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April 2016

Economic Benchmarking RIN Basis of Preparation 2015

Overview

United Energy is required to prepare a Basis of Preparation document (this document) which must, for all information:

a) demonstrate how the information provided is consistent with the requirements of this 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) explain, in circumstances where United Energy cannot provide input for a Variable using Actual Information and therefore must provide input using Estimated Information:

   1) why an estimate was required, including why it was not possible for United Energy to use Actual Financial Information or Actual Non-financial Information (as the case may be, depending on the Variable);

   2) 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 this Notice.

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

- *'United Energy economic benchmarking data templates – Consolidated Information'*
- *'United Energy economic benchmarking data templates – Actual Information'*
- *'United Energy economic benchmarking data templates – Estimated Information'*

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

- assessment of data quality;
- data source;
- classification as actual or estimated information, including appropriate justification if estimated;
- methodology and assumptions adopted to prepare the information; and
- any additional comments to assist users of the information to understand the basis of preparation.

The table below outlines the classifications used to assess data quality.

Table 1: Data quality and classifications

Colour coding	Availability of data from NSP's Primary System	Assumptions / methodology
Green	Available and verifiable	Simple – no additional work or minor work around (e.g. data sourced from a secondary system)
Light green	Available with some gaps	Moderate – estimate based on statistically significant sample size
Yellow	Little or no data available	Complex – estimate based on formula, standard parameters or other source

Colour coding	Availability of data from NSP's Primary System	Assumptions / methodology
Pink	Little or no data available	Subjective – based on significant estimates, judgements and assumptions
Black	N/A	Not applicable to relevant NSP

The table below provides the AER definitions for actual and estimated information.

Table 2: Definitions – 'Actual and 'estimated'

Term	Table Heading
Actual information	Information presented in response to the Notice whose presentation is Materially dependent on information recorded in United Energy's historical accounting records or other records used in the normal course of business, and whose presentation for the purposes of the Notice is not contingent on judgments and assumptions for which there are valid alternatives, which could lead to a Materially different presentation in the response to the Notice. 'Accounting records' include trial balances, the general ledger, subsidiary accounting ledgers, journal entries and documentation to support journal entries. Actual financial information may include accounting estimates, such as accruals and provisions, and any adjustments made to the accounting records to populate United Energy's regulatory accounts and responses to the Notice. 'Records used in the normal course of business', for the purposes of non-financial information, includes asset registers, geographical information systems, outage analysis systems, and so on.
Estimated information	Information presented in response to the Notice whose presentation is not Materially dependent on information recorded in United Energy's historical accounting records or other records used in the normal course of business, and whose presentation for the purposes of the Notice is contingent on judgments and assumptions for which there are valid alternatives, which could lead to a Materially different presentation in the response to the Notice.

The estimated information is produced using the methodology detailed below. This methodology represents United Energy's best estimate as applied over prior reporting periods and is sourced from United Energy's information systems, audited information (where applicable), internal management reports and subject matter expert professional judgement based on the nature of United Energy's operations. United Energy is unable to provide information with greater accuracy than that provided in its response.

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.

Detailed basis of preparation

The following tables outline the basis of preparation of the information provided in all Microsoft Excel Workbooks outlined in the Overview section.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
3.1	**Revenue**	**3.1.1**	**Revenue Grouping By Chargeable Quantity** DREV0101 - Revenue from Fixed Customer Charges		F	Based on reported monthly energy. SAP Billing System and accrual data extracts	Actual		Sum fixed revenue components for all tariffs (i.e. Cmp = 'FXD'). For accrued components scaling and adjustments may be made based on; - Boundary load metered energy and loss factors - Inter DNSP energy flows - Embedded generation - Known billing issues		A high percentage of actual billed data has been used.
			DREV0102 - Revenue from Energy Delivery charges where time of use is not a determinant		F	Based on reported monthly energy. SAP Billing System and accrual data extracts	Actual		Sum revenue components of single rate tariffs (i.e. S1, M1, L1, S1WET). For accrued components scaling and adjustments may be made based on; - Boundary load metered energy and loss factors - Inter DNSP energy flows - Embedded generation - Known billing issues		A high percentage of actual billed data has been used.
			DREV0103 - Revenue from On–Peak Energy Delivery charges		F	Based on reported monthly energy. SAP Billing System and accrual data extracts	Actual		Sum peak tariff revenue components (excluding S1, M1, L1, S1WET). For accrued components scaling and adjustments may be made based on; - Boundary load metered energy and loss factors - Inter DNSP energy flows - Embedded generation - Known billing issues		A high percentage of actual billed data has been used. The definition of peak times can vary across different tariffs.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			DREV0104 - Revenue from Shoulder period Energy Delivery Charges		F	Based on reported monthly energy. SAP Billing System and accrual data extracts	Actual		Sum shoulder revenue components (i.e. Cmp = 'SHD'). For accrued components scaling and adjustments may be made based on; - Boundary load metered energy and loss factors - Inter DNSP energy flows - Embedded generation - Known billing issues		A high percentage of actual billed data has been used. The definition of shoulder times can vary across different tariffs.
			DREV0105 - Revenue from Off–Peak Energy Delivery charges (excluding hot water and other DED)		F	Based on reported monthly energy. SAP Billing System and accrual data extracts	Actual		Sum off-peak revenue components (excluding controlled load and unmetered energy). For accrued components scaling and adjustments may be made based on; - Boundary load metered energy and loss factors - Inter DNSP energy flows - Embedded generation - Known billing issues		A high percentage of actual billed data has been used. The definition of off-peak times can vary across different tariffs.
			DREV0106 - Revenue from controlled load customer charges		F	Based on reported monthly energy. SAP Billing System and accrual data extracts	Actual		Sum controlled load revenue (i.e. Tariff = 'DED'). For accrued components scaling and adjustments may be made based on; - Boundary load metered energy and loss factors - Inter DNSP energy flows - Embedded generation - Known billing issues		
			DREV0107 - Revenue from unmetered supplies		F	Based on reported monthly energy. SAP Billing System and accrual data	Actual		Sum unmetered revenue (i.e. Tariff = 'UNM'). For accrued components scaling and adjustments may be made based on; - Boundary load metered energy and loss factors		A high percentage of actual billed data has been used.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
						extracts			- Inter DNSP energy flows - Embedded generation - Known billing issues		
			DREV0109 - Revenue from Measured Maximum Demand charges		F	Based on reported monthly energy. SAP Billing System and accrual data extracts	Actual		Sum revenue of maximum demand related charges (i.e. Cmp = 'DMNRLN', 'DMNSMR') For accrued components scaling and adjustments may be made based on; - Known billing issues		A high percentage of actual billed data has been used.
			DREV0110 - Revenue from metering charges		F	SAP Financial accounts	Actual		Extracted from summary sheet 'Alternative Control Services and Other Services' of the final RIN reported revenues for 2015. Includes the sum of the following; - Meter investigation - Special meter reading - Remote meter re-configuration		Alternative control services
			DREV0111 - Revenue from connection charges		F	SAP Financial accounts	Actual		Extracted from summary sheet 'Alternative Control Services and Other Services' of the final RIN reported revenues for 2015. Includes the sum of the following; - De-energisation of existing connections - Energisation of existing connections - Routine connections - customers below 100 amps - Temporary supply services - Remote de-energisation - Remote re-energisation - Supply abolishment		Alternative control services

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
									- Elective underground service - Routine connections, for customers > 100amps		
			DREV0112 - Revenue from public lighting charges		F	SAP Financial accounts	Actual		Extracted from summary sheet 'Alternative Control Services and Other Services' of the final RIN reported revenues for 2015.		Alternative control services
			DREV0113 - Revenue from other Sources		F	SAP Financial accounts	Actual		Extracted from Sheet '2. Demand and Revenue' of 2015 FIN RIN. Refer to section 'Table 1 Standard Control Services Revenue - Current Year' Sum the following rows: (NUOS Revenue + Rebates + PFIT Solar Recovery + Grid fees + Unmetered revenue adjustment.		
					Financial	SAP Financial accounts	Actual		Extracted from summary sheet 'Alternative Control Services and Other Services' of the final RIN reported revenues for 2015. Includes the sum of the following: - Wasted attendance - Service truck visits - Reserve feeder - Emergency recoverable works - Elective underground service - Covering of low voltage mains for safety reasons - After hours truck by		Alternative control services

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
									appointment Also includes negotiated services taken from Tab 1a. Income from the 2015 financial RIN.		
			DREV01 - Total revenue by chargeable quantity		F	Refer to DREV0101 to DREV0109	Actual		Sum of DREV0101 to DREV0109.		A high percentage of actual billed data has been used. This only contains revenue from standard control services.
		3.1.2	Revenue Grouping by Customer Type or Class DREV0201 - Revenue from residential Customers		F	Based on reported monthly energy. SAP Billing System and accrual data extracts	Actual		Sum up revenue components for residential tariffs. (i.e. DED, S1, S1WET, S2, TOD, TOD9, TODFLEX). For accrued components scaling and adjustments may be made based on; - Boundary load metered energy and loss factors - Inter DNSP energy flows - Embedded generation - Known billing issues		A high percentage of actual billed data has been used.
			DREV0202 - Revenue from non-residential customers not on demand tariffs		F	Based on reported monthly energy. SAP Billing System and accrual data extracts	Actual		Sum up revenue components for the following non-residential tariffs. (L1, L2, M1, M25, M27) For accrued components scaling and adjustments may be made based on; - Boundary load metered energy and loss factors - Inter DNSP energy flows - Embedded generation - Known billing issues		

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			DREV0203 - Revenue from non-residential low voltage demand tariff customers		F	Based on reported monthly energy. SAP Billing System and accrual data extracts	Actual		Sum up revenue components for the following LV demand tariffs. (KW-TOU, KW-TOU-H, L2-KVA, L2-KVA-H, TOU). For accrued components scaling and adjustments may be made based on; - Boundary load metered energy and loss factors - Inter DNSP energy flows - Embedded generation - Known billing issues		
			DREV0204 - Revenue from non-residential high voltage demand tariff customers		F	Based on reported monthly energy. SAP Billing System and accrual data extracts	Actual		Sum up revenue components for the following HV demand tariffs. (HV-KVA, HV-KVA-H, ST22-KVA). For accrued components scaling and adjustments may be made based on; - Boundary load metered energy and loss factors - Inter DNSP energy flows - Embedded generation - Known billing issues		
			DREV0205 - Revenue from unmetered supplies		F	Based on reported monthly energy. SAP Billing System and accrual data extracts	Actual		Sum up revenue components for UNM tariff. For accrued components scaling and adjustments may be made based on; - Boundary load metered energy and loss factors - Inter DNSP energy flows - Embedded generation - Known billing issues		
			DREV02 - Total revenue by customer		F	Based on reported monthly energy.	Actual		Sum of DREV0201 to DREV0206.		

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			class			SAP Billing System and accrual data extracts					
			DREV0206 - Revenue from Other Customers (Standard Control Services)		F	SAP Financial accounts	Actual		As per DREV0113 in Standard Control Services column. (Tab 3.1 Revenue of EB RIN).		
			DREV0206 - Revenue from Other Customers (Alternative Control Services)		F	SAP Financial accounts	Actual		As per DREV01 in Alternative Control Services column. (Tab 3.1 Revenue of EB RIN).		
		3.1.3	**Revenue (Penalties) allowed (deducted) through incentive schemes** DREV0302 - STPIS		F	Based on Annual RIN reported revenue for 2015 and S Factor performance as supplied by Network Management and approved by the AER.	Actual		Multiply the annual RIN report revenue by the applicable S factor for the year.		
			DREV0303 - F-Factor		F	F Factor report provided AER	Actual		This is taken from the summary sheet of the final RIN reported revenues for 2015 which would have been derived from; - Sum transactions for SAP pass through charges account		

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			DREV0304 - S-Factor True up		F	UED PTRM opex allowance	Actual		As per AER determination		
			DREV03 - Total revenue of incentive schemes		F	Refer to DREV0301 to DREV0305.	Actual		Sum of DREV0301 to DREV0305.		
3.2	**Opex**	3.2.1.1	Current Opex Categories and Cost Allocations								*No Material change in United Energy's Cost Allocation Methodology*
		3.2.1.2 A	Historical OPEX Categories and Cost Allocations		F	Annual Financial RIN 2015 (SAP data)	Actual		Refer Schedule 6a of United Energy Annual RIN 2015: • Routine • Condition based • Emergency • SCADA/Network Control • Other - SCS (a) • Metering RBPC • Public Lighting • Alternative Control - Other • Negotiated Services Refer Schedule 8a of United Energy Annual RIN 2015: • Network Operating Costs • Billing & Revenue Collection • Advertising/Marketing • Customer Service • Regulatory • Regulatory Reset • IT • Licence fee • GSL payments • Non-network		

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
									alternatives costs • Debt raising costs • Other - Standard Control Services (a,b)		
		3.2.1.2B	Historical OPEX Categories and Cost Allocations								
		3.2.1.2C	Historical OPEX Categories and Cost Allocations								
		3.2.2.1	OPEX Consistency - Current Cost Allocation Approach			OPEX for network services – Refer to Table 3.2.1.2A OPEX for metering – Tab 14 Annual Financial RIN 2015	Actual		**OPEX for network services** All maintenance SCS OPEX is related to network services (DOPEX 118 to 126) and has been classified accordingly. ACS classifications have been allocated to appropriate categories based on descriptions **OPEX for metering, OPEX for connection services, OPEX for public lighting** ACS classifications have been allocated to appropriate categories based on cost descriptions		
		3.2.2.2	OPEX Consistency - Historical Cost Allocation Approaches			OPEX for network services – Refer to Table 3.2.1.2A OPEX for metering – Tab 14 Annual	Actual		**OPEX for network services** All maintenance SCS OPEX is related to network services (DOPEX 118 to 126) and has been classified accordingly. ACS classifications have been		

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
						Financial RIN 2015			allocated to appropriate categories based on descriptions **OPEX for metering, OPEX for connection services, OPEX for public lighting** ACS classifications have been allocated to appropriate categories based on cost descriptions		
		3.2.4	Opex for High Voltage Customers		F	SAP	Estimate	MVA installation for HV customers not known. Assumption that Maximum demand is reflective of installed capacity	1) Obtain Maximum demand from SAP billing info for all HV customers 2) Identify peak demand for each hv customer 3) Obtain total network opex costs Table 2.8 CA RIN related to distribution substations only 4) Obtain Installed Dist TX capacity from table 2.2.2 in CA RIN 5) Divide OPEX cost by sum of peak demand HV customers plus Installed Dist TX 6) Obtain cost per MVA 7) Multiply each HV customer installed capacity by cost per mva and sum totals	Maximum demand is reflective of installed capacity per hv customer. OPEX cost per MVA can be averaged across the network and reflective of costs of HV customer installations.	

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
3.2.3	**Provisions**	3.2.3	Provisions		F	SAP Payroll	Actual		SAP data. Bonus paid and leave taken based on payroll reports. Bonus provision trued up to actual bonuses paid. Environmental obligation based on third party expert reports.		
			Additional Provisions - OPEX Additional Provisions – CAPEX Additional Provisions - OPEX		F	SAP Payroll	Estimate	Additional opex provision for outstanding claims payable.	Bonus amounts based on historical KPI achievement. Annual leave & LSL accruals based on payroll data provided. Additional Provisions – OPEX – Management estimate based on maximum BAU claims expected at any point in time. Endorsed by ARC.		
3.3	**Assets (RAB)**	3.3.1	Regulatory Asset Base Values		F	SAP	Actual		The data in this table is the sum of the RAB variables. ***Network Services*** UE has deducted the value of services from the standard control asset base as its basis of populating this template. This only affects asset classes: • Overhead network <33kv • Underground network <33kv The value of the services asset value has been determined on the basis as that described under standard control – refer Table 3.3.2.		

<table>
<tr><th>Tab</th><th>Table Name</th><th>Table</th><th>Table Title</th><th>Data quality</th><th>Fin / Non-fin</th><th>Data source</th><th>Actual / Estimate</th><th>Justification (if estimated)</th><th>Methodology (Actual & Estimated)</th><th>Assumptions (Actual & Estimated)</th><th>Additional Comments</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Standard Control Services
This template has been completed based on Annual RIN data.</td><td></td><td></td></tr>
<tr><td></td><td></td><td>3.3.2</td><td>Asset Value Roll Forward</td><td></td><td>F</td><td>SAP

United Energy RAB work book based on AER guidance

Ernst & Young RAB valuation report</td><td>Actual / Estimate</td><td>As per AER requirements.</td><td>An insurance valuation report prepared by Ernst & Young (2011) itemises UE's asset to a detailed asset class level. The valuation percentages for this report are outlined below and have been used to prepare this data.
<table>
<tr><th>UE Asset Class</th><th>%</th><th>EB RIN Template 4 categories</th></tr>
<tr><td>Network Overhead Conductor Low Voltage</td><td>11.75%</td><td>For overhead network assets less than 33kV:</td></tr>
<tr><td>Network Overhead Conductor High Voltage</td><td>7.71%</td><td>For overhead network assets 33kV and above:</td></tr>
<tr><td>Network Overhead Conductor Sub Transmission</td><td>2.65%</td><td>For overhead network assets 33kV and above:</td></tr>
</table>
<table>
<tr><th>UE Asset Class</th><th>%</th><th>EB RIN Template 4 categories</th></tr>
<tr><td rowspan="2">Network Overhead Service Cable</td><td>2.80%</td><td>For overhead network assets less than 33kV:</td></tr>
<tr><td>0.08%</td><td>For overhead network assets less than 33kV:</td></tr>
<tr><td>Network Pole Staking</td><td>0.27%</td><td>For overhead network assets less than 33kV:</td></tr>
</table></td><td></td><td></td></tr>
</table>

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments

	0.01%	For overhead network assets less than 33kV:
Network Pole Low Voltage	14.46%	For overhead network assets less than 33kV:
Network Pole High Voltage	16.61%	For overhead network assets 33kV and above:
Network Pole Sub-transmission	2.66%	For overhead network assets 33kV and above:
Network Zone Sub Equipment	3.01%	Zone substations and transformers
	4.52%	Zone substations and transformers
Network Substation and Transformer	4.57%	Zone substations and transformers
	6.86%	Zone substations and transformers

UE Asset Class	**%**	**EB RIN Template 4 categories**
Network Underground Cable Low Voltage	9.78%	For underground network assets less than 33kV:
	1.05%	For underground network assets less than 33kV:
	4.70%	For underground network assets less than 33kV:
	0.01%	For underground network assets less than 33kV:
Network	6.50%	For underground

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments

Underground Cable High Voltage		network assets 33kV and above:
TOTAL	**100%**	

UE has allocated capital expenditure on the following basis:

UE Capital Category	**EB RIN**
Subtransmission	Overhead network assets 33kV and above (wires and towers / poles etc)
	Underground network assets 33kV and above(cables, ducts etc)
	Zone substations and transformers
Distribution	Underground network assets less than 33kV (cables)
	Overhead network assets less than 33kV (wires and poles)
	Distribution substations including transformers
UE Capital Category	**EB RIN**
Metering	Meters
SCADA/Network control	"Other" assets with long lives
Non-network general assets - IT	"Other" assets with short lives
Non-network general assets - Other	"Other" assets with long lives
Public lighting	ACS RAB

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
									Alternative Control Services The values are based on reported numbers and the final decision as per the worksheets.		
		3.3.3	Total Disaggregated RAB Asset Values		F	SAP United Energy RAB work book based on AER guidance	Actual / Estimate	As per AER requirements.	This the Average RAB values for as per the AER document "Economic benchmarking RIN for distribution network service providers – Instructions and Definitions" (Value of Capital Contributions or Contributed Assets are actual values)		
		3.3.4.1	Assets Lives - estimated service life of new assets		F	SAP United Energy RAB work book based on AER guidance	Estimate	As per AER requirements.	The assets lives are based on the same methodology in used in the AER final decision for the 2011 to 2015 pricing proposal.		
		3.3.4.2	Asset Lives - Estimated residual service life		F	SAP United Energy RAB work book based on AER guidance	Estimate	As per AER requirements.	The assets lives are based on the same methodology in used in the AER final decision for the 2011 to 2015 pricing proposal.		
3.4	**Operational Data**	**3.4.1**	**Energy Delivery** DOPED01 - Total energy delivered		NF	Based on reported monthly energy. SAP Billing System and accrual data extracts	Actual		Sum of DOPED0201 to DOPED006.		A high percentage of actual billed data has been used.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
		3.4.1.1	**Energy Grouping - Delivery by Chargeable Quality** DOPED0201 - Energy Delivery where time of use is not a determinant		NF	Based on reported monthly energy. SAP Billing System and accrual data extracts	Actual		Sum energy components of single rate tariffs (i.e. S1, M1, L1). For accrued components scaling and adjustments may be made based on; - Boundary load metered energy and loss factors - Inter DNSP energy flows - Embedded generation - Known billing issues		A high percentage of actual billed data has been used.
			DOPED0202 - Energy Delivery at On-peak times		NF	Based on reported monthly energy. SAP Billing System and accrual data extracts	Actual		Sum peak energy tariff components (excluding S1, M1, L1). For accrued components scaling and adjustments may be made based on; - Boundary load metered energy and loss factors - Inter DNSP energy flows - Embedded generation - Known billing issues		A high percentage of actual billed data has been used. The definition of peak times can vary across different tariffs.
			DOPED0203 - Energy Delivery at Shoulder times		NF	Based on reported monthly energy. SAP Billing System and accrual data extracts	Actual		Sum shoulder energy tariff components (i.e. Cmp = 'SHD'). For accrued components scaling and adjustments may be made based on; - Boundary load metered energy and loss factors - Inter DNSP energy flows - Embedded generation - Known billing issues		The definition of shoulder times can vary across different tariffs.
			DOPED0204 - Energy Delivery at Off-peak times			Based on reported monthly energy. SAP Billing System and accrual data	Actual		Sum off-peak energy tariff components (excluding controlled load and unmetered energy). For accrued components scaling and adjustments may be made based on; - Boundary load metered		A high percentage of actual billed data has been used. The definition of off-peak times can vary across different tariffs.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
						extracts			energy and loss factors - Inter DNSP energy flows - Embedded generation - Known billing issues		
			DOPED0205 - Controlled load energy deliveries		NF	Based on reported monthly energy. SAP Billing System and accrual data extracts	Actual		Sum controlled load energy (i.e. Tariff = 'DED'). For accrued components scaling and adjustments may be made based on; - Boundary load metered energy and loss factors - Inter DNSP energy flows - Embedded generation - Known billing issues		A high percentage of actual billed data has been used.
			DOPED0206 - Energy Delivery to unmetered supplies		NF	Based on reported monthly energy. SAP Billing System and accrual data extracts	Actual		Sum unmetered energy (i.e. Tariff = 'UNM'). For accrued components scaling and adjustments may be made based on; - Boundary load metered energy and loss factors - Inter DNSP energy flows - Embedded generation - Known billing issues		A high percentage of actual billed data has been used.
		3.4.1.2	**Energy - Received from TNSP and Other DNSPs by Time of Receipt** DOPED0301 - Energy into DNSP network at On-peak times DOPED0302 - Energy into DNSP network at Shoulder times DOPED0303 - Energy into DNSP		NF				Due to the lack of a single and clear definition of peak, shoulder and off-peak times, this value is set to zero. All energy into the DNSP network is shown in DOPED0304.		No clear definition of On-Peak period for energy into network. The data is only readily available as an aggregate across a period. All energy into the DNSP network is shown in DOPED0304.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			network at Off-peak times								
			DOPED0304 - Energy received from TNSP and other DNSPs not included in the above categories		NF	DFL reports	Actual		Sum of energy delivered into the network from the Interval Metering System and also energy obtained from other distributors through inter DNSP energy flows.		Mostly actual data but some estimates for inter DNSP energy flows. Note that this value is based on the financial year basis and not the calendar year to ensure the full peak demand period (Summer) is captured.
		3.4.1.3	**Energy - Received into DNSP System From Embedded Generation by Time of Receipt** DOPED0401 - Energy into DNSP network at On-peak times from non-residential embedded generation		NF						No clear definition of On-Peak period for energy into network from embedded generation. The data is only available as an aggregate across a period.
			DOPED0402 - Energy into DNSP network at Shoulder times from non-residential embedded generation		NF						No clear definition of shoulder period for energy into network from embedded generation. The data is only available as an aggregate across a period.
			DOPED0403 - Energy into DNSP network at Off-peak times from non-residential embedded		NF						No clear definition of Off-peak period for energy into network from embedded generation. The data is only available as an aggregate across a

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			generation								period.
			DOPED0404 - Energy received from embedded generation not included in above categories from non-residential embedded generation		NF	SAP Billing System via report.	Actual / Estimate	The last month of the reporting period has been estimated for the following reasons. - NMIs can be billed for up to a month in arrears from the consumption period. - Delayed billing for other reasons.	Sum up export energy from all non-residential tariffs. Dec 15 export energy has been scaled from Nov 15 export energy based on the ratio of export energy from the prior year (Dec 14 export GWh/Nov 14 export GWh)		A high percentage of actual billed data has been used.
			DOPED0405 - Energy into DNSP network at On-peak times from residential embedded generation		NF						No clear definition of On-Peak period for energy into network from embedded generation. The data is only available as an aggregate across a period.
			DOPED0406 - Energy into DNSP network at Shoulder times from residential embedded generation		NF						No clear definition of shoulder period for energy into network from embedded generation. The data is only available as an aggregate across a period.
			DOPED0407 - Energy into DNSP network at Off-peak times from residential embedded generation		NF	SAP Billing System via report.	Actual / Estimate	The last month of the reporting period has been estimated for the following reasons. - NMIs can be billed for up to a month in arrears from the consumption period. - Delayed billing for other reasons.	Sum up export energy from all non-residential tariffs. Dec 15 export energy has been scaled from Nov 15 export energy based on the ratio of export energy from the prior year (Dec 14 export GWh/Nov 14 export GWh)		No clear definition of Off-peak period for energy into network from embedded generation. The data is only available as an aggregate across a period.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			DOPED0408 - Energy received from embedded generation not included in above categories from residential embedded generation		NF	SAP Billing System via report.	Actual		Sum up export energy from all residential tariffs.	Dec 15 export energy has been scaled from Nov 15 export energy based on the ratio of export energy from the prior year (Dec 14 export GWh/Nov 14 export GWh). The last month of the reporting period has been estimated for the following reasons. - NMIs can be billed for up to a month in arrears from the consumption period. - Delayed billing for other reasons.	
		3.4.1.4	**Energy Grouping - Customer Type or Class** DOPED0501 - Residential customers energy deliveries			Based on reported monthly energy. SAP Billing System and accrual data extracts	Actual / Estimate	The latter months of the reporting period have some accrued components for the following reasons. - NMIs can be billed for up to three months in arrears from the consumption period. - Delayed billing for other reasons.	Sum energy components of single rate tariffs (i.e. S1, M1, L1). For accrued components scaling and adjustments may be made based on; - Boundary load metered energy and loss factors - Inter DNSP energy flows - Embedded generation - Known billing issues		A high percentage of actual billed data has been used.
			DOPED0502 - Non residential customers not on demand tariffs energy deliveries		NF	Based on reported monthly energy. SAP Billing System and accrual data extracts	Actual / Estimate	The latter months of the reporting period have some accrued components for the following reasons. - NMIs can be billed for up to three months in arrears from the consumption period. - Delayed billing for other reasons.	Sum up all energy components for the following non-residential tariffs. (L1, L2, M1, M25, M27) For accrued components scaling and adjustments may be made based on; - Boundary load metered energy and loss factors - Inter DNSP energy flows		A high percentage of actual billed data has been used.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
									- Embedded generation - Known billing issues		
			DOPED0503 - Non-residential low voltage demand tariff customers energy deliveries		NF	Based on reported monthly energy. SAP Billing System and accrual data extracts	Actual / Estimate	The latter months of the reporting period have some accrued components for the following reasons. - NMIs can be billed for up to three months in arrears from the consumption period. - Delayed billing for other reasons.	Sum up all energy components for the following LV demand tariffs. (KW-TOU, KW-TOU-H, L2-KVA, L2-KVA-H, TOU). For accrued components scaling and adjustments may be made based on; - Boundary load metered energy and loss factors - Inter DNSP energy flows - Embedded generation - Known billing issues		A high percentage of actual billed data has been used.
			DOPED0504 - Non-residential high voltage demand tariff customers energy deliveries		NF	Based on reported monthly energy. SAP Billing System and accrual data extracts	Actual / Estimate	The latter months of the reporting period have some accrued components for the following reasons. - NMIs can be billed for up to three months in arrears from the consumption period. - Delayed billing for other reasons.	Sum up all energy components for the following HV demand tariffs. (HV-KVA, HV-KVA-H, ST22-KVA). For accrued components scaling and adjustments may be made based on; - Boundary load metered energy and loss factors - Inter DNSP energy flows - Embedded generation - Known billing issues		A high percentage of actual billed data has been used.
			DOPED0505 - Other Customer Class Energy Deliveries		NF	Based on reported monthly energy. SAP Billing System and accrual data extracts	Actual / Estimate	The latter months of the reporting period have some accrued components for the following reasons. - NMIs can be billed for up to three months in arrears from the consumption period. - Delayed billing for	Sum up all energy components for UNM tariff. For accrued components scaling and adjustments may be made based on; - Boundary load metered energy and loss factors - Inter DNSP energy flows - Embedded generation - Known billing issues		A high percentage of actual billed data has been used.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
								other reasons.			
		3.4.2.1	**Customer Numbers** DOPCN0101 - Residential customer numbers		NF	SAP Billing System customer number extracts and reports.	Actual / Estimate	Some estimation and smoothing of customer numbers required for 2015 to account for timing anomalies arising from transition of customers between Q-Rept and SAP Hana.	Sum all customers on tariffs classified as small.		Total customer numbers aligned with table 4 of STPIS reporting.
			DOPCN0102 – Non-residential customers not on demand tariff customer numbers		NF	SAP Billing System customer number extracts and reports.	Actual / Estimate	Some estimation and smoothing of customer numbers required for 2015 to account for timing anomalies arising from transition of customers between Q-Rept and SAP Hana.	Sum all customers on Non-TOU tariffs classified as medium.		Total customer numbers aligned with table 4 of STPIS reporting.
			DOPCN0103 - Low voltage demand tariff		NF	SAP Billing System customer	Actual / Estimate	Some estimation and smoothing of customer numbers required for 2015 to account for	Sum all customers on LV-TOU tariffs.		Total customer numbers aligned with table 4 of STPIS reporting.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			customer numbers			number extracts and reports.		timing anomalies arising from transition of customers between Q-Rept and SAP Hana.			
			DOPCN0104 - High voltage demand tariff customer numbers		NF	SAP Billing System customer number extracts and reports.	Actual / Estimate	Some estimation and smoothing of customer numbers required for 2015 to account for timing anomalies arising from transition of customers between Q-Rept and SAP Hana.	Sum all customers on HV-TOU and SUBT tariffs.		Total customer numbers aligned with table 4 of STPIS reporting.
			DOPCN0105 - Unmetered Customer Numbers		NF	SAP Billing System customer number extracts and reports.	Actual / Estimate	Some estimation and smoothing of customer numbers required for 2015 to account for timing anomalies arising from transition of customers between Q-Rept and SAP Hana.	Sum all customers on an UNMET tariff.		Total customer numbers aligned with table 4 of STPIS reporting.
			DOPCN0106 - Other Customer Numbers		NF						
			DOPCN01 - Total customer numbers		NF	SAP Billing System customer number extracts and reports.	Actual / Estimate	Some estimation and smoothing of customer numbers required for 2015 to account for timing anomalies arising from transition of customers between Q-Rept and SAP Hana.	Sum of DOPCN0101 to DOPCN0106.		Total customer numbers aligned with table 4 of STPIS reporting.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
		3.4.2.2	Distribution Customer Numbers by Customer Type or Class DOPCN0201 - Customers on CBD network		NF						No customers on CBD network.
			DOPCN0202 - Customers on Urban network		NF	Table 3.4.2.1 Distribution customer numbers by customer type or class.	Estimated	Not stored for all customers in source data systems.	Derived from proportion of urban customers supplied by Asset Management. 2015 customer numbers are based on the historic urban/short rural ratio. The geographical breakdown of UE will not change due to minimal movements in the feeder classifications in CY2015.		
			DOPCN0203 - Customers on Short rural network		NF	Table 3.4.2.1 Distribution customer numbers by customer type or class.	Estimated	Not stored for all customers in source data systems.	Derived from proportion of urban customers supplied by Asset Management. 2015 customer numbers are based on the historic urban/short rural ratio. The geographical breakdown of UE will not change due to minimal movements in the feeder classifications in CY2015.		
			DOPCN0204 - Customers on Long rural network		NF						No customers on Long rural network.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			DOPCN02 - Total customer numbers		NF	Table 3.4.2.1 Distribution customer numbers by customer type or class.	Actual / Estimate		Sum of DOPCN0201 to DOPCN0204.		
		3.4.2.3	Distribution Customer Numbers by Aurora Feeder Categories (Aurora Only)								Not applicable for UE
		3.4.2.4	Unmetered Supply								Not applicable for UE
		3.4.3	**System demand** **3.4.3.1 Annual MD at Zone sub Level - MW** DOPSD0101 Non–coincident Summated Raw System Annual Peak Demand		NF	Load Forecast Spreadsheet.	Actual		Peak demands are recorded at a zone substation level in our SCADA system. The load forecast spreadsheet is updated to include this data. Summation of individual zone substation peak demand provides the requested data.	It should be noted that these demands exclude (i.e. assumed out of service) the embedded generation at Dandenong and Springvale South zone substations	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.
			DOPSD0102 Non–coincident Summated Weather Adjusted System Annual Peak Demand 10% POE		NF	Load Forecast Spreadsheet.	Estimate	The 10% PoE forecast relies on temperature sensitivity information provided by the NIEIR forecast. This information is validated against historical data, an internal estimation procedure and bottom up estimation.	The 10% PoE forecast is generated from actual peak demand data and corrected for temperature. The correction of PoE for temperature is based on historical data, the scaling factor of Load with PoE is based on NIEIR estimates. Summation of individual zone substation peak	It should be noted that these demands exclude (i.e. assumed out of service) the embedded generation at Dandenong and Springvale South zone substations	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.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
									demand provides the requested data.		
			DOPSD0103 Non–coincident Summated Weather Adjusted System Annual Peak Demand 50% POE		NF	Load Forecast Spreadsheet.	Estimate	The 50% PoE forecast relies on temperature sensitivity information provided by the NIEIR forecast. This information is validated against historical data, an internal estimation procedure and bottom up estimation.	The 50% POE maximum demand levels are calculated from the 10% POE by the application of correction factors for demand sensitivity with temperature and a temperature correction factor for substations in the Mornington peninsula.	It should be noted that these demands exclude (i.e. assumed out of service) the embedded generation at Dandenong and Springvale South zone substations	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.
			DOPSD0104 Coincident Raw System Annual Peak Demand		NF	Load Forecast Spreadsheet.	Actual		Half hourly data at individual zone substations is extracted and summated for each year (summer period).	It should be noted that these demands exclude (i.e. assumed out of service) the embedded generation at Dandenong and Springvale South zone substations	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.
			DOPSD0105 Coincident Weather Adjusted System Annual Peak Demand 10% POE		NF	Load Forecast Spreadsheet.	Estimate	The 10% PoE forecast relies on temperature sensitivity information provided by the NIEIR forecast. This information is validated against historical data, an internal estimation procedure and bottom up estimation.	The ratio between weather corrected 10% POE non-coincident maximum demand in MW and the raw non-coincident maximum demand in MW at each zone substation is used to estimate the weather corrected 10% POE coincident maximum demand in MW.	The demand assumes the embedded generation at Dandenong and Springvale South Zone substation is included.	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.
			DOPSD0106 Coincident Weather Adjusted System Annual Peak		NF	Load Forecast Spreadsheet.	Estimate	The 50% PoE forecast relies on temperature sensitivity information provided by the NIEIR forecast. This	The ratio between weather corrected 50% POE non-coincident maximum demand in MW and the raw non-coincident maximum	It should be noted that these demands exclude (i.e. assumed out of service) the embedded generation at	Peak demands are recorded over a summer period which extends from November to March, so that it is possible for a

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			Demand 50% POE					information is validated against historical data, an internal estimation procedure and bottom up estimation.	demand in MW at each zone substation is used to estimate the weather corrected 50% POE coincident maximum demand in MW.	Dandenong and Springvale South zone substations	peak demand for a particular calendar year to fall in the previous November or December.
			3.4.3.2 Annual MD at Transmission Connection Point - MW DOPSD0107 Non–coincident Summated Raw System Annual Peak Demand		NF	Connection Asset Forecast	Actual		Non-coincident peak demands (MW & MVA) at individual terminal stations are calculated based on interval metering data. The UE numbers are reconciled with the AEMO values for accuracy during this process. Individual terminal station peak demands are summed to calculate the non-coincident raw system annual demand.	The demand assumes the embedded generation at Dandenong and Springvale South Zone substation is included.	AEMO allocates the power flows through a sub-transmission line to the DNSP to whom the physical assets belongs to. Therefore, in shared sub-transmission loops and shared zone substations, the actual UE demand deviates from the AEMO's assessment depending on the amount of cross border flows between adjacent DNSPs.
			DOPSD0108 Non–coincident Summated Weather Adjusted System Annual Peak Demand 10% POE		NF	Load Forecast Spreadsheet.	Estimate	The 10% PoE forecast relies on temperature sensitivity information provided by the NIEIR forecast. This information is validated against historical data, an internal estimation procedure and bottom up estimation.	The 10% PoE demand is generated from actual peak demand data and corrected for temperature. The correction of PoE for temperature is based on historical data, the scaling factor of Load with PoE is based on NIEIR estimates.	The demand assumes the embedded generation at Dandenong and Springvale South Zone substation is included.	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.
			DOPSD0109 Non–coincident Summated Weather Adjusted System Annual Peak Demand 50% POE		NF	Load Forecast Spreadsheet.	Estimate	The 50% PoE forecast relies on temperature sensitivity information provided by the NIEIR forecast. This information is validated against historical data, an internal estimation procedure and bottom up estimation.	The 50% PoE demand is generated from actual peak demand data and corrected for temperature. The correction of PoE for temperature is based on historical data, the scaling factor of Load with PoE is based on NIEIR estimates.	The demand assumes the embedded generation at Dandenong and Springvale South Zone substation is included.	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.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			DOPSD0110 Coincident Raw System Annual Peak Demand		NF	UE Actual & Forecast S & W Demand Spreadsheet	Actual		As part of the demand forecasting process, UE annually provides half hourly data at individual terminal stations to NIEIR. This data includes only the UE demand and all the metered cross border flows are adjusted to ascertain the actual UE demand. Based on this data, NIEIR calculates the coincident UE maximum demand. These values are included in the UE's annual demand forecast prepared by NIEIR.		These demands represent the total UE demand (adjusted for metered cross border flows) and exclude the embedded generation output at Dandenong and Springvale South zone substations.
			DOPSD0111 Coincident Weather Adjusted System Annual Peak Demand 10% POE		NF	Load Forecast Spreadsheet.	Estimate	The 10% PoE forecast relies on temperature sensitivity information provided by the NIEIR forecast. This information is validated against historical data, an internal estimation procedure and bottom up estimation.	The 10% PoE forecast is generated from actual peak demand data and corrected for temperature. The correction of PoE for temperature is based on historical data, the scaling factor of Load with PoE is based on NIEIR estimates.		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.
			DOPSD0112 Coincident Weather Adjusted System Annual Peak Demand 50% POE		NF	Load Forecast Spreadsheet.	Estimate	The 50% PoE forecast relies on temperature sensitivity information provided by the NIEIR forecast. This information is validated against historical data, an internal estimation procedure and bottom up estimation.	The 50% PoE forecast is generated from actual peak demand data and corrected for temperature. The correction of PoE for temperature is based on historical data, the scaling factor of Load with PoE is based on NIEIR estimates.		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.
			3.4.3.3 Annual MD at zone substation level - MVA		NF	Load Forecast Spreadsheet.	Actual		Actual peak demands (MW and MVAr) at individual zone substations are extracted from SCADA data		Peak demands are recorded over a summer period which extends from November to March, so

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			DOPSD0201 Non–coincident Summated Raw System Annual Maximum Demand						after each summer as part of demand forecasting process. Based on MW and MVAr values, maximum MVA demand is calculated at each zone substation and this information is readily available from summer 1989/90 in the Load Forecast spread sheet. Summation of individual zone substation peak demands (MVA) provides the requested data.		that it is possible for a peak demand for a particular calendar year to fall in the previous November or December.
			DOPSD0202 Non–coincident Summated Weather Adjusted System Annual Peak Demand 10% POE		NF	Load Forecast Spreadsheet.	Estimate	The 10% PoE forecast relies on temperature sensitivity information provided by the NIEIR forecast. This information is validated against historical data, an internal estimation procedure and bottom up estimation.	The raw non-coincident power factor is used to calculate the weather corrected 10% POE non-coincident maximum demands in MW to MVA. The calculation assumes the power factor will not be materially different at raw maximum demand and 10% POE maximum demand conditions.	It should be noted that these demands exclude (i.e. assumed out of service) the embedded generation at Dandenong and Springvale South zone substations	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.
			DOPSD0203 Non–coincident Summated Weather Adjusted System Annual Peak Demand 50% POE		NF	Load Forecast Spreadsheet.	Estimate	The 50% PoE forecast relies on temperature sensitivity information provided by the NIEIR forecast. This information is validated against historical data, an internal estimation procedure and bottom up estimation.	The raw non-coincident power factor is used to convert the weather corrected 50% POE non-coincident maximum demands in MW to MVA assuming the power factor will not be materially different at raw and 50% POE maximum demand conditions. Weather corrected 50% POE non coincident	It should be noted that these demands exclude (i.e. assumed out of service) the embedded generation at Dandenong and Springvale South zone substations	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.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
									maximum demand in MVA = (Weather corrected 50% POE non coincident maximum demand in MW)/(Power Factor at raw non coincident maximum demand)		
			DOPSD0204 Coincident Raw System Annual Peak Demand		NF	Load Forecast Spreadsheet.	Estimate	The estimate is accurate to the extent that the system average power factor is accurate.	The raw non-coincident power factor is used to calculate the coincident maximum demands in MW to MVA. it assumes the power factor will not be materially different at coincident and non-coincident maximum demand conditions.	It should be noted that these demands exclude (i.e. assumed out of service) the embedded generation at Dandenong and Springvale South zone substations	
			DOPSD0205 Coincident Weather Adjusted System Annual Peak Demand 10% POE		NF	Load Forecast Spreadsheet.	Estimate	The estimate is accurate to the extent that the system average power factor is accurate.	The raw non-coincident power factor is used to calculate the weather corrected 10% POE coincident maximum demands in MW to MVA. it assumes the power factor will not be materially different at raw and 10% POE maximum demand conditions.	It should be noted that these demands exclude (i.e. assumed out of service) the embedded generation at Dandenong and Springvale South zone substations	
			DOPSD0206 Coincident Weather Adjusted System Annual Peak Demand 50% POE		NF	Load Forecast Spreadsheet.	Estimate	The estimate is accurate to the extent that the system average power factor is accurate.	The raw non-coincident power factor is used to calculate the weather corrected 50% POE coincident maximum demands in MW to MVA. The calculation assumes the power factor will not be materially different at raw and 50% POE maximum demand conditions.	It should be noted that these demands exclude (i.e. assumed out of service) the embedded generation at Dandenong and Springvale South zone substations	

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			3.4.3.4 Annual MD at Transmission Connection Point - MVA DOPSD0207 Non–coincident Summated Raw System Annual Peak Demand		NF	Connection Assets Forecast Spreadsheet.	Estimate	The estimate is accurate to the extent that the system average power factor is accurate.	Non-coincident peak demands (MW and MVAr) at individual terminal stations are calculated based on the interval metering data. Based on MW and MVAr values, maximum MVA demand is calculated at each terminal station. These values are recorded in the annual TSDF submissions to AEMO.		It should be noted that these demands include the embedded generation output at Dandenong and Springvale South zone substations. Further they include cross border flows too.
			DOPSD0208 Non–coincident Summated Weather Adjusted System Annual Peak Demand 10% POE		NF	Load Forecast Spreadsheet	Estimate	The 10% POE forecast relies on temperature sensitivity information provided by the NIEIR forecast. This information is validated against historical data, an internal estimation procedure and bottom up estimation.	The 10% POE scaling factor calculated based on the actual and weather corrected total UE demand is used to scale the non-coincident demand calculated under DOPSD0207 to estimate the 10% POE non-coincident weather adjusted system annual maximum demand.		
			DOPSD0209 Non–coincident Summated Weather Adjusted System Annual Peak Demand 50% POE		NF	Load Forecast Spreadsheet	Estimate	The 50% POE forecast relies on temperature sensitivity information provided by the NIEIR forecast. This information is validated against historical data, an internal estimation procedure and bottom up estimation.	The 50% POE scaling factor calculated based on the actual and weather corrected total UE demand is used to scale the non-coincident demand calculated under DOPSD0207 to estimate the 50% POE non-coincident weather adjusted system annual maximum demand.		

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			DOPSD0210 Coincident Raw System Annual Peak Demand		NF	Load Forecast Spreadsheet	Estimate	The estimate is accurate to the extent that the system average power factor is accurate.	The coincident raw system annual maximum MW demand calculated under DOPSD10 is divided by the system average power factor calculated at non-coincident maximum demand to calculate the information for this cell.		It should be noted that these demands represent the total UE demand (adjusted for metered cross border flows) and exclude the embedded generation output at Dandenong and Springvale South zone substations.
			DOPSD0211 Coincident Weather Adjusted System Annual Peak Demand 10% POE		NF	Load Forecast Spreadsheet	Estimate	The estimate is accurate to the extent that the system average power factor is accurate.	The 10% POE coincident weather adjusted system annual maximum MW demand calculated under DOPSD11 is divided by the system average power factor calculated at non-coincident maximum demand to calculate the information in this cell.		It should be noted that these demands represent the total UE demand (adjusted for metered cross border flows) and exclude the embedded generation output at Dandenong and Springvale South zone substations.
			DOPSD0212 Coincident Weather Adjusted System Annual Peak Demand 50% POE		NF	Load Forecast Spreadsheet	Estimate	The estimate is accurate to the extent that the system average power factor is accurate.	The 50% POE coincident weather adjusted system annual maximum MW demand calculated under DOPSD12 is divided by the system average power factor calculated at non-coincident maximum demand to calculate the information for this cell.		It should be noted that these demands represent the total UE demand (adjusted for metered cross border flows) and exclude the embedded generation output at Dandenong and Springvale South zone substations.
			3.4.3.5 Power factor Conversion between MVA and MW DOPSD0301 Average over whole network		NF	Calculated value	Estimate	The power factor at maximum demand is used as the average power factor. This is reasonable estimate as power factor does not very materially and to calculate the average power factor would be very onerous.	The power factor conversion is a formula based factor. Coincident Raw System Annual Maximum Demand - MW (DOPSD0110) divided by the Coincident Raw System Annual Maximum - MVA (DOPSDP210)		

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			DOPSD0302 Average for LV		NF	Calculated value	Estimate	The power factor at maximum demand is used as the average power factor. This is reasonable estimate as power factor does not very materially and to calculate the average power factor would be very onerous.	The summer peak kW and kVAr for all LV substations has been used to calculate the average power factor for low voltage distribution lines.	We have assumed that the LV distribution line power factors are similar to the respective LV distribution substation power factors.	SWER Line Loads have been removed from the calculation
			DOPSD0303 Average for 3.3kV								UE does not have any 3.3kV lines
			DOPSD0304 Average for 6.6kV		NF	Calculated from Load Forecast Spreadsheet Peak Demand.	Estimated	The power factor at maximum demand is used as the average power factor. This is reasonable estimate as power factor does not very materially and to calculate the average power factor would be very onerous.	Peak demand for all 6.6kV feeder MW and MVAR values are totalled from actual data in the load forecast spreadsheet and are used to calculate the power factor.		
			DOPSD0305 Average for 7.6kV								UE does not have any 7.6kV lines
			DOPSD0306 Average for 11kV		NF	Calculated from Load Forecast Spreadsheet Peak Demand.	Estimated	The power factor at maximum demand is used as the average power factor. This is reasonable estimate as power factor does not very materially and to calculate the average power factor would be very onerous.	Peak demand for all 11kV feeder MW and MVAR values are totalled from actual data in the load forecast spreadsheet and are used to calculate the power factor.		

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			DOPSD0307 Average for SWER		NF	Calculated from Load Forecast Spreadsheet Peak Demand.	Estimated		Summer peak demand for all SWER substation kW and kVAR values are totalled from actual data in the distribution substation data spreadsheet and are used to calculate the power factor.	Assumes that the distribution line power factors are similar to the SWER distribution Substation Power Factor.	
			DOPSD0308 Average for 22kV		NF	Calculated from Load Forecast Spreadsheet Peak Demand.	Estimated	The power factor at maximum demand is used as the average power factor. This is reasonable estimate as power factor does not very materially and to calculate the average power factor would be very onerous.	Peak demand for all 22kV feeder MW and MVAR values are totalled from actual data in the load forecast spreadsheet and are used to calculate the power factor.		
			DOPSD0309 Average for 66kV		NF	Calculated from Load Forecast Spreadsheet Peak Demand.	Estimated	The power factor at maximum demand is used as the average power factor. This is reasonable estimate as power factor does not very materially and to calculate the average power factor would be very onerous.	The data is calculated from a formula using the measures non-coincident power flow into the zone substation excluding zone substation transformation which is DOPSD0101 divided by DOPSD0201.		
			DOPSD0310 Average for 110kV		NF						UE does not have any 110kV, 132kV or 220kV lines
			DOPSD0311 Average for 132kV/ 220kV		NF						UE does not have any 110kV, 132kV or 220kV lines

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			3.4.3.6 Demand supplied (for customers charged on this basis) – MW measure DOPSD0401 - Summated Chargeable Contracted Maximum Demand		NF						Not applicable for UE
			DOPSD0402 - Summated Chargeable Measured Maximum Demand		NF	Based on reported monthly demand. SAP Billing System and accrual data extracts.	Actual / Estimate	The latter months of the reporting period have some accrued components for the following reasons. - NMIs can be billed for up to three months in arrears from the consumption period. - Delayed billing for other reasons.			A high percentage of actual billed data has been used.
			3.4.3.7 Demand supplied (for customers charged on this basis) – MVA measure DOPSD0403 - Summated Chargeable Contracted Maximum Demand		NF						Not applicable for UE
			DOPSD0404 - Summated Chargeable Measured Maximum		NF	Based on reported monthly demand. SAP	Actual / Estimate	The latter months of the reporting period have some accrued components for the following reasons.	Sum up all kVA demand components at a monthly aggregate for both the SDIC (Summer) and RD(Rolling) tariff components. This will		A high percentage of actual billed data has been used.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			Demand			Billing System and accrual data extracts.		- NMIs can be billed for up to three months in arrears from the consumption period. - Delayed billing for other reasons.	include the following tariffs (L2-KVA, HV-KVA, ST22-KVA, HV-KVA-HOT, L2-KVA-HOT).		
3.5	**Physical Assets**		**3.5.1 Network Capacity** **3.5.1.1 Circuit Length Overhead** DPA0101 Overhead low voltage distribution		NF	GIS Data Base	Actual		The requested information is held within UE's Geographical Information System (GIS). To access this information UE have purpose built reports. The AM/FM reports webpage is a portal to obtain this asset data. Asset data in the AM/FM reports are updated monthly from UE's GIS and presented in user friendly tables. Data is then available to directly match the RIN requirement.		UE has produced a number of documents which contain instructions on how the data required for the RIN category is to be obtained and populated. These documents include detailed methodologies to provide both actual and estimated data. The Basis of Preparation against each relevant RIN category is a summary of the methodology detailed within these UE produced documents. For this particular RIN, document UE PR 2209 and 2310 were referenced. All feeders and feeder lengths that are not owned by UE are filtered and removed.
			DPA0102 Overhead 2.2kV								UE does not use 2.2kV voltage level
			DPA0103 Overhead 6.6kV		NF	GIS Data Base	Actual		The requested information is held within UE's Geographical Information System (GIS). To access this information UE have purpose built reports. The		All feeders and feeder lengths that are not owned by UE are filtered and removed.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
									AM/FM reports webpage is a portal to obtain this asset data. Asset data in the AM/FM reports are updated monthly from UE's GIS and presented in user friendly tables. Data is then available to directly match the RIN requirement.		
			DPA0104 Overhead 7.6kV								UE does not use 7.6kV voltage level.
			DPA0105 Overhead 11 kV		NF	GIS Data Base	Actual		The requested information is held within UE's Geographical Information System (GIS). To access this information UE have purpose built reports. The AM/FM reports webpage is a portal to obtain this asset data. Asset data in the AM/FM reports are updated monthly from UE's GIS and presented in user friendly tables. Data is then available to directly match the RIN requirement.		All feeders and feeder lengths that are not owned by UE are filtered and removed.
			DPA0106 Overhead SWER		NF	GIS Data Base	Actual		The requested information is held within UE's Geographical Information System (GIS). To access this information UE have purpose built reports. The AM/FM reports webpage is a portal to obtain this asset data. Asset data in the AM/FM reports are updated monthly from UE's GIS and presented in user friendly tables. Data is then		All feeders and feeder lengths that are not owned by UE are filtered and removed.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
									available to directly match the RIN requirement. The 12.7kV feeder length shall be used for SWER overhead length.		
			DPA0107 Overhead 22 kV		NF	GIS Data Base	Actual		The requested information is held within UE's Geographical Information System (GIS). To access this information UE have purpose built reports. The AM/FM reports webpage is a portal to obtain this asset data. Asset data in the AM/FM reports are updated monthly from UE's GIS and presented in user friendly tables. Data is then available to directly match the RIN requirement.		All feeders and feeder lengths that are not owned by UE are filtered and removed.
			DPA0108 Overhead 33 kV								UE does not use 33kV voltage level.
			DPA0109 Overhead 44 kV								UE does not use 33kV voltage level.
			DPA0110 Overhead 66 kV		NF	GIS Data Base	Actual		The requested information is held within UE's Geographical Information System (GIS). To access this information UE have purpose built reports. The AM/FM reports webpage is a portal to obtain this asset data. Asset data in the AM/FM reports are updated monthly from UE's GIS and presented in user friendly		All feeders and feeder lengths that are not owned by UE are filtered and removed.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
									tables. Data is then available to directly match the RIN requirement.		
			DPA0111 Overhead 110 kV								UE does not use 110kV voltage level
			DPA0112 Overhead 132 kV								UE does not use 132kV voltage level
3.5	**Physical assets**	3.5.1	**Network Capacity 3.5.1.1 Circuit Length Overhead** DPA0113 Overhead 220 kV								UE does not use 132kV voltage level
			DPA0114 Overhead Other								
			DPA01 Total overhead circuit km		NF	GIS Data Base	Actual		The requested information is held within UE's Geographical Information System (GIS). To access this information UE have purpose built reports. The AM/FM reports webpage is a portal to obtain this asset data. Asset data in the AM/FM reports are updated monthly from UE's GIS and presented in user friendly tables. Data is then available to directly match the RIN requirement.		All feeders and feeder lengths that are not owned by UE are filtered and removed.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			3.5.1.2 Circuit Length Underground DPA0201 Underground low voltage distribution		NF	GIS Data Base	Actual		The requested information is held within UE's Geographical Information System (GIS). To access this information UE have purpose built reports. The AM/FM reports webpage is a portal to obtain this asset data. Asset data in the AM/FM reports are updated monthly from UE's GIS and presented in user friendly tables. Data is then available to directly match the RIN requirement.		All feeders and feeder lengths that are not owned by UE are filtered and removed.
			DPA0202 Underground 5kV								UE does not use 5kV voltage level
			DPA0203 Underground 6.6kV		NF	GIS Data Base	Actual		The requested information is held within UE's Geographical Information System (GIS). To access this information UE have purpose built reports. The AM/FM reports webpage is a portal to obtain this asset data. Asset data in the AM/FM reports are updated monthly from UE's GIS and presented in user friendly tables. Data is then available to directly match the RIN requirement.		All feeders and feeder lengths that are not owned by UE are filtered and removed.
			DPA0204 Underground 7.6kV								UE does not use 7.6kV voltage level

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			3.5.1.2 Circuit Length Underground DPA0205 Underground 11 kV		NF	GIS Data Base	Actual		The requested information is held within UE's Geographical Information System (GIS). To access this information UE have purpose built reports. The AM/FM reports webpage is a portal to obtain this asset data. Asset data in the AM/FM reports are updated monthly from UE's GIS and presented in user friendly tables. Data is then available to directly match the RIN requirement.		All feeders and feeder lengths that are not owned by UE are filtered and removed.
			DPA0206 Underground SWER								UE does not use underground SWER.
			DPA0207 Underground 22 kV		NF	GIS Data Base	Actual		The requested information is held within UE's Geographical Information System (GIS). To access this information UE have purpose built reports. The AM/FM reports webpage is a portal to obtain this asset data. Asset data in the AM/FM reports are updated monthly from UE's GIS and presented in user friendly tables. Data is then available to directly match the RIN requirement.		All feeders and feeder lengths that are not owned by UE are filtered and removed.
			DPA0208 Underground 33 kV								UE does not use 33kV voltage level.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			DPA0209 Underground 66 kV		NF	GIS Data Base	Actual		The requested information is held within UE's Geographical Information System (GIS). To access this information UE have purpose built reports. The AM/FM reports webpage is a portal to obtain this asset data. Asset data in the AM/FM reports are updated monthly from UE's GIS and presented in user friendly tables. Data is then available to directly match the RIN requirement.		All feeders and feeder lengths that are not owned by UE are filtered and removed.
			DPA0210 Underground 132 kV								
			DPA0211 Other underground voltages								
			DPA02 Total underground circuit km		NF	GIS Data Base	Actual		The requested information is held within UE's Geographical Information System (GIS). To access this information UE have purpose built reports. The AM/FM reports webpage is a portal to obtain this asset data. Asset data in the AM/FM reports are updated monthly from UE's GIS and presented in user friendly tables. Data is then available to directly match the RIN requirement.		All feeders and feeder lengths that are not owned by UE are filtered and removed.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			3.5.1.3 Estimated overhead network weighted average MVA capacity by voltage class DPA0301 Overhead low voltage distribution		NF	The 'TLM Analysis and Consolidated Project List' and 'Consumption and Counts by Customer Type' reports are used to source the information.	Estimated	This value has been calculated using the best available estimated data.	The limiting thermal rating is that of the distribution transformer, not the overhead low voltage conductors. The circuit thermal ratings are calculated for each low voltage circuit by dividing the average distribution substation nameplate rating by the average number of distribution circuits.		
			DPA0302 Overhead 6.6kV		NF	Load Forecast Spreadsheet.	Estimated	This value has been calculated using the best available estimated data.	The weighted average capacity is calculated from the summer cyclic rating of the feeder with an adjustment factor cater for the average ratings of different types of conductor,		
			DPA0303 Overhead 7.6kV								UE does not use 7.6kV voltage levels.
			DPA0304 Overhead 11 kV		NF	Load Forecast Spreadsheet.	Estimated	This value has been calculated using the best available estimated data.	The weighted average capacity is calculated from the summer cyclic rating of the feeder with an adjustment factor cater for the average ratings of different types of conductor,		
			DPA0305 Overhead SWER		NF	Load Forecast Spreadsheet.	Estimated	This value has been calculated using the best available estimated data.	Given UE's relatively short SWER system, the limiting plant in all cases is the isolation transformer at 100kVA per transformer, not the thermal or voltage capability of the overhead conductor. Hence set to 0.1MVA.		

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			DPA0306 Overhead 22 kV		NF	Load Forecast Spreadsheet.	Estimated	This value has been calculated using the best available estimated data.	The weighted average capacity is calculated from the summer cyclic rating of the feeder with an adjustment factor cater for the average ratings of different types of conductor,		
			DPA0307 Overhead 33 kV								UE does not use 33kV voltage level.
			DPA0308 Overhead 44 kV								UE does not use 44kV voltage level.
			DPA0309 Overhead 66 kV		NF	Circuit data sheet	Estimated	This value has been calculated using the best available estimated data.	The weighted average capacity is calculated from the summer cyclic rating of the 66kV lines.		
			DPA0310 Overhead 110 kV								UE does not use 110kV voltage level
			DPA0311 Overhead 132 kV								UE does not use 132kV voltage level
			DPA0312 Overhead 220 kV								UE does not use 220kV voltage level.
			DPA0313 Overhead Other						As all operating voltages on the UE network are identified by other variables in this table, DPA0313 is set to zero.		UE does not use other voltage levels.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			3.5.1.4 Estimated underground network weighted average MVA capacity by voltage class DPA0401 Underground low voltage distribution		NF	Load Forecast Spreadsheet.	Estimated	This value has been calculated using the best available estimated data.	This is the same method as DPA0301 because the limit is the distribution transformer rating.		See DPA0301 above.
			DPA0402 Underground 5 kV								UE does not use 5kV voltage level.
			DPA0403 Underground 6.6 kV		NF	Load Forecast Spreadsheet.	Estimated	This value has been calculated using the best available estimated data.	The weighted average capacity is calculated from the summer cyclic rating of the feeder with an adjustment factor cater for the average ratings of differentt types of conductor,		
			DPA0404 Underground 7.6 kV								UE does not use 7.6kV voltage level.
			DPA0405 Underground 11 kV		NF	Load Forecast Spreadsheet.	Estimated	This value has been calculated using the best available estimated data.	The weighted average capacity is calculated from the summer cyclic rating of the feeder with an adjustment factor cater for the average ratings of different types of conductors.		
			DPA0406 Underground SWER								UE does not use SWER voltage level.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			DPA0407 Underground 12.7 kV								UE does not use 12.7kV voltage level
			DPA0408 Underground 22 kV		NF	Load Forecast Spreadsheet.	Estimated	This value has been calculated using the best available estimated data.	The weighted average capacity is calculated from the summer cyclic rating of the feeder with an adjustment factor cater for the average ratings of different types of conductors.		
			DPA0409 Underground 33 kV								UE does not use 33kV voltage level
			DPA0410 Underground 66 kV		NF	Circuit data sheet	Estimated	This value has been calculated using the best available estimated data.	The weighted average capacity is calculated from the summer cyclic rating of the 66kV lines.		This is the average summer rating of 66kV cables from the Circuit Data Sheets where Structure Configuration is “CABLE”. The summer rating is multiplied by 66x10^3, multiplied by √3 and divided by 1x10^6 for the relevant year.
			DPA0411 Underground 132 kV								UE does not use 132kV voltage level
			DPA0411 Underground 220 kV								UE does not use 220kV voltage level
			DPA0412 Other						As all operating voltages on the UE network are identified by other variables in this table, DPA0412 is set to zero.		UE does not use other voltage levels

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
		3.5.2	**3.5.2.1 Distribution transformer total installed capacity** DPA0501 Distribution transformer capacity owned by utility		NF	Transformer Load Management Network Load Management	Actual		This is calculated by summing the distribution substation nameplate rating from the Transformer Load Management report sourced from Network Load Management.		The transformers in stores also are included. The stock level information is sourced from UE's Service Delivery. It is assumed that minimum stock levels are maintained and the capacity value calculated based on minimum stock levels (excluding allocation for customer initiated projects) is added onto the distribution transformer capacity.
			DPA0502 Distribution transformer capacity owned by High Voltage Customers		NF	Customer Service Group	Actual		UE does not have information related to customer installations. The summated maximum demand of all HV customers are included as a proxy for their capacity. This information is extracted based on the HV customer list maintained by Customer Services group.		
			DPA0503 Cold spare capacity included in DPA0501		NF	Service Delivery	Actual		UE does not have any cold spare for distribution substations however, the transformers in stores are included. The minimum stock level information is sourced from UE's Service Delivery. It is assumed that minimum stock levels are maintained and the capacity value calculated based on minimum stock levels is used to estimate this value.		The actual total transformer stock movement during 2013 was sourced and out of that the fraction of transformers used for replacement was calculated. This figure was approximately 28% of the total capacity. It is assumed that similar proportion of the minimum stock level would be used on average for the replacement works each year. This value is

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
											approximately 23MVA.
			3.5.2.2 Zone Substation Transformer capacity MVA DPA0601 Total installed capacity for first level transformation								UE does not have any first level transformation
			DPA0602 Total installed capacity for second level transformation								UE does not have any second level transformation
			DPA0603 Total zone substation transformer capacity where there is a single transformation		NF	Networks ratings database	Actual		This is the total name plate rating (OFDAF) of all zone substation transformers on the UE network sourced from Network Load Management.		In years where archived versions of the Ratings database were not available, the total cyclic rating for the year is used from the Load Forecast Spread-sheet but multiplied by the ratio of the present total name plate rating divided by the present total cyclic rating to get an equivalent nameplate rating.
			DPA0604 Total zone substation transformer capacity		NF	Networks ratings database	Actual		This will be the same as above DPA0603.		See DPA0603 above.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			DPA0605 Cold spare capacity of zone substation transformers included in DPA0604								UE does not have any cold spare for distribution substations.
			3.5.2.3 Distribution - other transformer capacity MVA Distribution Other - Transformer Capacity owned by Utility								UE does not have any other transformer capacity
			3.5.3 Public Lighting DPA0701 Public lighting luminaires			GIS Data Base	Actual		The requested information is held within UE's Geographical Information System (GIS). To access this information UE have purpose built reports. The AM/FM reports webpage is a portal to obtain this asset data. Asset data in the AM/FM reports are updated monthly from UE's GIS and presented in user friendly tables. Data is then available to directly match the RIN requirement.		
			DPA0702 Public lighting poles			GIS Data Base	Actual		The requested information is held within UE's Geographical Information System (GIS). To access this information UE have purpose built reports. The AM/FM reports webpage is a portal to obtain this asset data. Asset data in the AM/FM reports are updated		

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
									monthly from UE's GIS and presented in user friendly tables. Data is then available to directly match the RIN requirement.		
			DPA0703 Public lighting columns								UE does not report against Public Lighting Columns.
3.6	**Quality of Service**	3.6.1	**Reliability** **3.6 Quality of Service General**						UE has produced a number of documents which contain instructions on how the data required for the RIN category is to be obtained and populated. These documents include detailed methodologies to provide both actual and estimated data. The Basis of Preparation against each relevant RIN category is a summary of the methodology detailed within these UE produced documents. For this particular RIN, document UE PR 2209 and 2301 were referenced.		Distribution Customer Numbers are calculated by summating the customer numbers for the relevant feeder classification at both the start and end of the regulatory reporting period (31/12/2014 & 31/12/2015). UE have no 'long rural' or CBD feeder classification and information is therefore not provided. Calculations are completed in accordance with AER definitions.
			3.6.1.1 Inclusive of MEDS DQS0101 Whole of network unplanned SAIDI		NF	Distribution Management Database	Actual		Raw data is downloaded from the Distribution Management Database. The data is "cleansed" to remove duplications and adjusted for temporary switching arrangements. SAIDI performance is calculated in accordance with AER definitions.		

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			DQS0102 Whole of network unplanned SAIDI excluding excluded outages		NF	Distribution Management Database	Actual	There has been no differentiation from Whole of Network unplanned SAIDI - DQS0101, due to an inability to differentiate between MED days and excluded outages.	Raw data is downloaded from the Distribution Management Database. The data is "cleansed" to remove duplications and adjusted for temporary switching arrangements and MED's excluded. SAIDI performance is calculated in accordance with AER definitions. This information agrees to Table 1a STPIS Reliability - Total SAIDI's inclusive of MED days in the Non - Financial RIN. There has been no difference from Whole of Network unplanned SAIDI outages when excluding excluded outages, due to difficulties in differentiating between excluded events and MED days.		
			DQS0103 Whole of network unplanned SAIFI		NF	Distribution Management Database	Actual		Raw data is downloaded from the Distribution Management Database. The data is "cleansed" to remove duplications and adjusted for temporary switching arrangements. SAIFI performance is calculated in accordance with AER definitions. This information agrees to Table 1a STPIS Reliability - Total SAIFI's inclusive of MED days in the Non - Financial RIN.		

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			DQS0104 Whole of network unplanned SAIFI excluding excluded outages		NF	Distribution Management Database	Actual		Raw data is downloaded from the Distribution Management Database. The data is refined to remove duplications and adjusted for temporary switching arrangements and MED's excluded. SAIFI performance is calculated in accordance with AER definitions.		
			3.6.1.2 Exclusive of MEDs DQS0105 Whole of network unplanned SAIDI		NF	Distribution Management Database	Actual		Raw data is downloaded from the Distribution Management Database. The data is refined to remove duplications and adjusted for temporary switching arrangements. SAIDI performance is calculated in accordance with AER definitions. This information agrees to Table 1a STPIS Reliability - Total SAIDI's exclusive of MED days in the Non - Financial RIN.		
			DQS0106 Whole of network unplanned SAIDI excluding excluded outages		NF	Distribution Management Database	Actual		Raw data is downloaded from the Distribution Management Database. The data is refined to remove duplications and adjusted for temporary switching arrangements. SAIDI performance is calculated in accordance with AER definitions.		
			MEDSDQS0107 Whole of network		NF	Distribution Management	Actual		Raw data is downloaded from the Distribution Management Database.		

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			unplanned SAIFI			Database			The data is refined to remove duplications and adjusted for temporary switching arrangements. SAIFI performance is calculated in accordance with AER definitions.		
			DQS0108 Whole of network unplanned SAIFI excluding excluded outages		NF	Distribution Management Database	Actual		Raw data is downloaded from the Distribution Management Database. The data is refined to remove duplications and adjusted for temporary switching arrangements and MED's excluded. SAIFI performance is calculated in accordance with AER definitions.		
		3.6.2	**Energy Not Supplied** DSQ0201 Planned		NF	Reliability data was taken from the non-financial RIN. The demand is that average annual feeder demand calculated from meter data.	Estimate	The calculation uses average demand rather than actual demand so is deemed to be an estimate. The estimate is the best available.	The energy not supplied was calculated based on annual reliability data for planned outages. Energy not supplied = average customer demand X no of customers interrupted X duration of interruption.		
			DSQ0202 Unplanned		NF	Reliability data was taken from the non-financial RIN. The demand is that average annual feeder demand calculated from	Estimate	The calculation uses average demand rather than actual demand so is deemed to be an estimate. The estimate is the best available.	The energy not supplied was calculated based on annual reliability data for unplanned outages. Energy not supplied = average customer demand X no of customers interrupted X duration of interruption.		

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
						meter data.					
			DSQ02 Total		NF	Reliability data was taken from the non-financial RIN. The demand is that average annual feeder demand calculated from meter data.	Estimate	This is a calculated value made up of the sum of two estimated values.	This is the sum of DSQ0201 + DSQ0202.		
		3.6.3	**System Losses** DSQ03 System Losses		NF	Distribution Management Database	Actual		Total UE distribution losses are annually calculated as part of the Distribution Loss Factor (DLF) reporting. The corresponding system losses percentage is calculated as network loss/total energy procured.		
		3.6.4	**Capacity Utilisation** DSQ04 Overall Utilisation		NF	Distribution Management Database	Actual		This is the percentage of non–coincident summated raw system annual maximum demand in MVA (DOPSD0201) divided by the summation of total installed zone substation transformer capacity (DPA0604) at all the zone substations.		
3.7	**Operating Environment**	**3.7**	**Operating Environmental factors** General						UE has produced a number of documents which contain instructions on how the data required for the RIN category is to be obtained and populated. These		It should be noted that UE does not record data under 'Urban' and 'Rural' categories. All Low Bushfire Risk Areas (LBRAs) are considered to

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
									documents include detailed methodologies to provide both actual and estimated data. The Basis of Preparation against each relevant RIN category is a summary of the methodology detailed within these UE produced documents. For this particular RIN, document UE PR 0085 was referenced.		be equivalent to 'Urban' and all High Bushfire Risk Areas (HBRAs) are considered to be equivalent to 'Rural'.
		3.7.1	**Density Factors** DOEF0101 Customer Density		NF	Calculated	Actual		The cell is calculated from using data from other categories. Customer Density = Total Customer Numbers (DOPCN01) / Route Line Length (DOEF0301)		
			DOEF0102 Energy Density		NF	Calculated	Actual		The cell is calculated from using data from other categories. Energy Density = Total Energy Delivered (DOPED01) X 1000 / Total Customer Numbers (DOPCN01)		
			DOEF0101 Demand Density		NF	Calculated	Actual		The cell is calculated from using data from other categories. Demand Density = Annual Maximum Demand X 1000 (DOPSD0201) / Total Customer Numbers (DOPCN01)		
		3.7.2	**Terrain Factors** DOEF0201 Rural		NF	GIS Database	Actual		The requested information is held within UE's Geographical Information		

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			Proportion						System (GIS) as feeder data includes a rural/urban attribute. The sum of span lengths is divided by 1000 to convert to kilometres, divided by the Route Line Length (DOEF0301) and multiplied by 100 to give the Rural Proportion as a percentage.		
		3.7.2	**Terrain Factors** DOEF0202 Urban/CBD vegetation Spans		NF	Vegetation Management System Report Electric Line Clearance Management Plan	Estimated	Urban/Rural split is estimated assuming HBRA is rural, LBRA is urban.	A Vegetation Management System (VMS) records the number of spans as High Bushfire Risk Area (HBRA) or Low Bushfire Risk Area (LBRA), not Urban or Rural.		It has been assumed that any spans reported as LBRA will be equivalent to Urban spans.
			DOEF0203 Rural vegetation Spans		NF	Vegetation Management System Report Electric Line Clearance Management Plan	Estimate	Rural Spans are assumed to be HBRA spans.	A Vegetation Management System (VMS) records the number of spans as High Bushfire Risk Area (HBRA) or Low Bushfire Risk Area (LBRA), not Urban or Rural.		It has been assumed that any spans within the VMS reported as HBRA will be equivalent to Rural spans.
			DOEF0204 Total Vegetation Maintenance Spans		NF	Calculated	Actual	Rural Spans are assumed to be HBRA spans.	A Vegetation Management System (VMS) records the number of spans as High Bushfire Risk Area (HBRA) or Low Bushfire Risk Area (LBRA), not Urban or Rural. The total Vegetation maintenance spans is the sum of HBRA and LBRA spans.		

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			DOEF0205 Total spans		NF	GIS Database	Actual		The requested information is held within UE's Geographical Information System (GIS). The Total number of spans variable is calculated as the sum of all spans within the UE network.		
			DOEF0206 Urban and CBD vegetation span cycle		NF	Vegetation Management System Report Electric Line Clearance Management Plan	Actual		The average vegetation span cycle has been calculated from the actual total number of LBRA spans maintained over the last two years (2014 & 2015). Factor of Spans Inspected to Total Spans = (Urban and CBD Vegetation Maintenance Spans (2014) + Urban and CBD Vegetation Maintenance Spans (2015)) / (Total Number of LBRA Spans) Average Urban and CBD Vegetation Maintenance Span Cycle = 2 / (Factor of Spans Inspected to Total Spans)		Nominal cycle is 2 years per the Electric line clearance plan.
			DOEF0207 Rural vegetation span cycle		NF	Vegetation Management System Report Electric Line Clearance Management Plan	Estimate	This number is estimated because the rural area is estimated.	The average vegetation span cycle has been calculated from the actual total number of HBRA spans maintained over the last two years (2014 & 2015). Factor of Spans Inspected to Total Spans = (Rural Vegetation Maintenance Spans (2014) + Rural		The calculation will provide the expected cycle time required to complete all spans at the current rate of span maintenance.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
									Vegetation Maintenance Spans (2015)) / (Total Number of HBRA Spans Average Urban and CBD Vegetation Maintenance Span Cycle = 2 / (Factor of Spans Inspected to Total Spans)		
			DOEF0208 Average trees per CBD & urban span		NF	Calculated	Estimate	The data used was commissioned in 1999 with no further information available.	A Vegetation Management Review was commissioned in 1999 which concluded that approximately 564,200 trees were within the immediate vicinity of the UE overhead distribution network; UE is responsible for approximately 339,000 trees, with the remaining 224,700 maintained by councils. The review also determined that of the 564,200 trees, approximately 24% (135,408) of trees were in a HBRA (Rural) and approximately 76% (428,792) of trees were in a LBRA (Urban). As UE does not record number of trees per span, the average number of trees per urban and CBD vegetation maintenance span is calculated by taking the average number of trees per span across the urban and CBD network. Average Number of Trees per Urban and CBD Vegetation Maintenance		The calculation assumes an even distribution of tress along the entire urban network length.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
									Span= (Number of Trees in LBRA)/(Number of LBRA Spans)		
			DOEF0209 Average trees per rural span		NF	Calculated	Estimate	The data used was commissioned in 1999 with no further information available.	A Vegetation Management Review was commissioned in 1999 which concluded that approximately 564,200 trees were within the immediate vicinity of the UE overhead distribution network; UE is responsible for approximately 339,000 trees, with the remaining 224,700 maintained by councils. The review also determined that of the 564,200 trees, approximately 24% (135,408) of trees were in a HBRA (Rural) and approximately 76% (428,792) of trees were in a LBRA (Urban). As UE does not record number of trees per span, the average number of trees per rural vegetation maintenance span is calculated by taking the average number of trees per span across the rural network. Average Number of Trees per Rural Vegetation Maintenance Span= (Number of Trees in HBRA)/(Number of HBRA Spans)		The calculation assumes an even distribution of tress along the entire rural network length.

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
			DOEF0210 Average defects per CBD & urban span		NF	Calculated	Estimate	UE recording processes do not record the number of defects cleared compared to the number of trees cleared. UE can only give a best estimate for this data variable.In the Urban and CBD areas, UE estimates that 25% of trees per maintenance span breach the regulatory clearance requirements and require maintenance.	The calculation for Average Number of Defects per Urban and CBD Vegetation Maintenance Span becomes the Average Number of Trees per Urban and CBD Vegetation Maintenance Span multiplied by 0.25.		
			DOEF0211 Average defects per rural span		NF	Calculated	Estimate	UE recording processes do not record the number of defects cleared compared to the number of trees cleared. UE can only give a best estimate for this data variable. UE undertakes an annual pre-summer inspection in the Rural (HBRA) areas. UE estimates that 20% of trees per maintenance span breach the regulatory clearance requirements and require maintenance.	The calculation for Average Number of Defects per Rural Vegetation Maintenance Span becomes the Average Number of Trees per Rural Vegetation Maintenance Span multiplied by 0.20.		
			DOEF0212 Tropical Proportion								UE does not have any tropical portion of land within its distribution area.

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			DOEF0213 standard Vehicle access		NF	Calculated	Estimate	UE does not maintain detailed records of the network distance accessible by standard vehicles (2X2). As an estimate, it is expected that only 1% of the network is inaccessible by standard vehicles.	Considering the AER definition provided for this variable, which is "Distribution route Line Length that does not have Standard Vehicle Access", the standard vehicle access distance becomes: Standard Vehicle Access Distance (km) = Total Network Length×1%		
			DOEF0214 Bushfire risk		NF	GIS Database	Actual		The requested information is held within UE's Geographical Information System (GIS). To access this information UE have purpose built reports. The AM/FM reports webpage is a portal to obtain this asset data. The Bushfire Risk variable is calculated as the sum of spans that are defined as "True" within the Bushfire Zone.		
		3.7.3	**Service area factors** DOEF0301 Route line length.		NF	GIS Database	Actual		The requested information is held within UE's Geographical Information System (GIS). To access this information UE have purpose built reports. The AM/FM reports webpage is a portal to obtain this asset data. The Route Line Length variable is calculated as the sum of all UE network span lengths.		

Tab	Table Name	Table	Table Title	Data quality	Fin / Non-fin	Data source	Actual / Estimate	Justification (if estimated)	Methodology (Actual & Estimated)	Assumptions (Actual & Estimated)	Additional Comments
3.7.4	**Weather Stations**	3.7.4	Weather Stations		NF	Bureau of Meteorology	Actual		Presently there are three weather stations owned by the Bureau of Meteorology located in the UE service area. UE Service area and Terminal station maximum demand forecasts are based on PoE's for Melbourne Regional Office Weather station.		