP1	2.7	Vegetation Management	TABLE 2.7.1 - DESCRIPTOR METRICS BY ZONE ZONE 1 - Route line length within zone (KM) - Urban and CBD [DESCRIPTOR] ZONE 1 - Route line length within zone (KM) - Rural [DESCRIPTOR]	Actual	Produced by UE's Asset Management group via GIS Data taken directly from GIS.	N/A	The Route Line Length variable is calculated as the sum of all SubT, HV, LV, Service (mains only) and Public Lighting span lengths from the respective GIS database reports. The sum of span lengths is divided by 1000 to convert from metres to kilometres and filtered for urban/rural.	N/A	N/A
CAUE2.7BOP2	2.7	Vegetation Management	TABLE 2.7.1 - DESCRIPTOR METRICS BY ZONE ZONE 1 - Number of maintenance spans (0's) - Urban and CBD [DESCRIPTOR] ZONE 1 - Number of maintenance spans (0's) - Rural [DESCRIPTOR]	Actual	UE VMS report contained in spreadsheet Consolidated working file RIN trim 2018.	N/A	The above report is all trimming tasks which has multiple tasks in a single span. This is consolidated to unique span values. These spans are matched via feeder to determine urban and rural for each span. The list is then filtered and totalled to obtain the Urban & CBD and Rural values.	N/A	N/A
CAUE2.7BOP3	2.7	Vegetation Management	TABLE 2.7.1 - DESCRIPTOR METRICS BY ZONE ZONE 1 - Total length of maintenance spans (KM) - Urban and CBD [DESCRIPTOR] ZONE 1 - Total length of maintenance spans (KM) - Rural [DESCRIPTOR]	Actual	Produced by UE's Asset Management group via GIS Data taken directly from GIS. Spans cut (maintenance spans) is sourced from UE VMS.	N/A	The actual length of all spans is extracted from GIS. The length of maintenance spans is calculated utilising this base GIS information cross referencing the maintenance spans that have been completed which are extracted from VMS.	N/A	N/A
CAUE2.7BOP4	2.7	Vegetation Management	TABLE 2.7.1 - DESCRIPTOR METRICS BY ZONE ZONE 1 - Length of vegetation corridors (KM) - Urban and CBD [DESCRIPTOR] ZONE 1 - Length of vegetation corridors (KM) - Rural [DESCRIPTOR]	Estimated	GIS	The definition of Vegetation corridor is not an attribute within the GIS so it is not able to be reported. The actual line length in the corridor is an estimate however this will be surveyed for next year's RIN data.	The length of line for the 2 66Kv feeders DMA RBD Nos 1&2 where they pass through Arthurs seat.	That vegetation corridor is defined as those parts of the network where a tree exclusion corridor exists for the purposes of maintain line clearance rather than a tree trimming program.	N/A
CAUE2.7BOP5	2.7	Vegetation Management	TABLE 2.7.1 - DESCRIPTOR METRICS BY ZONE ZONE 1 - Average number of trees per maintenance span (0's) - Urban and CBD [DESCRIPTOR] ZONE 1 - Average number of trees per maintenance span (0's) - Rural [DESCRIPTOR]	Actual	Calculation using reports from Vegetation Management System (VMS) on the number of spans cut and the number of jobs (trees) in each span for the same period.	N/A	Each tree to be trimmed has its own job number, by reporting all jobs by span, we are able to average the trees in each span cut by dividing the total job count by the unique span count.	There is an even distribution of trees along the entire network length. Only trees with a job number were cut.	N/A
CAUE2.7BOP6	2.7	Vegetation Management	TABLE 2.7.1 - DESCRIPTOR METRICS BY ZONE ZONE 1 - Average frequency of cutting cycle (years) - Urban and CBD [DESCRIPTOR]	Actual	Vegetation Management System (VMS) report of recorded trees and recorded cutting from VMS. File 'Tree Count UE VMS 2 cutting frequency calc.xlsx'.	N/A	Trees have a last cut date recorded and are classified by feeder which is further classified to Urban and Rural. By dividing the number of Urban trees cut in the calendar year by the total number of Urban trees will give the average cutting cycle.	There is an assumption that all UE trees are listed in VMS.	N/A
CAUE2.7BOP7	2.7	Vegetation Management	TABLE 2.7.1 - DESCRIPTOR METRICS BY ZONE ZONE 1 - Average frequency of cutting cycle (years) - Rural [DESCRIPTOR]	Actual	Vegetation Management System (VMS) report of recorded trees and recorded cutting from VMS. File 'Tree Count UE VMS 2 cutting frequency calc.xlsx'.	N/A	Trees have a last cut date recorded and are classified by feeder which is further classified to Urban and Rural. By dividing the number of Rural trees cut in the calendar year by the total number of rural trees will give the average cutting cycle.	There is an assumption that all UE trees are listed in VMS.	NA
CAUE2.7BOP8	2.7	Vegetation Management	TABLE 2.7.2 - EXPENDITURE METRICS BY ZONE ZONE 1 - Tree trimming (excluding hazard trees) [Expenditure] ZONE 1 - Hazard tree cutting [Expenditure]	Estimated	UE finance total 2017 Invoice records and span rate calculations	N/A	Contractors Select Solutions (SS) and AAM are only engaged on inspection activities therefore their invoice values have been used to calculate the Inspection costs. Hazard tree removal costs are obtained via quote and a spreadsheet is maintained with these details. We know the direct employee labour costs as $518K therefore the remaining value is attributable to the cutting costs.	Assumes that all costs are for cutting as clearing costs are not provided.	N/A
CAUE2.7BOP9	2.7	Vegetation Management	TABLE 2.7.2 - EXPENDITURE METRICS BY ZONE ZONE 1 - Contractor liaison expenditure [Expenditure]	Estimated	SAP report for UE finance	N/A	Direct employee labour costs associated with the vegetation activities are listed in the data as labour and these have been assigned to the contract liaison	N/A	N/A

							costs.		
CAUE2.7BOP10	2.7	Vegetation Management	TABLE 2.7.2 - EXPENDITURE METRICS BY ZONE ZONE 1 - Inspection [Expenditure]	Estimated	Vegetation Management System and invoice tracking.	NA	Invoices from AAM and span rate from Select Solutions X number of spans completed.	N/A	N/A
CAUE2.7BOP11	2.7	Vegetation Management	TABLE 2.7.2 - EXPENDITURE METRICS BY ZONE ZONE 1 - Audit [Expenditure]	Estimated	N/A	N/A	Included as part of the contract so unable to itemise this value and entry will be '0'.	N/A	N/A
CAUE2.7BOP12	2.7	Vegetation Management	TABLE 2.7.3 - DESCRIPTOR METRICS ACROSS ALL ZONES - UNPLANNED VEGETATION EVENTS Number of fire starts caused by vegetation grow-ins (NSP responsibility) (0's) [Volume] Number of fire starts caused by vegetation blow-ins and fall-ins (NSP responsibility) (0's) [Volume] Number of fire starts caused by vegetation grow-ins (other party responsibility) (0's) [Volume] Number of fire starts caused by vegetation blow-ins and fall-ins (other party responsibility) (0's) [Volume]	Actual	Data is sourced from the F factor submission. This data has been extracted from DMS and has previously been audited as part of those submissions.	N/A	This data is extracted from DMS monthly and reviewed for accuracy. Each fire start is reported through F-Factor and investigated to ensure it legitimacy.	N/A	Figures received from UE Fire Prevention Manager.
CAUE2.8BOP1	2.8	Maintenance	Table 2.8.1 - DESCRIPTOR METRICS FOR ROUTINE AND NON-ROUTINE MAINTENANCE	Actual	SAP, GIS, Service Providers Invoices and Life Cycle Strategy Documents	N/A	1. Assets at year-end Quantity of assets at year-end are extracted from the asset age profiles, as prepared for the Category Analysis RIN Tab 5.2 and then grouped accordingly for the Maintenance Table 2.8.1. 2. Assets Inspected and Maintained (a) Where there is a one-one mapping between maintenance activity and RIN category the volume of assets can be directly allocated from SAP confirmations or service provider invoices. (b) Where there is a many-one mapping between maintenance activity and RIN category the volume of assets are allocated based on a percentage split of the expenditure. 3. Average Age of Asset Group The average age is determined using the Asset age profiles as prepared for the Category Analysis RIN Tab 5.2. 4. Inspection and Maintenance Cycle (Years) The inspection cycle and maintenance cycle for each asset group was sourced from the Life cycle Strategy (LCS) documents or the Reliability Centred Maintenance (RCM) studies.	N/A	Refer to Document UE PR 2326 Category Analysis RIN Asset Maintenance Data.
CAUE2.8BOP2	2.8	Maintenance	TABLE 2.8.2 - COST METRICS FOR ROUTINE AND NON-ROUTINE MAINTENANCE	Actual	UE SAP	N/A	SAP is the repository of all UEs expenditure. The requested information is in regards to maintenance expenditure grouped into asset categories as per the RIN template. To access this information UE have purpose built reports. The reports are built using Tableau, stored on a server and updated daily. The report on maintenance is built on the concept of Maintenance Activity Type Codes (MATs). These MATs are used to differentiate between various types of works that may be undertaken on the network. Furthermore two SETs (Groupings) have been built into SAP that define whether the maintenance activity is routine, non-routine and to which asset category is belongs. All the maintenance expenditure is then surfaced in SAP HANA and reported on through Tableau, where all the work order costs are aggregated and categorised on the basis of the MAT code and which SET they belong to in SAP.	N/A	Refer to Document UE PR 2932 Extraction Methodology of RIN Category Analysis Maintenance.

							Where a MAT code can belong to more than one RIN asset category, individual work orders have been re-assigned to the relevant RIN category in SAP and reported through Tableau.		
CAUE2.9BOP1	2.9	Emergency Response	TABLE 2.9.1 - EMERGENCY RESPONSE EXPENDITURE (OPEX) (A) TOTAL EMERGENCY RESPONSE EXPENDITURE ($0's) [($0's)]	Actual	SAP	N/A	Data is obtained from SAP.	Actual cost data is sourced directly from SAP. Any costs which has gone to FE activity has been classified under this category for OMSA wbs.	N/A
CAUE2.9BOP2	2.9	Emergency Response	TABLE 2.9.1 - EMERGENCY RESPONSE EXPENDITURE (OPEX) (B) MAJOR EVENTS O&M EXPENDITURE ($0's) [Expenditure] (B) MAJOR EVENTS O&M EXPENDITURE ($0's) [($0's)]	Actual	Service Providers	N/A	Data is obtained from Service Providers.	Based on faults that occurred for a major event. Service Provider to provide the actual cost spend to restore supply for each fault.	N/A
CAUE2.9BOP3	2.9	Emergency Response	TABLE 2.9.1 - EMERGENCY RESPONSE EXPENDITURE (OPEX) (C) MAJOR EVENT DAYS O&M EXPENDITURE ($0's) [Expenditure] (C) MAJOR EVENT DAYS O&M EXPENDITURE ($0's) [($0's)]	Actual	Service Providers	N/A	Data obtained from Service Providers.	Based on major event exclusion days. Service Providers to provide the actual cost spend on these days.	N/A
CAUE2.10BOP1	2.10(A)	Overheads A	Table 2.10.1 - NETWORK OVERHEADS EXPENDITURE Table 2.10.2 - CORPORATE OVERHEADS EXPENDITURE	Actual	The data for the expenditure categories and cost allocations has been sourced from the SAP accounting system. SAP is the primary financial reporting system and is the source of providing the audited statutory accounts.	N/A	The SAP financial system is used to extract the information required by category and regulatory segment. The business uses cost elements within SAP in order to allocate costs between the regulatory segments in accordance with the cost allocation methodology.	N/A	N/A
CAUE2.11BOP1	2.11	Labour	TABLE 2.11.1 - COST METRICS PER ANNUM TABLE 2.11.2 - EXTRA DESCRIPTOR METRICS FOR CURRENT YEAR	Actual	ASLs - Data for the ASLs has been sourced from the payroll system. Labour Expenditure - Data for labour expenditure has been sourced from the SAP accounting system. Ordinary Hours – Payroll.	N/A	ASLs - ASLs have been sourced directly from the payroll system as at March 2017 and December 2017. An average of the two months has been used to reflect average FTE for the full year in order to capture the impact of acquisition in May. Each position from the payroll system has been mapped to a labour type and category as per the template. SCS labour expenditure as a % of total labour expenditure for the Distribution Business has been used to allocate the Distribution Business FTEs to SCS, arriving to 2017 ASLs. Labour Expenditure - SAP cost elements have been used to identify total labour expenditure for SCS by Network and Corporate Overhead categories. Average remunerations were derived per labour type from the payroll system in order to create a weighting to allocate total SCS labour expenditure between the various labour types. Ordinary Hours - as per Payroll. Hourly Rate - Formula: Labour Expenditure / ASL / Ordinary Hours.	N/A	N/A
CAUE2.12BOP1	2.12	Input Tables	Table 2.12 INPUT TABLES ZONE 1 [Direct Material Expenditure] ZONE 1 [Direct Labour Expenditure] ZONE 1 [Contract Expenditure] ZONE 1 [Other Expenditure] ROUTINE MAINTENANCE [Direct Material Expenditure]	Estimated	The data for the labour, material, contract, other expenditure has been sourced from the SAP accounting system.	Labour / Materials / Contracts / Other Split - A mapping is applied to assign GL Accounts as either labour, material, contract or other costs.	The SAP financial system is used to extract the information required to state the DNSP costs by category and regulatory segment. The business uses cost elements within SAP in order to allocate costs between the regulatory segments in accordance with the cost allocation methodology. In order to establish	N/A	Labour and Contract costs have been reported consistent with the definitions contained in the RIN notice. As a definition has not been listed for materials an interpretation has been made

			ROUTINE MAINTENANCE [Direct Labour Expenditure] ROUTINE MAINTENANCE [Contract Expenditure] ROUTINE MAINTENANCE [Other Expenditure] Pole inspection and treatment [Direct Material Expenditure] Pole inspection and treatment [Direct Labour Expenditure] Pole inspection and treatment [Contract Expenditure] Pole inspection and treatment [Other Expenditure] Overhead asset inspection [Direct Material Expenditure] Overhead asset inspection [Direct Labour Expenditure] Overhead asset inspection [Contract Expenditure] Overhead asset inspection [Other Expenditure] Network underground cable maintenance [Direct Material Expenditure] Network underground cable maintenance [Direct Labour Expenditure] Network underground cable maintenance [Contract Expenditure] Network underground cable maintenance [Other Expenditure] Distribution substation equipment & property maintenance [Direct Material Expenditure] Distribution substation equipment & property maintenance [Direct Labour Expenditure] Distribution substation equipment & property maintenance [Contract Expenditure] Distribution substation equipment & property maintenance [Other Expenditure] Zone substation equipment maintenance [Direct Material Expenditure] Zone substation equipment maintenance [Direct Labour Expenditure] Zone substation equipment maintenance [Contract Expenditure] Zone substation equipment maintenance [Other Expenditure] Zone substation property maintenance [Direct Material Expenditure] Zone substation property maintenance [Direct Labour Expenditure] Zone substation property maintenance [Contract Expenditure] Zone substation property maintenance [Other Expenditure] Public lighting maintenance [Direct Material Expenditure] Public lighting maintenance [Direct Labour Expenditure] Public lighting maintenance [Contract Expenditure] Public lighting maintenance [Other Expenditure] Scada & network control maintenance [Direct Material Expenditure] Scada & network control maintenance [Direct Labour Expenditure] Scada & network control maintenance [Contract Expenditure] Scada & network control maintenance [Other Expenditure] Protection systems maintenance [Direct Material Expenditure] Protection systems maintenance [Direct Labour Expenditure] Protection systems maintenance [Contract Expenditure] Protection systems maintenance [Other Expenditure] Subtransmission asset maintenance - for dnsps with dual function assets [Direct Material Expenditure] Subtransmission asset maintenance - for dnsps with dual function assets [Direct Labour Expenditure]			This mapping is a management estimate assigning GL accounts against these categories. Where a GL account materially fits one of these categories, that account has been mapped in its entirety to either labour, materials or contracts.	the proportion of costs that relate to labour, materials, contracts and others as per the definition of labour in the RIN, a mapping is applied to assign GL accounts as either labour, materials contracts or other costs. This mapping is a management judgement to best align GL account definitions with RIN definitions of labour, material, contracts and others. Most GL accounts have been mapped in their entirety to either labour, materials or contracts. For the remaining GL accounts, management judgement has been used to estimate an allocation between labour, materials, contracts and other. Note: The basis of preparation for the assignment of costs between work type categories has been specified in the BOPs relating to these categories within the RIN template. This basis of preparation addresses the methodology for the split of these categories between labour, materials, contracts and other.		internally to allocate costs appropriately.

			Subtransmission asset maintenance - for dnsps with dual function assets [Contract Expenditure] Subtransmission asset maintenance - for dnsps with dual function assets [Other Expenditure] Other [Direct Material Expenditure] Other [Direct Labour Expenditure] Other [Contract Expenditure] Other [Other Expenditure] NON-ROUTINE MAINTENANCE [Direct Material Expenditure] NON-ROUTINE MAINTENANCE [Direct Labour Expenditure] NON-ROUTINE MAINTENANCE [Contract Expenditure] NON-ROUTINE MAINTENANCE [Other Expenditure] Pole inspection and treatment [Direct Material Expenditure] Pole inspection and treatment [Direct Labour Expenditure] Pole inspection and treatment [Contract Expenditure] Pole inspection and treatment [Other Expenditure] Overhead asset inspection [Direct Material Expenditure] Overhead asset inspection [Direct Labour Expenditure] Overhead asset inspection [Contract Expenditure] Overhead asset inspection [Other Expenditure] Network underground cable maintenance [Direct Material Expenditure] Network underground cable maintenance [Direct Labour Expenditure] Network underground cable maintenance [Contract Expenditure] Network underground cable maintenance [Other Expenditure] Distribution substation equipment & property maintenance [Direct Material Expenditure] Distribution substation equipment & property maintenance [Direct Labour Expenditure] Distribution substation equipment & property maintenance [Contract Expenditure] Distribution substation equipment & property maintenance [Other Expenditure] Zone substation equipment maintenance [Direct Material Expenditure] Zone substation equipment maintenance [Direct Labour Expenditure] Zone substation equipment maintenance [Contract Expenditure] Zone substation equipment maintenance [Other Expenditure] Zone substation property maintenance [Direct Material Expenditure] Zone substation property maintenance [Direct Labour Expenditure] Zone substation property maintenance [Contract Expenditure] Zone substation property maintenance [Other Expenditure] Public lighting maintenance [Direct Material Expenditure] Public lighting maintenance [Direct Labour Expenditure] Public lighting maintenance [Contract Expenditure] Public lighting maintenance [Other Expenditure] SCADA & network control maintenance [Direct Material Expenditure] SCADA & network control maintenance [Direct Labour Expenditure] SCADA & network control maintenance [Contract Expenditure] SCADA & network control maintenance [Other					

			Expenditure] Protection systems maintenance [Direct Material Expenditure] Protection systems maintenance [Direct Labour Expenditure] Protection systems maintenance [Contract Expenditure] Protection systems maintenance [Other Expenditure] Subtransmission asset maintenance - for DNSP with dual function assets [Direct Material Expenditure] Subtransmission asset maintenance - for DNSP with dual function assets [Direct Labour Expenditure] Subtransmission asset maintenance - for DNSP with dual function assets [Contract Expenditure] Subtransmission asset maintenance - for DNSP with dual function assets [Other Expenditure] Other [Direct Material Expenditure] Other [Direct Labour Expenditure] Other [Contract Expenditure] Other [Other Expenditure] OVERHEADS [Direct Material Expenditure] OVERHEADS [Direct Labour Expenditure] OVERHEADS [Contract Expenditure] OVERHEADS [Other Expenditure] Corporate overheads [Direct Material Expenditure] Corporate overheads [Direct Labour Expenditure] Corporate overheads [Contract Expenditure] Corporate overheads [Other Expenditure] AUGMENTATION [Direct Material Expenditure] AUGMENTATION [Direct Labour Expenditure] AUGMENTATION [Contract Expenditure] AUGMENTATION [Other Expenditure] Subtransmission lines [Direct Material Expenditure] Subtransmission lines [Direct Labour Expenditure] Subtransmission lines [Contract Expenditure] Subtransmission lines [Other Expenditure] HV feeders [Direct Material Expenditure] HV feeders [Direct Labour Expenditure] HV feeders [Contract Expenditure] HV feeders [Other Expenditure] Distribution substations [Direct Material Expenditure] Distribution substations [Direct Labour Expenditure] Distribution substations [Contract Expenditure] Distribution substations [Other Expenditure] LV feeders [Direct Material Expenditure] LV feeders [Direct Labour Expenditure] LV feeders [Contract Expenditure] LV feeders [Other Expenditure] Other assets [Direct Material Expenditure] Other assets [Direct Labour Expenditure] Other assets [Contract Expenditure] Other assets [Other Expenditure] CONNECTIONS [Direct Material Expenditure] CONNECTIONS [Direct Labour Expenditure] CONNECTIONS [Contract Expenditure] CONNECTIONS [Other Expenditure] EMERGENCY RESPONSE [Direct Material Expenditure] EMERGENCY RESPONSE [Direct Labour Expenditure] EMERGENCY RESPONSE [Contract Expenditure] EMERGENCY RESPONSE [Other Expenditure] Major event days [Direct Material Expenditure] Major event days [Direct Labour Expenditure] Major event days [Contract Expenditure] Major event days [Other Expenditure] PUBLIC LIGHTING [Direct Material Expenditure] PUBLIC LIGHTING [Direct Labour Expenditure] PUBLIC LIGHTING [Contract Expenditure]						

			PUBLIC LIGHTING [Other Expenditure] METERING [Direct Material Expenditure] METERING [Direct Labour Expenditure] METERING [Contract Expenditure] METERING [Other Expenditure] FEE-BASED SERVICES [Direct Material Expenditure] FEE-BASED SERVICES [Direct Labour Expenditure] FEE-BASED SERVICES [Contract Expenditure] FEE-BASED SERVICES [Other Expenditure] QUOTED SERVICES [Direct Material Expenditure] QUOTED SERVICES [Direct Labour Expenditure] QUOTED SERVICES [Contract Expenditure] QUOTED SERVICES [Other Expenditure] REPLACEMENT [Direct Material Expenditure] REPLACEMENT [Direct Labour Expenditure] REPLACEMENT [Contract Expenditure] REPLACEMENT [Other Expenditure] Pole top structures [Direct Material Expenditure] Pole top structures [Direct Labour Expenditure] Pole top structures [Contract Expenditure] Pole top structures [Other Expenditure] Overhead conductors [Direct Material Expenditure] Overhead conductors [Direct Labour Expenditure] Overhead conductors [Contract Expenditure] Overhead conductors [Other Expenditure] Underground cables [Direct Material Expenditure] Underground cables [Direct Labour Expenditure] Underground cables [Contract Expenditure] Underground cables [Other Expenditure] Service lines [Direct Material Expenditure] Service lines [Direct Labour Expenditure] Service lines [Contract Expenditure] Service lines [Other Expenditure] Transformers [Direct Material Expenditure] Transformers [Direct Labour Expenditure] Transformers [Contract Expenditure] Transformers [Other Expenditure] Switchgear [Direct Material Expenditure] Switchgear [Direct Labour Expenditure] Switchgear [Contract Expenditure] Switchgear [Other Expenditure] Public lighting [Direct Material Expenditure] Public lighting [Direct Labour Expenditure] Public lighting [Contract Expenditure] Public lighting [Other Expenditure] SCADA network control and protection systems [Direct Material Expenditure] SCADA network control and protection systems [Direct Labour Expenditure] SCADA network control and protection systems [Contract Expenditure] SCADA network control and protection systems [Other Expenditure] Other [Direct Material Expenditure] Other [Direct Labour Expenditure] Other [Contract Expenditure] Other [Other Expenditure] NON-NETWORK EXPENDITURE [Direct Material Expenditure] NON-NETWORK EXPENDITURE [Direct Labour Expenditure] NON-NETWORK EXPENDITURE [Contract Expenditure] NON-NETWORK EXPENDITURE [Other Expenditure] Motor vehicles [Direct Material Expenditure] Motor vehicles [Direct Labour Expenditure] Motor vehicles [Contract Expenditure]					

			Motor vehicles [Other Expenditure] Buildings and property [Direct Material Expenditure] Buildings and property [Direct Labour Expenditure] Buildings and property [Contract Expenditure] Buildings and property [Other Expenditure] Other [Direct Material Expenditure] Other [Direct Labour Expenditure] Other [Contract Expenditure] Other [Other Expenditure]						
CAUE2.12BOP2	2.12	Input Tables	Table 2.12 INPUT TABLES ZONE 1 [Related Party Contract Expenditure] ZONE 1 [Related Party Contract Margin] ROUTINE MAINTENANCE [Related Party Contract Expenditure] ROUTINE MAINTENANCE [Related Party Contract Margin] Pole inspection and treatment [Related Party Contract Expenditure] Pole inspection and treatment [Related Party Contract Margin] Overhead asset inspection [Related Party Contract Expenditure] Overhead asset inspection [Related Party Contract Margin] Network underground cable maintenance [Related Party Contract Expenditure] Network underground cable maintenance [Related Party Contract Margin] Distribution substation equipment & property maintenance [Related Party Contract Expenditure] Distribution substation equipment & property maintenance [Related Party Contract Margin] Zone substation equipment maintenance [Related Party Contract Expenditure] Zone substation equipment maintenance [Related Party Contract Margin] Zone substation property maintenance [Related Party Contract Expenditure] Zone substation property maintenance [Related Party Contract Margin] Public lighting maintenance [Related Party Contract Expenditure] Public lighting maintenance [Related Party Contract Margin] Scada & network control maintenance [Related Party Contract Expenditure] Scada & network control maintenance [Related Party Contract Margin] Protection systems maintenance [Related Party Contract Expenditure] Protection systems maintenance [Related Party Contract Margin] Subtransmission asset maintenance - for dnsps with dual function assets [Related Party Contract Expenditure] Subtransmission asset maintenance - for dnsps with dual function assets [Related Party Contract Margin] Other [Related Party Contract Expenditure] Other [Related Party Contract Margin] NON-ROUTINE MAINTENANCE [Related Party Contract Expenditure] NON-ROUTINE MAINTENANCE [Related Party Contract Margin] Pole inspection and treatment [Related Party Contract Expenditure] Pole inspection and treatment [Related Party Contract Margin] Overhead asset inspection [Related Party Contract	Estimated	The data for the related party costs and margins has been sourced from related party SAP accounting systems.	Related party contract costs by work type category. In arriving at the chosen methodology, UE explored a pro rata allocation using margins, an approach using a mix of pro rata and direct cost allocation and the chosen methodology utilising a mix of margin, direct cost and management estimates.	The methodology used to state the related party information is as follows: Related Party Margins - Detailed related party data was extracted from the related party SAP accounting systems. This data does not align to the categories in the input tables and is allocated in accordance with the allocation of all other costs and described in their basis of preparations. Related Party Contract Cost - Utilising the total costs of each related party contract as reported in the Annual RINs, which has been extracted from cost elements within SAP, total related party contract costs have been apportioned utilising a combination of margin and direct cost to represent the related party cost applicable to the categories in the RIN. Whilst estimating the related party contract costs by category the total related party contract reported in the RIN reflect that of previously reported Annual RIN's. Utilising the assumption that particular maintenance functions are known to be primarily either performed by a related party or externally provided, further alignment was made between opex direct and opex overheads to ensure related party cost best reflect management's best estimate.	N/A	In accordance with the requirements of the RIN notice: Labour and Contract costs have been reported consistent with the definitions contained in the RIN notice. As a definition has not been listed for materials an interpretation has been made internally to allocate costs appropriately.

			Expenditure] Overhead asset inspection [Related Party Contract Margin] Network underground cable maintenance [Related Party Contract Expenditure] Network underground cable maintenance [Related Party Contract Margin] Distribution substation equipment & property maintenance [Related Party Contract Expenditure] Distribution substation equipment & property maintenance [Related Party Contract Margin] Zone substation equipment maintenance [Related Party Contract Expenditure] Zone substation equipment maintenance [Related Party Contract Margin] Zone substation property maintenance [Related Party Contract Expenditure] Zone substation property maintenance [Related Party Contract Margin] Public lighting maintenance [Related Party Contract Expenditure] Public lighting maintenance [Related Party Contract Margin] SCADA & network control maintenance [Related Party Contract Expenditure] SCADA & network control maintenance [Related Party Contract Margin] Protection systems maintenance [Related Party Contract Expenditure] Protection systems maintenance [Related Party Contract Margin] Subtransmission asset maintenance - for DNSP with dual function assets [Related Party Contract Expenditure] Subtransmission asset maintenance - for DNSP with dual function assets [Related Party Contract Margin] Other [Related Party Contract Expenditure] Other [Related Party Contract Margin] OVERHEADS [Related Party Contract Expenditure] OVERHEADS [Related Party Contract Margin] Corporate overheads [Related Party Contract Expenditure] Corporate overheads [Related Party Contract Margin] AUGMENTATION [Related Party Contract Expenditure] AUGMENTATION [Related Party Contract Margin] Subtransmission lines [Related Party Contract Expenditure] Subtransmission lines [Related Party Contract Margin] HV feeders [Related Party Contract Expenditure] HV feeders [Related Party Contract Margin] Distribution substations [Related Party Contract Expenditure] Distribution substations [Related Party Contract Margin] LV feeders [Related Party Contract Expenditure] LV feeders [Related Party Contract Margin] Other assets [Related Party Contract Expenditure] Other assets [Related Party Contract Margin] CONNECTIONS [Related Party Contract Expenditure] CONNECTIONS [Related Party Contract Margin] EMERGENCY RESPONSE [Related Party Contract Expenditure] EMERGENCY RESPONSE [Related Party Contract Margin] Major event days [Related Party Contract Expenditure] Major event days [Related Party Contract Margin] PUBLIC LIGHTING [Related Party Contract Expenditure] PUBLIC LIGHTING [Related Party Contract Margin] METERING [Related Party Contract Expenditure] METERING [Related Party Contract Margin]					

			FEE-BASED SERVICES [Related Party Contract Expenditure] FEE-BASED SERVICES [Related Party Contract Margin] QUOTED SERVICES [Related Party Contract Expenditure] QUOTED SERVICES [Related Party Contract Margin] REPLACEMENT [Related Party Contract Expenditure] REPLACEMENT [Related Party Contract Margin] Pole top structures [Related Party Contract Expenditure] Pole top structures [Related Party Contract Margin] Overhead conductors [Related Party Contract Expenditure] Overhead conductors [Related Party Contract Margin] Underground cables [Related Party Contract Expenditure] Underground cables [Related Party Contract Margin] Service lines [Related Party Contract Expenditure] Service lines [Related Party Contract Margin] Transformers [Related Party Contract Expenditure] Transformers [Related Party Contract Margin] Switchgear [Related Party Contract Expenditure] Switchgear [Related Party Contract Margin] Public lighting [Related Party Contract Expenditure] Public lighting [Related Party Contract Margin] SCADA network control and protection systems [Related Party Contract Expenditure] SCADA network control and protection systems [Related Party Contract Margin] Other [Related Party Contract Expenditure] Other [Related Party Contract Margin] NON-NETWORK EXPENDITURE [Related Party Contract Expenditure] NON-NETWORK EXPENDITURE [Related Party Contract Margin] Motor vehicles [Related Party Contract Expenditure] Motor vehicles [Related Party Contract Margin] Buildings and property [Related Party Contract Expenditure] Buildings and property [Related Party Contract Margin] Other [Related Party Contract Expenditure] Other [Related Party Contract Margin]						
CAUE4.1BOP1	4.1	Public Lighting	TABLE 4.1.1 - DESCRIPTOR METRICS OVER YEAR	Actual	GIS	N/A	All Public Lighting asset data stored in GIS has been surfaced in SAP HANA then aggregated and reported through Tableau. The fields required in the Tableau report are lamp type, number of lamps and rating in Watts. The population is filtered to contain only billable public Lights.	N/A	Refer to Document UE PR 2351 Population of Public Lighting Data for Category Analysis RIN.
CAUE4.1BOP2	4.1	Public Lighting	TABLE 4.1.2 - DESCRIPTOR METRICS ANNUALLY	Actual	SAP and Service Providers Invoices	N/A	This table requires specific metrics on asset information with regards to public lighting volumes and expenditure across the categories of installation, replacement and maintenance. To compile this information UE uses the concept of work order Maintenance Activity Codes (MATs). The costs and volumes associated with these activity codes are aggregated to report the required metrics. For Major and Minor Public lighting schemes (CLJ and CLN) work volumes are determined by project scope documents, for projects completed in the current calendar year. Expenditure is compiled through running SAP report C74 on these projects.	Public Lighting poles are not considered under the Installation category as these are installed by entities outside of UE (City Councils, Vic Roads).	Refer to Document UE PR 2351 Population of Public Lighting Data for Category Analysis RIN.
CAUE4.1BOP3	4.1	Public Lighting	TABLE 4.1.3 - COST METRICS	Actual	SAP and Service Providers Invoices	N/A	This table requires specific metrics on public lighting Average Unit Rates across installation, replacement and maintenance categories. The costs and volumes aggregated for Table 4.1.2 can be converted to an Average Unit Rate as below:	N/A	Refer to Document UE PR 2351 Population of Public Lighting Data for Category Analysis RIN.

							Average Unit Cost = Expenditure/(Total quantity of assets)		
CAUE4.2BOP1	4.2	Metering	TABLE 4.2.1 - METERING DESCRIPTOR METRIC	Actual	SAP Annual RIN	N/A	The Annual RIN reports of 2017 and 2016 are used to calculate average volumes.	Two single phase meters and time switch at one installation counted as one meter consistent with Annual RIN reports. We have included >160 MWh customers where United Energy is Responsible Person. Approximately 600 customers of 650K total population (~ 0.1%) belongs to >160 MWh category. As we could not separate these customers for all metering services, we have included these customers in scope.	N/A
CAUE4.2BOP2	4.2	Metering	TABLE 4.2.2 - COST METRICS Meter purchase [Volumes] Meter Type 5 [Volumes] Meter Type 6 [Volumes]	Actual	Finance SAP & Corporate Finance P.O. reports	N/A	Report prepared and provided by Finance.	N/A	N/A
CAUE4.2BOP3	4.2	Metering	TABLE 4.2.2 - COST METRICS Meter testing [Volumes] Meter Type 5 [Volumes] Meter Type 6 [Volumes]	Actual	Service Delivery Specialist Meter Testing Contract - Monthly Report and Invoice	N/A	Sample testing of direct connected meters. 100% testing of CT connected meters. CT inspections & admittance test also carried out as part of CT meter testing. Sample testing of Current Transformers.	N/A	N/A
CAUE4.2BOP4	4.2	Metering	TABLE 4.2.2 - COST METRICS Meter investigation [Volumes] Meter Type 5 [Volumes] Meter Type 6 [Volumes]	Actual	Service Delivery Specialist Meter Testing Contract - Monthly Report and Invoice	N/A	Metering investigation service orders of below types are included. - Remote communication faults - CT meter faults - Domestic faults - C& I faults - Time Reset and downloads - Revenue protection: police initiated drug raids	Internal investigations done by contractor labour is not included.	N/A
CAUE4.2BOP5	4.2	Metering	TABLE 4.2.2 - COST METRICS Scheduled meter reading [Volumes] Meter Type 5 [Volumes] Meter Type 6 [Volumes] Special meter reading [Volumes] Meter Type 5 [Volumes] Meter Type 6 [Volumes]	Actual	Market Services Specialist Meter Reading Contract - Monthly Report and Invoice	N/A	For Type 5 and 6 metering actual direct contract costs for meter reading activities available in monthly invoices. Meter read costs for Type 4 metering is zero as they are remote read meters. This information is repeated for remote meter reading template.	N/A	N/A
CAUE4.2BOP6	4.2	Metering	TABLE 4.2.2 - COST METRICS New meter installation [Volumes] Meter Type 5 [Volumes] Meter Type 6 [Volumes]	Actual	SAP Reports	N/A	New meter installation volumes from SAP IQ09 report.	N/A	N/A
CAUE4.2BOP7	4.2	Metering	TABLE 4.2.2 - COST METRICS	Actual	SAP Reports	N/A	Reports from Formway and Truck meter replacement	N/A	N/A

			Meter replacement [Volumes] Meter Type 5 [Volumes] Meter Type 6 [Volumes]				volumes		
CAUE4.2BOP8	4.2	Metering	TABLE 4.2.2 - COST METRICS Meter maintenance [Volumes] Meter Type 5 [Volumes] Meter Type 6 [Volumes]	Actual	Market Services Specialist Meter Reading Contract - Monthly Report and Invoice	N/A	Metering assets were not part of preventive/predictive maintenance program. There is no expenditure on this category.	N/A	N/A
CAUE4.2BOP9	4.2	Metering	TABLE 4.2.2 - COST METRICS Remote meter reading [Volumes]	Actual	NOCUIQ Reports	N/A	Remote Meter reading Volumes obtained from UIQ reports from NOC.	Network Management System- UIQ reads meter data for every 4 hours. However we have counted this as 1 read per day.	N/A
CAUE4.2BOP10	4.2	Metering	TABLE 4.2.2 - COST METRICS Remote meter re-configuration [Volumes]	Actual	NOCUIQ Reports	N/A	Remote Meter reading Volumes obtained from UIQ reports from NOC.	N/A	N/A
CAUE4.2BOP11	4.2	Metering	TABLE 4.2.2 - COST METRICS Meter purchase [Expenditure] Meter Type 5 [Expenditure] Meter Type 6 [Expenditure]	Actual	SAP Corporate Finance reports	N/A	Actual Purchase order of SECURE meter purchase.	N/A	N/A
CAUE4.2BOP12	4.2	Metering	TABLE 4.2.2 - COST METRICS Meter testing [Expenditure] Meter Type 5 [Expenditure] Meter Type 6 [Expenditure]	Actual	Service Delivery Specialist Meter Testing Contract - Monthly Report and Invoice	N/A	Data obtained from Specialist meter testing contract invoices of below testing activities. Sample testing of direct connected meters. 100% testing of CT connected meters. CT inspections & admittance test also carried out as part of CT meter testing. Sample testing of Current Transformers.	N/A	N/A
CAUE4.2BOP13	4.2	Metering	TABLE 4.2.2 - COST METRICS Meter investigation [Expenditure] Meter Type 5 [Expenditure] Meter Type 6 [Expenditure]	Actual	Service Delivery Specialist Meter Testing Contract - Monthly Report and Invoice	N/A	Metering investigation service orders of below types are included. - Remote communication faults - CT meter faults - Domestic faults - C& I faults - Time Reset and downloads - Revenue protection: police initiated drug raids	N/A	N/A
CAUE4.2BOP14	4.2	Metering	TABLE 4.2.2 - COST METRICS Scheduled meter reading [Expenditure] Meter Type 5 [Expenditure] Meter Type 6 [Expenditure]	Actual	Market Services Specialist Meter Reading Contract - Monthly Report and Invoice.	N/A	We have obtained actual volumes for meter reading activities from monthly report for Type 5 and 6. Type 4 AMI meter reading quantities obtained from the Network Management System-UIQ report.	N/A	N/A
CAUE4.2BOP15	4.2	Metering	TABLE 4.2.2 - COST METRICS Special meter reading [Expenditure] Meter Type 5 [Expenditure] Meter Type 6 [Expenditure]	Actual	Market Services Specialist Meter Reading Contract - Monthly Report and Invoice.	N/A	Type 5 and 6 meter volumes obtained from specialist meter reading contract monthly reports for 2017. Type 4 metering volumes given as zero as these meters read daily.	N/A	N/A
CAUE4.2BOP16	4.2	Metering	TABLE 4.2.2 - COST METRICS New meter installation [Expenditure] Meter Type 5 [Expenditure] Meter Type 6 [Expenditure]	Actual	Finance	N/A	Report prepared by Finance of ACS new connections.	N/A	N/A
CAUE4.2BOP17	4.2	Metering	TABLE 4.2.2 - COST METRICS Meter replacement [Expenditure] Meter Type 5 [Expenditure] Meter Type 6 [Expenditure]	Actual	Market Services Specialist Meter Reading Contract - Monthly Report and Invoice Truck meter replacement on VM codes.	N/A	Data obtained from Formway report and Truck replacement costing reports.	N/A	N/A
CAUE4.2BOP18	4.2	Metering	TABLE 4.2.2 - COST METRICS Meter maintenance [Expenditure] Meter Type 5 [Expenditure] Meter Type 6 [Expenditure]	Actual	Market Services Specialist Meter Reading Contract - Monthly Report and Invoice Truck meter replacement on VM codes.	N/A	Metering assets were not part of preventive/predictive maintenance program.	N/A	N/A
CAUE4.3BOP19	4.2	Metering	TABLE 4.2.2 - COST METRICS Remote meter reading [Expenditure]	Actual	Network Management System UIQ report.	N/A	These costs are zero as they are captured in IT costs.	N/A	N/A
CAUE4.2BOP20	4.2	Metering	TABLE 4.2.2 - COST METRICS Remote meter re-configuration [Expenditure]	Actual	Network Management System UIQ report.	N/A	These costs are zero as they are captured in IT costs.	N/A	N/A
CAUE4.2BOP21	4.2	Metering	TABLE 4.2.2 - COST METRICS Other metering [Volumes] Meter Type 5 [Volumes] Meter Type 6 [Volumes] Meter Type 7 [Volumes]	Actual	SAP Corporate Finance reports	N/A	SAP and Corporate Finance reports available for total Capex & Opex costs. Other metering costs calculated as difference between Total Metering ACS costs and all other CROIC items in table 4.2.	Costs for Type 5 and 6 is given as zero as these meter volumes are low and the	N/A

								same costs included in Type 4 metering costs.	
CAUE4.2BOP22	4.2	Metering	TABLE 4.2.2 - COST METRICS IT infrastructure capex [Volumes] IT infrastructure opex [Volumes] Communications infrastructure capex [Volumes] Communications infrastructure opex [Volumes]	Actual	SAP Corporate Finance reports	NA	SAP & Corporate Finance reports	N/A	N/A
CAUE4.3BOP1	4.3	Fee-Based Services	TABLE 4.3.1 - COST METRICS FOR FEE-BASED SERVICES	Estimated	Product Line Report	The cost codes in SAP are not directly attributable to the ACS categories therefore assumptions have been developed to allocate expenditure to the appropriate categories.	ACS costs are calculated based on quantities derived from ACS revenue extracted from UE's general ledger multiplied by unit cost rates.	N/A	As UE do not provide data split into the 'Common Fee-Based Services' subcategories, data has therefore been populated under the 'Miscellaneous Fee-Based Services' section instead.
CAUE4.4BOP1	4.4	Quoted Services	TABLE 4.4.1 - COST METRICS FOR QUOTED SERVICES	Estimated	Product Line Report	The cost codes in SAP are not directly attributable to the ACS categories therefore assumptions have been developed to allocate expenditure to the appropriate categories.	ACS costs are calculated based on quantities derived from ACS revenue extracted from UE's general ledger multiplied by unit cost rates.	N/A	N/A
CAUE5.2BOP1	5.2	Asset Age Profile	TABLE 5.2.1 - ASSET AGE PROFILE POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - Staking of a wooden pole [Mean] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - Staking of a wooden pole [Std. Dev] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - < = 1 kV; Wood [Mean] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - < = 1 kV; Wood [Std. Dev] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 1 kV & < = 11 kV; Wood [Mean] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 1 kV & < = 11 kV; Wood [Std. Dev] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 11 kV & < = 22 kV; Wood [Mean] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 11 kV & < = 22 kV; Wood [Std. Dev] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 22 kV & < = 66 kV; Wood [Mean] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 22 kV & < = 66 kV; Wood [Std. Dev] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 66 kV & < = 132 kV; Wood [Mean] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 66 kV & < = 132 kV; Wood [Std. Dev] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 132 kV; Wood [Mean] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 132 kV; Wood [Std. Dev] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - < = 1 kV; Concrete [Mean]	Actual	Economic life is based on the 2001 Asset Simplification Report and Internal Weibul Models	N/A	Economic life is based on the 2001 Asset Simplification Report and Internal Weibul Models.	Economic life is based on the 2001 Asset Simplification Report or derived from internal Weibul Models.	N/A

			POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - < = 1 kV; Concrete [Std. Dev] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 1 kV & < = 11 kV; Concrete [Mean] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 1 kV & < = 11 kV; Concrete [Std. Dev] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 11 kV & < = 22 kV; Concrete [Mean] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 11 kV & < = 22 kV; Concrete [Std. Dev] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 22 kV & < = 66 kV; Concrete [Mean] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 22 kV & < = 66 kV; Concrete [Std. Dev] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 66 kV & < = 132 kV; Concrete [Mean] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 66 kV & < = 132 kV; Concrete [Std. Dev] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 132 kV; Concrete [Mean] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 132 kV; Concrete [Std. Dev] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - < = 1 kV; Steel [Mean] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - < = 1 kV; Steel [Std. Dev] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 1 kV & < = 11 kV; Steel [Mean] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 1 kV & < = 11 kV; Steel [Std. Dev] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 11 kV & < = 22 kV; Steel [Mean] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 11 kV & < = 22 kV; Steel [Std. Dev] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 22 kV & < = 66 kV; Steel [Mean] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 22 kV & < = 66 kV; Steel [Std. Dev] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 66 kV & < = 132 kV; Steel [Mean] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 66 kV & < = 132 kV; Steel [Std. Dev] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 132 kV; Steel [Mean] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 132 kV; Steel [Std. Dev] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - Other [Mean] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - Other [Std. Dev] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING					

			VOLTAGE; NUMBER OF PHASES (AT HV) - < = 1 kV [Mean] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - < = 1 kV [Std. Dev] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 1 kV & < = 11 kV [Mean] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 1 kV & < = 11 kV [Std. Dev] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 11 kV & < = 22 kV ; SWER [Mean] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 11 kV & < = 22 kV ; SWER [Std. Dev] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 11 kV & < = 22 kV ; Single-Phase [Mean] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 11 kV & < = 22 kV ; Single-Phase [Std. Dev] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 11 kV & < = 22 kV ; Multiple-Phase [Mean] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 11 kV & < = 22 kV ; Multiple-Phase [Std. Dev] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 22 kV & < = 66 kV [Mean] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 22 kV & < = 66 kV [Std. Dev] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 66 kV & < = 132 kV [Mean] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 66 kV & < = 132 kV [Std. Dev] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 132 kV [Mean] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 132 kV [Std. Dev] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - Other [Mean] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - Other [Std. Dev] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - < = 1 kV [Mean] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - < = 1 kV [Std. Dev] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 1 kV & < = 11 kV [Mean] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 1 kV & < = 11 kV [Std. Dev] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 11 kV & < = 22 kV ; SWER [Mean] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 11 kV & < = 22 kV ; SWER [Std. Dev] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 11 kV & < = 22 kV ; Single-Phase [Mean] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 11 kV & < = 22 kV ; Single-Phase [Std. Dev] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 22 kV & < = 66 kV [Mean] UNDERGROUND CABLES BY: HIGHEST OPERATING					

			VOLTAGE - > 22 kV & < = 66 kV [Std. Dev] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 66 kV & < = 132 kV [Mean] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 66 kV & < = 132 kV [Std. Dev] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 132 kV [Mean] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 132 kV [Std. Dev] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - Other [Mean] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - Other [Std. Dev] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Residential ; Simple Type [Mean] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Residential ; Simple Type [Std. Dev] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Commercial & Industrial ; Simple Type [Mean] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Commercial & Industrial ; Simple Type [Std. Dev] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Residential ; Complex Type [Mean] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Residential ; Complex Type [Std. Dev] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Commercial & Industrial ; Complex Type [Mean] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Commercial & Industrial ; Complex Type [Std. Dev] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Subdivision ; Complex Type [Mean] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Subdivision ; Complex Type [Std. Dev] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 11 kV & < = 22 kV ; Commercial & Industrial [Mean] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 11 kV & < = 22 kV ; Commercial & Industrial [Std. Dev] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 11 kV & < = 22 kV ; Subdivision [Mean] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 11 kV & < = 22 kV ; Subdivision [Std. Dev] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 22 kV & < = 33 kV ; Commercial & Industrial [Mean] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 22 kV & < = 33 kV ; Commercial & Industrial [Std. Dev] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 22 kV & < = 33 kV ; Subdivision [Mean] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 22 kV & < = 33 kV ;					

			Subdivision [Std. Dev] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 33 kV & < = 66 kV ; Commercial & Industrial [Mean] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 33 kV & < = 66 kV ; Commercial & Industrial [Std. Dev] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 33 kV & < = 66 kV ; Subdivision [Mean] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 33 kV & < = 66 kV ; Subdivision [Std. Dev] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 66 kV & < = 132 kV ; Commercial & Industrial [Mean] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 66 kV & < = 132 kV ; Commercial & Industrial [Std. Dev] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 66 kV & < = 132 kV ; Subdivision [Mean] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 66 kV & < = 132 kV ; Subdivision [Std. Dev] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 132 kV ; Commercial & Industrial [Mean] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 132 kV ; Commercial & Industrial [Std. Dev] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 132 kV ; Subdivision [Mean] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 132 kV ; Subdivision [Std. Dev] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - Other [Mean] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - Other [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; < = 60 kVA ; Single Phase [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; < = 60 kVA ; Single Phase [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; > 60 kVA and < = 600 kVA ; Single Phase [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; > 60 kVA and < = 600 kVA ; Single Phase [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; > 600 kVA ; Single Phase [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; > 600 kVA ; Single Phase [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST					

			OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; < = 60 kVA ; Multiple Phase [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; < = 60 kVA ; Multiple Phase [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; > 60 kVA and < = 600 kVA ; Multiple Phase [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; > 60 kVA and < = 600 kVA ; Multiple Phase [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; > 600 kVA ; Multiple Phase [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; > 600 kVA ; Multiple Phase [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; < = 60 kVA ; Single Phase [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; < = 60 kVA ; Single Phase [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; > 60 kVA and < = 600 kVA ; Single Phase [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; > 60 kVA and < = 600 kVA ; Single Phase [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; > 600 kVA ; Single Phase [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; > 600 kVA ; Single Phase [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; < = 60 kVA ; Multiple Phase [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; < = 60 kVA ; Multiple Phase [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; > 60 kVA and < = 600 kVA ; Multiple Phase [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; > 60 kVA and < = 600 kVA ; Multiple Phase [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; > 600 kVA ;					

			Multiple Phase [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; > 600 kVA ; Multiple Phase [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; < = 60 kVA ; Single Phase [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; < = 60 kVA ; Single Phase [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; > 60 kVA and < = 600 kVA ; Single Phase [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; > 60 kVA and < = 600 kVA ; Single Phase [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; > 600 kVA ; Single Phase [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; > 600 kVA ; Single Phase [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; < = 60 kVA ; Multiple Phase [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; < = 60 kVA ; Multiple Phase [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; > 60 kVA and < = 600 kVA ; Multiple Phase [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; > 60 kVA and < = 600 kVA ; Multiple Phase [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; > 600 kVA ; Multiple Phase [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; > 600 kVA ; Multiple Phase [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > = 22 kV & < = 33 kV ; < = 15 MVA [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > = 22 kV & < = 33 kV ; < = 15 MVA [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST					

			OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > = 22 kV & < = 33 kV ; > 15 MVA and < = 40 MVA [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > = 22 kV & < = 33 kV ; > 15 MVA and < = 40 MVA [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > = 22 kV & < = 33 kV ; > 40 MVA [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > = 22 kV & < = 33 kV ; > 40 MVA [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 33 kV & < = 66 kV ; < = 15 MVA [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 33 kV & < = 66 kV ; < = 15 MVA [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 33 kV & < = 66 kV ; > 15 MVA and < = 40 MVA [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 33 kV & < = 66 kV ; > 15 MVA and < = 40 MVA [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 33 kV & < = 66 kV ; > 40 MVA [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 33 kV & < = 66 kV ; > 40 MVA [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 66 kV & < = 132 kV ; < = 100 MVA [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 66 kV & < = 132 kV ; < = 100 MVA [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 66 kV & < = 132 kV ; > 100 MVA [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 66 kV & < = 132 kV ; > 100 MVA [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 132 kV ; < = 100 MVA [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber					

			Mounted; > 132 kV ; < = 100 MVA [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 132 kV ; > 100 MVA [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 132 kV ; > 100 MVA [Std. Dev] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Other [Mean] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Other [Std. Dev] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - < = 11 kV ; Fuse [Mean] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - < = 11 kV ; Fuse [Std. Dev] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - < = 11 kV ; Switch [Mean] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - < = 11 kV ; Switch [Std. Dev] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - < = 11 kV ; Circuit Breaker [Mean] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - < = 11 kV ; Circuit Breaker [Std. Dev] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 11 kV & < = 22 kV ; Switch [Mean] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 11 kV & < = 22 kV ; Switch [Std. Dev] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 11 kV & < = 22 kV ; Circuit Breaker [Mean] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 11 kV & < = 22 kV ; Circuit Breaker [Std. Dev] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 11 kV & < = 22 kV ; Circuit Breaker [Std. Dev] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 22 kV & < = 33 kV ; Switch [Mean] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 22 kV & < = 33 kV ; Switch [Std. Dev] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 22 kV & < = 33 kV ; Circuit Breaker [Mean] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 22 kV & < = 33 kV ; Circuit Breaker [Std. Dev] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 33 kV & < = 66 kV ; Switch [Mean] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 33 kV & < = 66 kV ; Switch [Std. Dev] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 33 kV & < = 66 kV ; Circuit Breaker [Mean] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 33 kV & < = 66 kV ; Circuit Breaker [Std. Dev] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 66 kV & < = 132 kV ; Switch [Mean] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 66 kV & < = 132 kV ; Switch [Std. Dev] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 66 kV & < = 132 kV ; Circuit Breaker [Mean] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 66 kV & < = 132 kV ; Circuit Breaker [Std. Dev] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 132 kV ; Switch [Mean] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 132 kV ; Switch [Std. Dev] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 132 kV ; Circuit Breaker [Mean] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH					

			FUNCTION - > 132 kV ; Circuit Breaker [Std. Dev] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - Other [Mean] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - Other [Std. Dev] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION [Mean] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION [Std. Dev] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Luminaires ; Minor Road [Mean] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Luminaires ; Minor Road [Std. Dev] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Brackets ; Major Road [Mean] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Brackets ; Major Road [Std. Dev] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Brackets ; Minor Road [Mean] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Brackets ; Minor Road [Std. Dev] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Lamps ; Major Road [Mean] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Lamps ; Major Road [Std. Dev] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Lamps ; Minor Road [Mean] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Lamps ; Minor Road [Std. Dev] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Poles / Columns ; Major Road [Mean] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Poles / Columns ; Major Road [Std. Dev] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Poles / Columns ; Minor Road [Mean] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Poles / Columns ; Minor Road [Std. Dev] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Other [Mean] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Other [Std. Dev] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: Function - Field Devices [Mean] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: Function - Field Devices [Std. Dev] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: Function - Local Network Wiring Assets [Mean] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: Function - Local Network Wiring Assets [Std. Dev] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: Function - Communications Network Assets [Mean] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: Function - Communications Network Assets [Std. Dev] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: Function - Master Station Assets [Mean] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: Function - Master Station Assets [Std. Dev] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: Function - Communications Site Infrastructure [Mean] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: Function - Communications Site Infrastructure [Std. Dev] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: Function - Communications Linear Assets [Mean] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS					

			BY: Function - Communications Linear Assets [Std. Dev] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: Function - AFLC [Mean] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: Function - AFLC [Std. Dev] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: Function - Other [Mean] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: Function - Other [Std. Dev] Buildings [Mean] Buildings [Std. Dev] Civil [Mean] Civil [Std. Dev] Capacitor Banks - Large [Mean] Capacitor Banks - Large [Std. Dev] Fences [Mean] Fences [Std. Dev] CTs and VTs [Mean] CTs and VTs [Std. Dev]						
CAUE5.2BOP2	5.2	Asset Age Profile	TABLE 5.2.1 - ASSET AGE PROFILE POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - Staking of a wooden pole [2017 - 1911] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - < = 1 kV; Wood [2017 - 1911] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 1 kV & < = 11 kV; Wood [2017 - 1911] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 11 kV & < = 22 kV; Wood [2017 - 1911] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 22 kV & < = 66 kV; Wood [2017 - 1911] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 66 kV & < = 132 kV; Wood [2017 - 1911] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 132 kV; Wood [2017 - 1911] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - < = 1 kV; Concrete [2017 - 1911] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 1 kV & < = 11 kV; Concrete [2017 - 1911] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 11 kV & < = 22 kV; Concrete [2017 - 1911] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 22 kV & < = 66 kV; Concrete [2017 - 1911] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 66 kV & < = 132 kV; Concrete [2017 - 1911] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 132 kV; Concrete [2017 - 1911] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - < = 1 kV; Steel [2017 - 1911] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 1 kV & < = 11 kV; Steel [2017 - 1911] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 11 kV & < = 22 kV; Steel [2017 - 1911] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 22 kV & < = 66 kV; Steel [2017	Actual	SAP	N/A	All Pole asset data stored in SAP has been surfaced in SAP HANA then aggregated and reported through Tableau. The installation date is held against the Equipment 'STARTUP DATE' in the SAP Equipment Record. Equipment records are assigned a RIN code by virtue of characteristics associated with that equipment record. i.e. Voltage, Material and whether or not the pole is reinforced.	N/A	Refer to procedure UE-PR-2345 Poles.

			- 1911] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 66 kV & < = 132 kV; Steel [2017 - 1911] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - > 132 kV; Steel [2017 - 1911] POLES BY: HIGHEST OPERATING VOLTAGE ; MATERIAL TYPE; STAKING (IF WOOD) - Other [2017 - 1911]						
CAUE5.2BOP3	5.2	Asset Age Profile	TABLE 5.2.1 - ASSET AGE PROFILE OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - < = 1 kV [2016 - 1911] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 1 kV & < = 11 kV [2016 - 1911] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 11 kV & < = 22 kV ; SWER [2017 - 1911] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 11 kV & < = 22 kV ; Single-Phase [2017 - 1911] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 11 kV & < = 22 kV ; Multiple-Phase [2017 - 1911] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 22 kV & < = 66 kV [2017 - 1911] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 66 kV & < = 132 kV [2017 - 1911] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 132 kV [2017 - 1911] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - Other [2017 - 1911]	Actual	GIS	N/A	All Conductor asset data stored in GIS has been surfaced in SAP HANA then aggregated and reported through Tableau. The installation date is held against the Equipment 'DATE_INSERTED' or 'COND_DATE_CONSTRUCTED' in the GIS Equipment Record. Equipment records are assigned a RIN code by virtue of characteristics associated with that equipment record i.e. Voltage, Material and whether the conductor is multiphase or single phase.	N/A	Refer to procedure UE-PR-2343 Conductor.
CAUE5.2BOP4	5.2	Asset Age Profile	TABLE 5.2.1 - ASSET AGE PROFILE UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - < = 1 kV [2017 - 1911] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 1 kV & < = 11 kV [2017 - 1911] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 11 kV & < = 22 kV ; SWER [2017 - 1911] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 11 kV & < = 22 kV ; Single-Phase [2017 - 1911] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 22 kV & < = 66 kV [2017 - 1911] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 66 kV & < = 132 kV [2017 - 1911] UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - > 132 kV [2017 - 1911]	Actual	SAP and GIS	N/A	Data for HV Cable is stored in both SAP and GIS, surfaced in SAP HANA then aggregated and reported through Tableau. The installation date is held against the Equipment 'STARTUP DATE' in the SAP Equipment Record. Equipment records are assigned a RIN code by virtue of characteristics associated with that equipment record. i.e. Voltage, Material.	N/A	Refer to procedure UE-PR-2342 Cable.
CAUE5.2BOP5	5.2	Asset Age Profile	TABLE 5.2.1 - ASSET AGE PROFILE SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Residential ; Simple Type [2016 - 1911] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Commercial & Industrial ; Simple Type [2016 - 1911] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Residential ; Complex Type [2016 - 1911] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Commercial & Industrial ; Complex Type [2016 - 1911] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Subdivision ;	Actual	SAP and GIS	N/A	All Service Line asset details stored in both SAP and GIS, surfaced in SAP HANA then aggregated and reported through Tableau. The installation date is held against the Equipment 'DATE_CONSTRUCTED' or 'DATE_LAID' in the GIS Equipment Record. Equipment records are assigned a RIN code by virtue of characteristics associated with that equipment record. i.e. 'SUPERIOR_TYPE_OF_PREMISE' and 'SUPPLY_COMPLEXITY'.	N/A	Refer to procedure UE-PR-2345 LV Services.

			Complex Type [2017 - 1911] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 11 kV & < = 22 kV ; Commercial & Industrial [2017 - 1911] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 11 kV & < = 22 kV ; Subdivision [2017 - 1911] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 22 kV & < = 33 kV ; Commercial & Industrial [2017 - 1911] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 22 kV & < = 33 kV ; Subdivision [2017 - 1911] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 33 kV & < = 66 kV ; Commercial & Industrial [2017 - 1911] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 33 kV & < = 66 kV ; Subdivision [2017 - 1911] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 66 kV & < = 132 kV ; Commercial & Industrial [2017 - 1911] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 66 kV & < = 132 kV ; Subdivision [2017 - 1911] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 132 kV ; Commercial & Industrial [2017 - 1911] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - > 132 kV ; Subdivision [2017 - 1911] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - Other [2017 - 1911]						
CAUE5.2BOP6	5.2	Asset Age Profile	TABLE 5.2.1 - ASSET AGE PROFILE TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; < = 60 kVA ; Single Phase [2017 - 1911] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; > 60 kVA and < = 600 kVA ; Single Phase [2017 - 1911] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; > 600 kVA ; Single Phase [2017 - 1911] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; < = 60 kVA ; Multiple Phase [2017 - 1911] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; > 60 kVA and < = 600 kVA ; Multiple Phase [2016 - 1911] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; > 600 kVA ; Multiple Phase [2017 - 1911] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; < = 60 kVA ; Single Phase [2017 - 1911] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; > 60 kVA and < = 600 kVA ; Single Phase [2017 - 1911]	Actual	SAP	N/A	All Transformer asset data stored in SAP has been surfaced in SAP HANA then aggregated and reported through Tableau. The installation date is held against the Equipment 'STARTUP DATE' in the SAP Equipment Record. Equipment records are assigned a RIN code by virtue of characteristics associated with that equipment record. i.e. Construction type, kVA Rating and whether or not the transformer is multiphase or single phase.	N/A	Refer to procedure UE-PR-2347 transformers.

			TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; > 600 kVA ; Single Phase [2017 - 1911] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; < = 60 kVA ; Multiple Phase [2017 - 1911] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; > 60 kVA and < = 600 kVA ; Multiple Phase [2017 - 1911] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Kiosk Mounted ; < = 22kV ; > 600 kVA ; Multiple Phase [2017 - 1911] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; < = 60 kVA ; Single Phase [2017 - 1911] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; > 60 kVA and < = 600 kVA ; Single Phase [2017 - 1911] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; > 600 kVA ; Single Phase [2017 - 1911] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; < = 60 kVA ; Multiple Phase [2017 - 1911] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; > 60 kVA and < = 600 kVA ; Multiple Phase [2017 - 1911] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; < 22 kV ; > 600 kVA ; Multiple Phase [2017 - 1911] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > = 22 kV & < = 33 kV ; < = 15 MVA [2017 - 1911] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > = 22 kV & < = 33 kV ; > 15 MVA and < = 40 MVA [2017 - 1911] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > = 22 kV & < = 33 kV ; > 40 MVA [2017 - 1911] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 33 kV & < = 66 kV ; < = 15 MVA [2017 - 1911] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 33 kV & < = 66 kV ; > 15 MVA and < = 40 MVA [2017 - 1911]					

			TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 33 kV & < = 66 kV ; > 40 MVA [2017 - 1911] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 66 kV & < = 132 kV ; < = 100 MVA [2017 - 1911] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 66 kV & < = 132 kV ; > 100 MVA [2017 - 1911] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 132 kV ; < = 100 MVA [2017 - 1911] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Ground Outdoor / Indoor Chamber Mounted; > 132 kV ; > 100 MVA [2017 - 1911] TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Other [2017 - 1911]					
CAUE5.2BOP7	5.2	Asset Age Profile	TABLE 5.2.1 - ASSET AGE PROFILE SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - < = 11 kV ; Fuse [2017 - 1911] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - < = 11 kV ; Switch [2017 - 1911] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - < = 11 kV ; Circuit Breaker [2017 - 1911] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 11 kV & < = 22 kV ; Switch [2017 - 1911] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 11 kV & < = 22 kV ; Circuit Breaker [2017 - 1911] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 22 kV & < = 33 kV ; Switch [2017 - 1911] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 22 kV & < = 33 kV ; Circuit Breaker [2017 - 1911] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 33 kV & < = 66 kV ; Switch [2017 - 1911] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 33 kV & < = 66 kV ; Circuit Breaker [2017 - 1911] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 66 kV & < = 132 kV ; Switch [2017 - 1911] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 66 kV & < = 132 kV ; Circuit Breaker [2017 - 1911] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 132 kV ; Switch [2017 - 1911] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - > 132 kV ; Circuit Breaker [2017 - 1911] SWITCHGEAR BY: HIGHEST OPERATING VOLTAGE ; SWITCH FUNCTION - Other [2017 - 1911]	Actual	SAP	N/A	All Switchgear assets (Fuses, Switches and Line Capacitors) data stored in SAP has been surfaced in SAP HANA then aggregated and reported through Tableau. The installation date is held against the Equipment 'STARTUP DATE' in the SAP Equipment Record. Equipment records are assigned a RIN code by virtue of characteristics associated with that equipment record. i.e. Asset Type, Construction type, Voltage or kVA Rating.	Plant is installed in the same year as it is specified.	Refer to procedures UE-PR-2341 Switchgear UE-PR-2340 Line Capacitors
CAUE5.2BOP8	5.2	Asset Age Profile	TABLE 5.2.1 - ASSET AGE PROFILE PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION [2017 - 1911] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Luminaires ; Minor Road [2017 - 1911] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Brackets ; Major Road [2017 - 1911] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Brackets ; Minor Road [2017 - 1911]	Actual	SAP and GIS	N/A	All PL Pole asset data stored in SAP has been surfaced in SAP HANA then aggregated and reported through Tableau. The installation date is held against the Equipment 'STARTUP DATE' in the SAP Equipment Record. Equipment records are assigned a RIN code by virtue of whether or not the pole on a Major or Minor Road All Luminaries and Brackets data stored in GIS has	N/A	Refer to procedure UE-PR-2324 Public Lighting.

			PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Lamps ; Major Road [2017 - 1911] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Lamps ; Minor Road [2017 - 1911] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Poles / Columns ; Major Road [2016 - 1911] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Poles / Columns ; Minor Road [2016 - 1911] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Other [2017 - 1911]				been surfaced in OSAP HANA then aggregated and reported through Tableau. The installation date is held against the Equipment 'DATE_COMMISSIONED', 'DATE_INSERTED' or 'LAMP CHANGED' in the GIS Equipment Record. Equipment records are assigned a RIN code by virtue of whether or not the pole on a Major or Minor Road.		
CAUE5.2BOP9	5.2	Asset Age Profile	TABLE 5.2.1 - ASSET AGE PROFILE SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: Function - Field Devices [2017 - 1911] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: Function - Local Network Wiring Assets [2017 - 1911] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: Function - Communications Network Assets [2017 - 1911] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: Function - Master Station Assets [2017 - 1911] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: Function - Communications Site Infrastructure [2017 - 1911] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: Function - Communications Linear Assets [2017 - 1911] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: Function - AFLC [2017 - 1911] SCADA, NETWORK CONTROL AND PROTECTION SYSTEMS BY: Function - Other [2017 - 1911]	Actual	SAP and GIS	N/A	Data for SCADA, Network Control & Protection is stored in both SAP and GIS, surfaced in SAP HANA then aggregated and reported through Tableau. The installation date is held against the Equipment 'CONSTRUCTION_YEAR' in the SAP Equipment Record. Equipment records are assigned a RIN code by virtue of the assets 'EQUIPMENT_TYPE'. For Records coming from GIS the installation date are held against the Equipment 'DATE INSERTED' or 'DATE LAID' in the GIS Equipment Record. Equipment records are assigned a RIN code by virtue of the assets 'OBJECT_TYPE'.	N/A	Refer to procedure UE-PR-2323 ZSS Secondary Assets.
CAUE5.2BOP10	5.2	Asset Age Profile	TABLE 5.2.1 - ASSET AGE PROFILE UNDERGROUND CABLES BY: HIGHEST OPERATING VOLTAGE - Other [2017 - 1911]	Actual	GIS	N/A	All Pits and Pillar asset data stored in GIS has been surfaced in surfaced in SAP HANA then aggregated and reported through Tableau. The installation date is held against the Equipment 'DATE_INSTALLED' or 'DATE_INSERTED' in the GIS Equipment Record. Equipment records are assigned a RIN code by virtue of the assets 'EQUIPMENT_TYPE'.	N/A	Refer to Procedure UE-PR-2316 Pits and Pillar. This is for 'Underground Cables - Other'.
CAUE5.2BOP11	5.2	Asset Age Profile	TABLE 5.2.1 - ASSET AGE PROFILE OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - < = 1 kV [2017] OVERHEAD CONDUCTORS BY: HIGHEST OPERATING VOLTAGE; NUMBER OF PHASES (AT HV) - > 1 kV & < = 11 kV [2017]	Estimated	GIS	Addition of Conductors with unknown installation dates to the current period. Conductors with unknown installation dates are shown in year 1900 per the Tableau system and then added to the current year balance.	All Conductor asset data stored in GIS has been surfaced in SAP HANA then aggregated and reported through Tableau. The installation date is held against the Equipment 'DATE_INSERTED' or 'COND_DATE_CONSTRUCTED' in the GIS Equipment Record. Equipment records are assigned a RIN code by virtue of characteristics associated with that equipment record i.e. Voltage, Material and whether the conductor is multiphase or single phase.	N/A	Refer to procedure UE-PR-2343 Conductor.
CAUE5.2BOP12	5.2	Asset Age Profile	TABLE 5.2.1 - ASSET AGE PROFILE SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Residential ; Simple Type [2017] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Commercial & Industrial ; Simple Type [2017] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Residential ; Complex Type [2017] SERVICE LINES BY: CONNECTION VOLTAGE; CUSTOMER TYPE; CONNECTION COMPLEXITY - < = 11 kV ; Commercial & Industrial ; Complex Type [2017]	Estimated	GIS	Services as fault replacements are not aged correctly in GIS. As such have been aged based on when the order was closed out.	All Service Line asset details are stored in both SAP and GIS, surfaced in SAP HANA then aggregated and reported through Tableau. The installation date is held against the Equipment 'DATE_CONSTRUCTED' or 'DATE_LAID' in the GIS Equipment Record. Equipment records are assigned a RIN code by virtue of characteristics associated with that equipment record. i.e. 'SUPERIOR_TYPE_OF_PREMISE' and 'SUPPLY_COMPLEXITY'.	N/A	Refer to procedure UE-PR-2345 LV Services.
CAUE5.2BOP13	5.2	Asset Age Profile	TABLE 5.2.1 - ASSET AGE PROFILE TRANSFORMERS BY: MOUNTING TYPE; HIGHEST OPERATING VOLTAGE ; AMPERE RATING; NUMBER OF PHASES (AT LV) - Pole Mounted ; < = 22kV ; > 60 kVA and < = 600 kVA ; Multiple Phase [2017]	Estimated	SAP	Addition of 'NULL' row from the Tableau table. 'NULL' represents Transformers that have not been correctly	All Transformer asset data stored in SAP has been surfaced in SAP HANA then aggregated and reported through Tableau. The installation date is held against the Equipment	N/A	Refer to procedure UE-PR-2347 transformers.

						posted to an asset class. The preparer has gone into the GIS system and confirmed they all should be added into the Pole Mounted ; < = 22kV ; > 60 kVA and < = 600 kVA	"STARTUP DATE" in the SAP Equipment Record. Equipment records are assigned a RIN code by virtue of characteristics associated with that equipment record. i.e. Construction type, kVA Rating and whether or not the transformer is multiphase or single phase.		
CAUE5.2BOP14	5.2	Asset Age Profile	TABLE 5.2.1 - ASSET AGE PROFILE PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Poles / Columns ; Major Road [2017] PUBLIC LIGHTING BY: ASSET TYPE ; LIGHTING OBLIGATION - Poles / Columns ; Minor Road [2017]	Estimated	SAP	Poles and column for Minor Road includes all 'NULL' assets within this class, as it is more likely they will relate to minor roads rather than main roads.	All PL Pole asset data stored in SAP have been surfaced in SAP HANA then aggregated and reported through Tableau. The installation date is held against the Equipment "STARTUP DATE" in the SAP Equipment Record. Equipment records are assigned a RIN code by virtue of whether or not the pole on a Major or Minor Road All Luminaries and Brackets data stored in GIS has been surfaced in OSAP HANA then aggregated and reported through Tableau. The installation date is held against the Equipment "DATE_COMMISSIONED", "DATE_INSERTED" or "LAMP CHANGED" in the GIS Equipment Record. Equipment records are assigned a RIN code by virtue of whether or not the pole on a Major or Minor Road.	N/A	Refer to procedure UE-PR-2324 Public Lighting.
CAUE5.3BOP1	5.3	MD - Network Level	Table 5.3.1 - RAW AND WEATHER CORRECTED COINCIDENT MD AT NETWORK LEVEL (Summed at transmission connection point) Raw network coincident MD [0] Date MD occurred [0] Half hour time period MD occurred [0] Winter/summer peaking [0]	Actual	Metered Data Stored in 'UE Actual & Forecast S & W Demand Energy & Customer No' Spreadsheet.	N/A	After each summer, UE Network Planning collects the actual demand data (half-hourly average summations of a set of wholesale boundary load NMI's) and these are used to identify the maximum coincident demand and its date and time.	N/A	Peak demands are recorded over a summer period which extends from November to March, so that it is possible for a peak demand for a particular calendar year to fall in the previous November or December.
CAUE5.3BOP2	5.3	MD - Network Level	Table 5.3.1 - RAW AND WEATHER CORRECTED COINCIDENT MD AT NETWORK LEVEL (Summed at transmission connection point) Embedded generation [0]	Actual	Metered Data Stored in 'NIEIR Boundary load Apr16-Mar17-Submission' Spreadsheet.	N/A	The embedded generation contribution at the coincident maximum demand is sourced from the annual data provided to NIEIR for forecasting and is obtained from actual half-hourly average summations of a defined set of wholesale boundary load meters at the date and time of MD.	N/A	All the embedded generators in the UE network are of non-scheduled category.
CAUE5.3BOP3	5.3	MD - Network Level	Table 5.3.1 - RAW AND WEATHER CORRECTED COINCIDENT MD AT NETWORK LEVEL (Summed at transmission connection point) Weather corrected (10% POE) network coincident MD [0] Weather corrected (50% POE) network coincident MD [0]	Actual	Metered Data Stored in 'UE Actual & Forecast S & W Demand Energy & Customer No' Spreadsheet.	N/A	As part of the demand forecasting process, NIEIR provides 10%, 50% and 90% PoE forecasts for total UE demand. Those will define the overall variability of UE MD due to temperature. That relationship is used to calculate 10% and 50% PoE coincident weather adjusted system annual peak demands from actual coincident raw system annual peak demand.	N/A	N/A
CAUE5.4BOP2	5.4	MD & Utilisation Spatial	TABLE 5.4.1 NON-COINCIDENT & COINCIDENT MAXIMUM DEMAND [Weather Corrected MD 10% POE Non-Coincident] MW [Weather Corrected MD 10% POE Coincident] MW [Weather Corrected MD 10% POE Non-Coincident] MVA [Weather Corrected MD 10% POE Coincident] MVA [Weather Corrected MD 50% POE Non-Coincident] MW [Weather Corrected MD 50% POE Coincident] MW [Weather Corrected MD 50% POE Non-Coincident] MVA [Weather Corrected MD 50% POE Coincident] MVA	Actual	Load Forecast Spreadsheet Weather Correction Spreadsheet	N/A	The 10% and 50% PoE demands are generated from actual peak demand data from SCADA and corrected for temperature. The correction of PoE for temperature is based on historical demand and temperature data. The temperature sensitivity of demand at each zone substation is calculated and used in PoE correction.	N/A	UE PR 2213 Population of Demand Data for CA RIN.
CAUE5.4BOP3	5.4	MD & Utilisation Spatial	TABLE 5.4.1 NON-COINCIDENT & COINCIDENT MAXIMUM DEMAND [Substation Rating Non-Coincident] [Substation Rating Coincident]	Actual	Load Forecast Spreadsheet SCADA (OSI-PI)	N/A	While extracting non-coincident and coincident maximum demand information as part of the load forecasting process, the embedded generation contributions at the maximum demand are recorded. This is presently applicable at only three zone substations: Dandenong Zone Sub, Springvale South Zone sub and Sorrento Zone Sub.	N/A	There is no difference between coincident and non-coincident ratings. UE PR 2213 Population of Demand Data for CA RIN.
CAUE5.4BOP4	5.4	MD & Utilisation Spatial	TABLE 5.4.1 NON-COINCIDENT & COINCIDENT MAXIMUM DEMAND [Raw Adjusted MD Non-Coincident] MW	Actual	Load Forecast Spreadsheet SCADA (OSI-PI)	N/A	Historical non-coincident maximum demands (MW) at each zone substation were captured and recorded as part of the load forecasting process. These values	N/A	Peak demands are recorded over a summer period which extends from November to

			[Raw Adjusted MD Coincident] MW [Raw Adjusted MD Non-Coincident] MVA [Raw Adjusted MD Coincident] MVA [Date MD occurred Non-Coincident] [Date MD occurred Coincident] [Half hour time period MD occurred Non-Coincident] [Half hour time period MD occurred Coincident] [Winter/Summer Peaking Non-Coincident]				have been adjusted for any applicable abnormalities which occurred within the period concerned. The reactive power demand in MVAr at each zone substation has also been captured and recorded as part of the load forecasting process. These values have been adjusted for any applicable abnormalities occurred within the period concerned. Those MW and MVAr values can be used to calculate the MVA demand and operating power factor at each zone substation. Coincident demands are extracted from OSI-PI for RIN reporting. Those values are not corrected for abnormalities and reported as raw data. The recorded information includes date and time (EST) of non-coincident and coincident MD.		March, so that it is possible for a peak demand for a particular calendar year to fall in the previous November or December. UE PR 2213 Population of Demand Data for CA RIN.
CAUE6.3BOP1	6.3	Sustained Interruptions	TABLE 6.3.1 - SUSTAINED INTERRUPTIONS TO SUPPLY	Actual	OUA DMS Annual RIN 2016 Tab 3.6.8	N/A	Raw unplanned data is downloaded from the DMS Database. The data is cleansed to remove duplications, system errors (events that should have been cancelled), ensure each event has a valid feeder name, split out outages affecting multiple feeders into each feeder component and check SAIFI/MAIFI overrides and adjusted for temporary switching arrangements. Raw planned data is downloaded from OUA. The data is checked to ensure each entry has a valid feeder ID and that the time appears correct (events over 1 day are usually a system error and have not been closed out correctly). SAIDI, SAIFI and MAIFI performance is calculated in accordance with AER definitions. Refer to Annual RIN tab 3.6.8 for feeder classifications. Excluded events and MED records are maintained by Network Performance team. The cause codes in the database are UE cause codes and these are mapped into the RIN 'Reason for Interruption'. The outage database also contains outage dates and time, feeder ID, number of customers affected and CMOS. The average duration is calculated as CMOS/customers affected. For this particular RIN, document UE PR 2355 was referenced. For the majority of events, the raw outage data from OUA is sufficient to select the appropriate detailed reason. These causes are mapped directly. For animal faults, the comments must be read for each individual outage to determine the correct detailed cause. For vegetation faults, the comments and cause are checked to get some information (UE vs Non UE responsibility), however whether the event was a Grow-in or a Blow-in/Fall-in is not easily deduced from the comments. Therefore the maximum wind gust speed was compiled for each day of the year (sourced from BOM data at Scoresby Weather station) along with the number of vegetation outages. The	An interruption starts when first recorded by equipment or, where equipment does not exist, at the time of the first customer call in relation to the network outage. An interruption ends when supply is restored and available to the customer.	N/A

							average number of vegetation outages per day was determined as well as the max wind gust speed range at which the average number of vegetation outages per day more than doubles. Therefore, for days on which the wind gust speed exceeded 65km/hr, vegetation outages are deemed to be 'Blow-in/Fall-in', otherwise they are classified as 'Grow-in'. Note that additional vegetation outage data should be available for 2017 calendar year.		