

## Title Page and Introduction

This sheet provides a first introduction to the workbook



### Title and brief description of the workbook

Cost of service tool

### Use of the workbook

The model's input sheets (tabs in yellow) need to be populated first using the 'Guide' tab and user manual. All input sheets need to be filled in order to have correct results. The main outputs of the model are the COS calculation tabs (in green) and the tariff setting tabs (in orange). Any modification in the calculations may affect the functionality of the model, therefore it should be done with care and only if it is necessary.

### Disclaimer

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### Check of checks

The Map sheet contains the results of each sheet's autocheck - the overall result is presented below:

Overall workbook check of checks: -

### Ricardo version control numbering

Ricardo Energy and Environment has adopted the following format for workbook Version Control indexing:

[v]WW-XX[-YYYY]-ZZ

...where the letters and symbols have the following meaning:

#### [ ] Square Brackets

Denote optional matter. The minimum is therefore WW-XX; the user can add the other aspects as required.

#### v Short for version

To flag clearly that what follows is the version control number.

#### WW Workbook major version (or "release") number

Should be 00 for the pre-release versions, until the first completed version is provided to the client, and then increments on each material change (as opposed to the minor changes denoted by XX below).

#### XX Workbook minor version number

Used to log updates in the initial draft workbook development and then minor updates and bug fixes once released to the client.

#### YYYY Year

This is NOT the year the workbook was last used, but the latest year of the data on which the workbook is predicated.

#### ZZ Data run or Iteration number

From the v01- workbook onwards, the ZZ number will record data run numbers, if required (hence optional).

#### Separator

-

Proposed because as the alternatives are explicit requirements of a path name, or used to denote spaces.

### Governance

Details for latest workbook version	Value
Workbook author/owner	
QA reviewer	
Date of last workbook review	
Senior responsible officer (SRO)	
Project manager (PM)	
Project reference	
Client organisation	
Client individual(s) (if appropriate)	
Ricardo QA requirement	
Ricardo QA score	

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## Guide

This sheet explains how to use the workbook.

### Instructions

The model is supplied with a set of input cells which are reflected in the yellow sheets and yellow cells of the model. These inputs include both Eskom and non-Eskom purchase inputs, commercial inputs, operational inputs, the asset register, technical inputs such as loss factors and other inputs.

What follows is intermediary calculations using the inputs from the user to compute the Cost To Serve, this is in the blue sheets. Then, the intermediary calculations are used to compute the Cost To Serve that are reflected in the green sheets.

The technical calibration done for Year 0, based on the supplied data, is used to expand the set of calculations conducted to multi-year calculations. A core focus in this is Year 2 since the granularity required to be able to determine the cost of service would be for this year, the upcoming financial period. The forecasts determined for Year 2 then form the basis of the calculations conducted by the model in order to determine the cost of supply. This leads to the tariff setting module which allows for direct interactions between the cost of supply analysis and tariff setting. The rate design dashboard allows the user to make choices, based on the three

#### 1.1 Steps needed for the annual or periodic updates of the model (i.e. data entry and data validation checks)

First row of table: 16

Step	Link	Worksheet	Action On	Description of update process
1	<a href="#">Goto</a>	General Data Inputs	Yellow cells	It is optional to update the Methodology inputs and Index Tables. However please update the Non-Eskom Power Purchase Inputs annually
2	<a href="#">Goto</a>	Year 0 Data Inputs	Yellow cells	All these sheets should be updated annually
3	<a href="#">Goto</a>	Years 1-4 Data Inputs	Yellow cells	All these sheets should be updated annually
4	<a href="#">Goto</a>	Tariff Setting	Yellow cells	These sheets should be updated when designing new tariffs

End of sheet



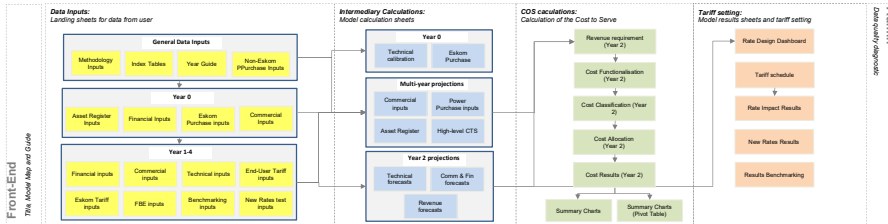
## Map: Navigation around the model and key

This sheet provides a workbook map, sheet list and colour key



### 1. Model map

The following schematic diagram shows how data flows through the model:



### 2. Table of sheets

This table lists all the sheets in the workbook and re-presents key information recorded in the top rows

Section	Link	Sheet Name	Check-box	Checks	Last User	Date	Status	User Comments	Explanation
Front-end	Goto	Title	0						This sheet provides a first introduction to the workbook
	Goto	Map	0						This sheet provides a workbook map, sheet list and colour key
	Goto	Guide	0						This sheet explains how to use the workbook
Data quality diagnostic	Goto	Data quality diagnostic	0						This sheet contains the summary of the data quality diagnostic to make sure the model results are accurate
	Goto	Generate a report	0						This sheet is hidden and can be enabled using the Macro file
The Model Itself	Goto	Methodology Inputs	0						This sheet contains the methodology choices to compute the cost to serve
	Goto	Index Tables	0						This sheet contains all the labels and set the level of granularity of the cost to serve
	Goto	Non-Eskom P/Purchase inputs	0						This sheet contains the Non-Eskom power purchase inputs
	Goto	Asset Register inputs (Year 0)	0						This sheet contains a summary of assets for year 0
	Goto	Financial inputs (Year 0)	0						This sheet contains financial inputs for Year 0 (including OPEX, non-electricity supply revenues and non-Eskom purchase inputs)
	Goto	Eskom P/Purchase/Val Imp (Year 0)	0						This sheet is information entered from Eskom bills
	Goto	Commercial inputs (Year 0)	0						This sheet contains commercial inputs for Year 0 (including monthly sales and the number of customers per customer category)
	Goto	Commercial inputs (Years 1-4)	0						This sheet contains commercial inputs forecasts (including monthly sales and the number of customers per customer category)
	Goto	Financial inputs (Years 1-4)	0						This sheet contains financial inputs forecasts (including OPEX, non-electricity supply revenues and non-Eskom purchase inputs)
	Goto	Technical inputs (Years 1-4)	0						This sheet contains technical inputs (including load profile, Non-technical loss and loss inputs by asset group)
	Goto	End-User Tariff inputs (Year 1)	0						This sheet contains information on End-User Tariffs
	Goto	Eskom Tariff inputs (Year 1)	0						This sheet contains information on Eskom Tariff
	Goto	FBE inputs (Years 1-4)	0						This sheet contains information on Free Basic Electricity and subsidies
	Goto	Benchmarking inputs (Year 2)	0						This sheet contains information on NERSA's acceptable range for the financial, expenses and tariffs
	Goto	New Rates Test inputs (Year 2)	0						This sheet contains information on the current tariff charged by the utility
	Goto	Commercial inputs Summary	0						This sheet provides commercial calculations
	Goto	Power Purchase inputs Summary	0						This sheet provides a summary of Eskom and Non-Eskom power purchases
	Goto	Asset Register Calculations	0						This sheet provides calculations on assets
	Goto	High-level CTS projections	0						This sheet provides a high level Cost To Serve forecast
	Goto	Eskom Purch. CostCheck (Year 0)	0						This sheet is the calculation of the type of charge for each POD for validation purposes
	Goto	Technical calibration (Year 0)	0						This sheet computes the energy losses and energy requirement by the customer category and by asset group
	Goto	Technical forecasts (Year 2)	0						This sheet is the forecast of energy and demand requirement for each customer category
	Goto	Comm. & Fin. Forecasts (Year 2)	0						This sheet is commercial (sales and purchases) and financial (CAPEX and OPEX) calculation forecasts for Year 2
	Goto	Revenue forecasts (Year 2)	0						This sheet is calculation of the revenue forecasts for Year 2 with the current rate and new rate (based on CTS calculation)
	Goto	1) Revenue Requirement (Year 2)	0						This sheet is calculation of the revenue requirement per business area
	Goto	2) Cost Funct (Year 2)	0						This sheet functionalise costs for each business area
	Goto	3) Cost Classification (Year 2)	0						This sheet classifies costs into these cost drivers: fixed or variable, and energy, demand, or customer-related.
Goto	4) Cost Allocation (Year 2)	0						This sheet allocates costs for each customer category by function, business area, cost class, season and Time Of Use.	
Goto	5) COS Results (Year 2)	0						This sheet shows the COS results and cost-reflective charges by function, business area, class, season and Time Of Use	
Goto	Summary Charts (Year 2)	0						This sheet summarise all the charts from the COS study	
Goto	Rate Design Dashboard (Year 2)	0						This sheet compares the Business As Usual and the Cost To Serve results and help the user fix its tariffs.	
Goto	Tariff Schedule (Year 2)	0						This sheet summarise the tariff schedule for Year 2 based on inputs on Rate Design Dashboard	
Goto	Rate Impact Results (Year 2)	0						0	
Goto	New Rates Results (Year 2)	0						This sheet shows the new tariff by customer category and TOU period	
Goto	Results Benchmarking (Year 2)	0						This sheet compares the new tariff with NERSA's guidelines	
		CheckOf/Check_n		OK					

### 3. Colour key for model cells and text

The model uses the following colour-coding conventions to denote different sheet and cell functionalities.

Style	Abbrev	Cell	Title/Tab	Description
Ref Data	Data			Imported datasets or reference data
Input	User			Data entered by the user
Prepopulated inputs	Author			Pre-populated inputs to enable simplified mode
Calculation	Calc			Default for calculations
Explanation	Expl			Explanatory information
Check Cell	Check			Cross-checks (data are OK)

End of sheet

## Data quality diagnostic

This sheet contains the summary of the data quality diagnostic to make sure the model results are accurate

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Index Tables	Check	1	<b>Compliance score</b> 6 / 7
Eskom PPurchaseVol Inp (Year 0)	Check	1	
Commercial Inputs (Year 0)	Check	1	
Commercial Inputs (Years 1-4)	Check	1	
Technical Inputs (Years 1-4)	Add input	0	
End-User Tariff Inputs (Year 1)	Check	1	
Power Purchase Inputs Summary	Check	1	

End of sheet



All sheets to the right of this sheet are Data Inputs

**Data Inputs -->**

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- General Data Inputs -->**
- Methodology Inputs
- Index Tables
- Non-Eskom PPurchase Inputs
- Year 0 Data Inputs -->**
- Asset Register Inputs (Year 0)
- Financial Inputs (Year 0)
- Eskom PPurchaseVol Inp (Year 0)
- Commercial Inputs (Year 0)
- Years 1-4 Data Inputs -->**
- Financial Inputs (Years 1-4)
- Commercial Inputs (Years 1-4)
- Technical Inputs (Years 1-4)
- End-User Tariff Inputs (Year 1)
- Eskom Tariff Inputs (Year 1)
- FBE Inputs (Years 1-4)
- Benchmarking Inputs (Year 2)

End of sheet

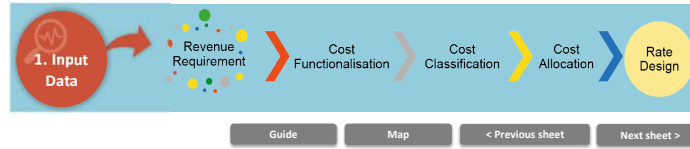
**General Data Inputs -->**

Guide

Map

< Previous sheet

Next sheet >



## Methodology Inputs

This sheet contains the methodology choices to compute the cost to serve

### Methodology choices

#### 1. Adopted revenue requirement approach

<b>Option ID:</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>Description of option:</b>	Allowable return on regulated asset base	Asset values annualised at selected discount rate	Allowable surplus on OPEX
<b>Option selected:</b>	<b>3</b>	<b>3</b>	
	Wires	Retail	
	Allowable surplus on OPEX	Allowable surplus on OPEX	
	<b>1</b>	<b>2</b>	<b>3</b>
	Allowable rate of return	Discount rate	Surplus factor
Wires			10%
Retail			10%
			Surplus x ...
			OPEX incl. purchases
			OPEX incl. purchases

#### 2. Selected approach to determine total value of assets in any particular year

<b>Option ID:</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>Description of option:</b>	BOY (Beginning of Year) balance	EOY (End of Year) balance	Mid-year balance (average of EOY and BOY)
<b>Option selected:</b>	<b>1</b>		
	BOY (Beginning of Year) balance		

#### 3. Selected approach to determine network asset depreciation in any particular year

<b>Option ID:</b>	<b>1</b>	<b>2</b>
<b>Description of option:</b>	Use hardcoded inputs in "Financial Inputs"	Estimate depreciation from inputs in "Asset Register Inputs"
<b>Option selected:</b>	<b>1</b>	
	Use hardcoded inputs in "Financial Inputs"	

#### 4. Selected approach to determine retail asset depreciation in any particular year

<b>Option ID:</b>	<b>1</b>	<b>2</b>
<b>Description of option:</b>	Use hardcoded inputs in "Financial Inputs"	Estimate depreciation from inputs in "Asset Register Inputs"
<b>Option selected:</b>	<b>1</b>	
	Use hardcoded inputs in "Financial Inputs"	

#### 5. Selected approach to determine network asset O&M in any particular year

<b>Option ID:</b>	<b>1</b>	<b>2</b>
<b>Description of option:</b>	Use hardcoded inputs in "Financial Inputs"	Estimate O&M from inputs in "Asset Register Inputs"
<b>Option selected:</b>	<b>1</b>	
	Use hardcoded inputs in "Financial Inputs"	

#### 6. Selected approach to cap total losses

<b>Option ID:</b>	<b>1</b>	<b>2</b>
<b>Description of option:</b>	100% of energy purchase costs count towards revenue requirements	Only the share of total purchase costs corresponding to sales + maximum allowable losses count
<b>Option selected:</b>	<b>2</b>	
	Maximum allowable losses	Only the share of total purchase costs corresponding to sales + maximum allowable losses count towards revenue requirements
	12%	

#### 6. Selected approach to allocate the cost of losses

<b>Option ID:</b>	<b>1</b>	<b>2</b>
<b>Description of option:</b>	100% of "cost of losses" treated as retail cost	share of total losses treated as wires cost
<b>Option selected:</b>	<b>2</b>	
	share of total losses treated as wires cost	share of total losses treated as retail cost
	100%	0%

#### 7. Selected approach to project future OPEX

<b>Option ID:</b>	<b>1</b>	<b>2</b>
<b>Description of option:</b>	Use hardcoded Rand figures	Use X-factor assumptions
<b>Option selected:</b>		
	Year 1	1
	Year 2	2
	Year 3	2
	Year 4	2
		Use hardcoded Rand figures
		Use X-factor assumptions
		Use X-factor assumptions
		Use X-factor assumptions

**8. Classification of Eskom purchase costs**

Option ID:	1	2
Description of option:	100% of costs treated as "energy-driven"	KVA purchase costs treated as demand-driven, Fixed costs treated as customer-driven
Option selected:	2	KVA purchase costs treated as demand-driven, Fixed costs treated as customer-driven

**9. Selected approach to Year 0 depreciation inputs**

Option ID:	1	2
Description of option:	Use hardcoded Rand figures	Use depreciation % assumptions
Option selected:	2	Use depreciation % assumptions

**10. Selected approach to electricity sales forecasting**

Option ID:	1	2
Description of option:	Future sales derived from kWh estimates	Future sales derived from % increase estimates
Option selected:	Year 1: 1 Year 2: 2 Year 3: 2 Year 4: 2	Future sales derived from kWh estimates Future sales derived from % increase estimates Future sales derived from % increase estimates Future sales derived from % increase estimates

**12. Selected approach to customer base forecasting**

Option ID:	1	2
Description of option:	Future customer numbers derived from customer base estimates	Future customer numbers derived from % increase estimates
Option selected:	Year 1: 1 Year 2: 2 Year 3: 2 Year 4: 2	Future customer numbers derived from customer base estimates Future customer numbers derived from % increase estimates Future customer numbers derived from % increase estimates Future customer numbers derived from % increase estimates

End of sheet



### Index Tables

This sheet is contains all the labels and set the level of granularity of the cost to serve

Index Tables

Check

data quality diagnostic

### Index choices

#### Municipality Name and Time Frame Reference

The current year is the year in which the Cost of Service study is being undertaken.

Municipality Name	Prince Albert Municipality
Current Year	2026

#### Index of voltage levels

Sets the level of granularity of the cost allocation - can cover more than one voltage level in the utility's SID. Should be ordered from highest to lowest voltage level.

Voltage level #1	Label	Min voltage level (kV)	Max voltage level (kV)	Sub urban/rural ?
1	33-132.275kV	33	275	FALSE
2	6.6-11 kV	6.6	11	FALSE
3	400 V	0.4	0.4	FALSE

#### Index of customer categories

Sets the level of granularity of the cost allocation - can cover more than one voltage level in the utility's SID

Customer category #	Label	RND asset group (including intake point)	Monthly data available?	TOU data available and TOU limits in place?	Use manual % inputs for TOU allocation?	Services provided include BOTH whitening & retail?	Wheeling busbar	Category Group	New category in Year 2-5?	Category most similar to new one	Data quality check	Label
Customer category #1	Domestic (pre-paid)	400 V / Mnsd	FALSE	FALSE	FALSE	TRUE	1	Domestic customers	FALSE	Domestic (pre-paid)	TRUE	Category group #1
Customer category #2	Domestic (conventional)	400 V / Mnsd	FALSE	FALSE	FALSE	TRUE	1	Domestic customers	FALSE	Domestic (conventional)	TRUE	Category group #2
Customer category #3	FBE	400 V / Mnsd	FALSE	FALSE	FALSE	TRUE	1	Domestic customers	FALSE	FBE	TRUE	Category group #3
Customer category #4	Commercial Conventional	6.6-11 kV / Mnsd	FALSE	FALSE	FALSE	TRUE	1	Industrial customers	FALSE	Commercial Conventional	TRUE	Category group #4
Customer category #5	Commercial (pre-paid)	400 V / Mnsd	FALSE	FALSE	FALSE	TRUE	1	Domestic customers	FALSE	Commercial (pre-paid)	TRUE	Category group #5
Customer category #6	400 V / Mnsd	400 V / Mnsd	FALSE	FALSE	FALSE	FALSE	0	Commercial customers	FALSE	Label	TRUE	
Customer category #7	6.6-11 kV / Mnsd	6.6-11 kV / Mnsd	FALSE	FALSE	FALSE	FALSE	0	Commercial customers	FALSE	Commercial (conventional)		
Customer category #8	6.6-11 kV / Mnsd	6.6-11 kV / Mnsd	FALSE	FALSE	FALSE	FALSE	0	Commercial customers	FALSE	Transport		
Customer category #9	6.6-11 kV / Mnsd	6.6-11 kV / Mnsd	FALSE	FALSE	FALSE	FALSE	0	Commercial customers	FALSE	Redistribution/Retailers		
Customer category #10	400 V / Mnsd	400 V / Mnsd	FALSE	FALSE	FALSE	FALSE	0	Internal & SL	FALSE	Street lighting		
Customer category #11	400 V / Mnsd	400 V / Mnsd	FALSE	FALSE	FALSE	FALSE	0	Internal & SL	FALSE	Electricity department		
Customer category #12	400 V / Mnsd	400 V / Mnsd	FALSE	FALSE	FALSE	FALSE	0	Domestic customers	FALSE	Domestic (pre-paid)		
Customer category #13	400 V / Mnsd	400 V / Mnsd	FALSE	FALSE	FALSE	FALSE	0	Domestic customers	FALSE	Other consumers	TRUE	

#### Index of functions

Business area	Wires		Retail		Split by class:						Function included in surplus balance?	Function related to purchasing costs?	Label - Wires only	Label - Retail only
	Label	Function included in Wires OPEX list	Function included in Retail OPEX list	Energy	Demand	Customer								
Function #1	Edison Energy Purchase - incl. losses	FALSE	FALSE				FALSE	TRUE						
Function #2	Edison Energy Purchase - cost of losses	FALSE	FALSE				FALSE	TRUE						
Function #3	Other Energy Purchase	FALSE	FALSE	100%	0%	0%	FALSE	TRUE						
Function #4	CAPEX and return	TRUE	FALSE	0%	100%	0%	FALSE	FALSE		CAPEX and return				
Function #5	Depreciation	TRUE	TRUE	0%	100%	0%	TRUE	FALSE		Depreciation			Depreciation	
Function #6	Network repairs & maintenance	TRUE	FALSE	0%	100%	0%	FALSE	FALSE		Network repairs & maintenance				
Function #7	Salaries, wages and allowances inclusive	TRUE	FALSE	0%	0%	100%	TRUE	FALSE		Salaries, wages and allowances				
Function #8	Financial costs	TRUE	TRUE	0%	0%	100%	TRUE	FALSE		Financial costs			Financial costs	
Function #9	Other expenses	TRUE	TRUE	0%	0%	100%	TRUE	FALSE		Other expenses			Other expenses	
Function #10	General expenses	TRUE	TRUE	0%	0%	100%	TRUE	FALSE		General expenses			General expenses	
Function #11	Notified Maximum Demand Cost	TRUE	TRUE	0%	0%	100%	TRUE	FALSE		Notified Maximum Demand			Notified Maximum Demand	
Function #12	Other 5	TRUE	TRUE	0%	0%	100%	TRUE	FALSE		Other 5			Other 5	
Function #13	Other 6	TRUE	TRUE	0%	0%	100%	TRUE	FALSE		Other 6			Other 6	
Function #14	Other 7	TRUE	TRUE	0%	0%	100%	TRUE	FALSE		Other 7			Other 7	

Function designating asset depreciation: Depreciation  
 Function designating network repairs & asset O&M: Network repairs & asset O&M  
 Function designating CAPEX: CAPEX and return  
 Function to allocate "surplus surplus" when: Other expenses

#### Index of Eskom intake points

POD #	Name	Monthly data available?
POD #1	173281 From Albert Municipality	TRUE
POD #2		FALSE
POD #3		FALSE
POD #4		FALSE
POD #5		FALSE
POD #6		FALSE
POD #7		FALSE
POD #8		FALSE
POD #9		FALSE
POD #10		FALSE
POD #11		FALSE
POD #12		FALSE
POD #13		FALSE
POD #14		FALSE
POD #15		FALSE

#### Index of TOU periods

	Number of hours per day	Share of a day
Offpeak	12	50%
Standard	8	33%
Peak	4	17%

#### Index of seasons

Months	July	August	September	October	November	December	January	February	March	April	May	June
Days in month	31	31	30	31	30	31	31	28	31	30	31	30
Season	High season	High season	Low season	Low season	Low season	Low season	Low season	Low season	Low season	Low season	Low season	High season

	Number of days	Share of year
High season	92	25%
Low season	273	75%

Index of Eskom tariffs and charges

Charge Category #1	Unit
Charge Category #1	Energy
Charge Category #2	Demand
Charge Category #3	Fixed

Unit	Category
Unit Type #1	c/kWh
Unit Type #2	R/kVA/month (DM)
Unit Type #3	R/kVA/month (NMD)
Unit Type #4	c/kVAh
Unit Type #5	R/POD/day
Unit Type #6	R/POD/month
Unit Type #7	
Unit Type #8	

Charge	Unit	TOU?
Charge Type #1	Active energy charge	c/kWh
Charge Type #2	Transmission network charge	R/kVA/month (DM)
Charge Type #3	Network capacity charge	R/kVA/month (DM)
Charge Type #4	Auxiliary service charge	c/kWh
Charge Type #5	Administration charge	R/POD/day
Charge Type #6	Reactive energy charge	c/kVAh
Charge Type #7	Low voltage subsidy charge	R/kVA/month (DM)
Charge Type #8	Electricity subsidy charge	c/kWh
Charge Type #9	Network Demand Charge	R/kVA/month (DM)
Charge Type #10		

Index of non-estom power purchases categories

Label
Power purchase category #1
Power purchase category #2
Power purchase category #3
Power purchase category #4
Power purchase category #5

Index of utility tariffs and charges

Charge	Unit
Customer Charge Type #1	Active Energy Rate
Customer Charge Type #2	Maximum Demand Charge
Customer Charge Type #3	Basic charge
Customer Charge Type #4	
Customer Charge Type #5	

End of sheet



### Year Guide

This sheet indicates the time frame under consideration.

### Timeframe for Cost to Serve Study

*The Applicable Year indicates the financial year ending.*

Reference Year	Applicable Year	
Year 0	2025	<i>When data sets are last complete.</i>
Year 1	2026	<i>When the CTS study is carried out.</i>
Year 2	2027	<i>When new rates are implemented.</i>
Year 3	2028	
Year 4	2029	

End of sheet

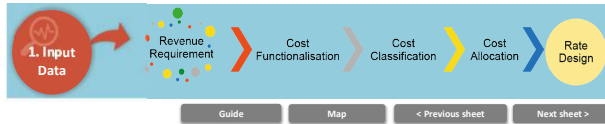
**Year 0 Data Inputs -->**

Guide

Map

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### Financial Inputs (Year 0)

This sheet contains financial inputs for Year 0 (including OPEX, non-electricity supply revenues and non-Eskom purchase inputs)

#### Financial Inputs (Year 0)

##### OPEX inputs (non purchase)

	Year 0 estimate	Electricity Supply Share (%)	Wires Share (%)	Retail Share (%)	Function (Wires)	Function (Retail)
<b>General &amp; Other</b>	R 2 558 099					
Salaries and allowances	R 1 270 387	100%	100%	0%	Network repairs & maintenance	
Materials and supplies	R 34 075	100%	100%	0%	Network repairs & maintenance	
Contracted Services	R 526 321	100%	100%	0%	Network repairs & maintenance	
Salaries, wages and allowances (excl. Repairs and Maintenance)	R -	100%	0%	100%		Other expenses
Payments to consultants (operational work)	R -	100%	50%	50%	Other expenses	Other expenses
Eskom Purchases	R -	100%	0%	100%		Other expenses
Other creditors interests	R -	100%	0%	100%		Other expenses
Current year depreciation	R 527 315	100%	100%	0%	Depreciation	
Loss on during current year 2024/25 for not implementing Nersa approved tariffs	R 200 000	100%	100%	0%		
		100%				
		100%		100%		
<b>Shared municipal OPEX</b>	R 2 356 000					
Bad debts (Allowance for impairment)	R 253 129	100%	0%	100%		Other expenses
FBE paid to Eskom	R 1 450 816	100%	0%	100%		Other expenses
Charges from other Municipal Departments	R -	100%	50%	50%	Other expenses	Other expenses
Operating Leases	R -	100%	50%	50%	Other expenses	Other expenses
Operational Costs	R 652 055	100%	50%	50%	Other expenses	Other expenses
Other expenses	R -	100%	50%	50%	Other expenses	Other expenses
		100%	0%	100%		
		100%	0%	100%		
		100%	0%	100%		
<b>Total</b>	R 4 914 098					

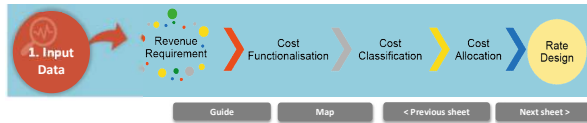
##### Non-electricity supply revenues (will be netted out of OPEX)

	Year 0 estimate	Electricity Supply Share (%)	Wires Share (%)	Retail Share (%)	Function (Wires)	Function (Retail)
<b>Other revenues</b>						
Reconnection fees	R -	100%	10%	90%	Network repairs & maintenance	Other expenses
New connections	R 117 570	100%	100%	0%	Network repairs & maintenance	
Government grant and subsidies	R 330 688	100%	0%	100%		Other expenses
Rental of facilities and equipment	R -	0%	0%	100%		Other expenses
Interest Earned	R 118 639	0%	0%	100%		Other expenses
Internal income	R -	0%	0%	100%		Other expenses
Other income	R -	0%	0%	100%		Other expenses
Other	R -	0%	0%	100%		Other expenses
Sold to other municipal departments	R -	0%	0%	100%		Other expenses
Pre-paid Customers with 60A and higher basic charge	R 100 800			100%		
Pre-paid Customers with 60A and higher Amp Charge	R 3 290 676			100%		
Basic Charge for Customers on Credit	R 134 400			100%		
<b>Total</b>	R 4 092 774					

##### Non-Eskom Purchase Inputs

Sources of Electricity Purchases	Type of purchase cost input	Purchase costs in Year 0	Average rate in Year 0 in cR/kWh	Annual escalation	Average rate in Year 2 (cR/kWh)
DG Exports	Average rate in Year 0 in cR/kWh				-
Independent Power Producers Conventional	Purchase costs in Year 0				-
Independent Power Producers Renewable Energy	Purchase costs in Year 0				-
Self Generation	Purchase costs in Year 0				-
Other	Purchase costs in Year 0				-
<b>Total</b>		R -			R -





### Commercial Inputs (Year 0)

This sheet contains commercial inputs for Year 0 (including monthly sales and the number of customers per customer category)

### Commercial Inputs (Year 0)

#### Energy (KWh) sales inputs

Customer category	TOU period	TOTAL annual - manual	Manual seasonal ratios			Manual TOU ratios			TOTAL - calculated	High Season	Low Season	Data Quality Diagnostic
			High Season	Low Season	Offpeak	Standard	Peak	Do all customer categories have inputs?				
1 Domestic (pre-paid)	All	FALSE			TRUE						TRUE	
Domestic (pre-paid)		2 537 923.00	30%	70%		100%		2 537 923	761 377	1 776 546	TRUE	
Domestic (pre-paid)								-	-	-	TRUE	
Domestic (pre-paid)								-	-	-	TRUE	
2 Domestic (conventional)	All	FALSE			TRUE						TRUE	
Domestic (conventional)		1 743 479.00	30%	70%		100%		1 743 479	523 044	1 220 435	TRUE	
Domestic (conventional)								-	-	-	TRUE	
Domestic (conventional)								-	-	-	TRUE	
3 FBE	All	FALSE			TRUE						TRUE	
FBE		1 896 001.00	30%	70%		100%		1 896 001	568 800	1 327 201	TRUE	
FBE								-	-	-	TRUE	
FBE								-	-	-	TRUE	
4 Commercial Conventional	All	FALSE			TRUE						TRUE	
Commercial Conventional		1 601 331.00	30%	70%		100%		1 601 331	480 399	1 120 932	TRUE	
Commercial Conventional								-	-	-	TRUE	
Commercial Conventional								-	-	-	TRUE	
5 Commercial (pre-paid)	All	FALSE			TRUE						TRUE	
Commercial (pre-paid)		90 089.00	30%	70%		100%		90 089	27 027	63 062	TRUE	
Commercial (pre-paid)								-	-	-	TRUE	
Commercial (pre-paid)								-	-	-	TRUE	
<b>Total</b>								<b>7 868 823</b>	<b>2 360 647</b>	<b>5 508 176</b>	TRUE	

Are total losses between 4% and 40%?  
17% YES

#### Customer base (number of PODs) inputs by customer category - Year 0

Customer Categories	Number of customers (Year 0)
1 Domestic (pre-paid)	892
2 Domestic (conventional)	224
3 FBE	970
4 Commercial Conventional	21
5 Commercial (pre-paid)	14
6	
7	
8	
9	
10	
11	
12	
13	
<b>Total</b>	<b>2 121</b>

**Years 1-4 Data Inputs -->**

[Guide](#)

[Map](#)

[< Previous sheet](#)

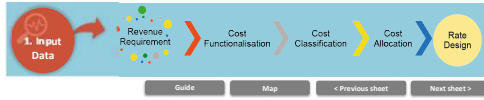
[Next sheet >](#)

Financial Report 2022

Financial Report 2022	2022 (€ million)			2021 (€ million)			2020 (€ million)			2019 (€ million)			2018 (€ million)			2017 (€ million)			2016 (€ million)			2015 (€ million)											
	Revenue	Operating Profit	Profit Before Tax	Revenue	Operating Profit	Profit Before Tax	Revenue	Operating Profit	Profit Before Tax	Revenue	Operating Profit	Profit Before Tax	Revenue	Operating Profit	Profit Before Tax	Revenue	Operating Profit	Profit Before Tax	Revenue	Operating Profit	Profit Before Tax	Revenue	Operating Profit	Profit Before Tax									
Revenue	4,231,000			4,231,000			3,321,000			3,221,000			3,121,000			2,821,000			2,821,000			2,821,000			2,821,000			2,821,000			2,821,000		
Operating Profit		1,121,000			1,121,000			1,121,000			1,121,000			1,121,000			1,121,000			1,121,000			1,121,000			1,121,000			1,121,000				
Profit Before Tax			1,121,000			1,121,000			1,121,000			1,121,000			1,121,000			1,121,000			1,121,000			1,121,000			1,121,000			1,121,000			

Financial Report 2022	2022 (€ million)			2021 (€ million)			2020 (€ million)			2019 (€ million)			2018 (€ million)			2017 (€ million)			2016 (€ million)			2015 (€ million)													
	Revenue	Operating Profit	Profit Before Tax	Revenue	Operating Profit	Profit Before Tax	Revenue	Operating Profit	Profit Before Tax	Revenue	Operating Profit	Profit Before Tax	Revenue	Operating Profit	Profit Before Tax	Revenue	Operating Profit	Profit Before Tax	Revenue	Operating Profit	Profit Before Tax	Revenue	Operating Profit	Profit Before Tax											
Revenue	4,231,000			4,231,000			3,321,000			3,221,000			3,121,000			2,821,000			2,821,000			2,821,000			2,821,000			2,821,000			2,821,000				
Operating Profit		1,121,000			1,121,000			1,121,000			1,121,000			1,121,000			1,121,000			1,121,000			1,121,000			1,121,000			1,121,000			1,121,000			
Profit Before Tax			1,121,000			1,121,000			1,121,000			1,121,000			1,121,000			1,121,000			1,121,000			1,121,000			1,121,000			1,121,000			1,121,000		

Financial Report 2022	2022 (€ million)	2021 (€ million)	2020 (€ million)	2019 (€ million)	2018 (€ million)	2017 (€ million)	2016 (€ million)	2015 (€ million)
Operating Profit	1,121,000	1,121,000	1,121,000	1,121,000	1,121,000	1,121,000	1,121,000	1,121,000



### Commercial Inputs (Years 1-4)

This sheet contains commercial inputs forecasts (including monthly sales and the number of customers per customer category) Commercial Inputs (Years 1-4)  data quality diagnostic

### Commercial Inputs (Years 1-4)

#### Commercial inputs by customer category - Sales growth forecasts

Customer Categories	Inputs										Summary				Data quality diagnostic			
	Year:	1	2	3	4	4	0	1	2	3	4	Year 0 estimate (kWh)	Year 1 estimate (kWh)	Year 2 estimate (kWh)			Year 3 estimate (kWh)	Year 4 estimate (kWh)
	Methodology selection	0	0	1	1	1	1	1	1	1	1	0	1	0			0	0
Domestic (pre-paid)	2 537 923	2 563 302									0	2 537 923	2 563 302	2 588 935	2 614 825	2 640 973	TRUE	YES
Domestic (conventional)	1 743 479	1 760 914									1%	1 743 479	1 760 914	1 778 523	1 796 308	1 814 271	TRUE	YES
FBE	1 896 001	1 914 961									1%	1 896 001	1 914 961	1 934 111	1 953 452	1 972 986	TRUE	YES
Commercial Conventional	1 601 331	1 617 344									1%	1 601 331	1 617 344	1 633 518	1 649 853	1 666 351	TRUE	YES
Commercial (pre-paid)	90 089	90 990									1%	90 089	90 990	91 900	92 819	93 747	TRUE	YES
<b>Total</b>	<b>7 868 823</b>	<b>7 947 511</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7 868 823</b>	<b>7 947 511</b>	<b>8 026 966</b>	<b>8 107 256</b>	<b>8 188 329</b>	<b>8 269 402</b>	<b>TRUE</b>	<b>Checked</b>	

#### Commercial inputs by customer category - customer base forecasts

Customer Categories	Inputs										Summary				Do all customer categories have inputs?		
	Year:	1	2	3	4	4	0	1	2	3	4	Year 0 estimate (#)	Year 1 estimate (#)	Year 2 estimate (#)		Year 3 estimate (#)	Year 4 estimate (#)
	Methodology selection	0	0	1	1	1	1	1	1	1	1	0	1	0		0	0
Domestic (pre-paid)	914	923										914	923	932	932	932	TRUE
Domestic (conventional)	224	226										224	226	229	229	229	TRUE
FBE	1 031	1 041										1 031	1 041	1 052	1 052	1 052	TRUE
Commercial Conventional	21	21										21	21	21	21	21	TRUE
Commercial (pre-paid)	19	19										19	19	19	19	19	TRUE
-	-	-										-	-	-	-	-	TRUE
-	-	-										-	-	-	-	-	TRUE
-	-	-										-	-	-	-	-	TRUE
-	-	-										-	-	-	-	-	TRUE
-	-	-										-	-	-	-	-	TRUE
-	-	-										-	-	-	-	-	TRUE
-	-	-										-	-	-	-	-	TRUE
<b>Total</b>	<b>2 209</b>	<b>2 231</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2 209</b>	<b>2 231</b>	<b>2 253</b>	<b>2 253</b>	<b>2 253</b>	<b>2 253</b>	<b>TRUE</b>	

#### Non-technical losses - future outlook

NTL reduction	
Year on year NTL reduction %	0.0% (as a % of Year 0 NTL)
Year 0 to Year 2 reduction	0%

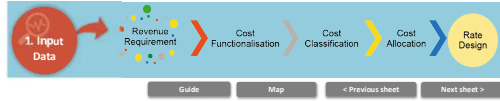


Tariffs currently charged by utility to retail customers - Low season

Customer category	TOU period	Season	Active Energy Rate	Maximum Demand Charge	Basic charge	0	0	Totals by type of charge and season							
								c/kWh	R/KVA/month (MD)	R/KVA/month (NMD)	c/KVAh	R/POD/day	R/POD/month	0	0
Unit:								c/kWh	R/KVA/month (MD)	R/KVA/month (NMD)	c/KVAh	R/POD/day	R/POD/month	0	0
TOU?															
<b>1</b>	<b>Domestic (pre-paid)</b>														
	Domestic (pre-paid)	OffPeak	Low Season					374	-	-	-	-	-	-	-
	Domestic (pre-paid)	Standard	Low Season					374	-	-	-	-	-	-	-
	Domestic (pre-paid)	Peak	Low Season					374	-	-	-	-	-	-	-
	Domestic (pre-paid)	All	Low Season	374	0	0									
<b>2</b>	<b>Domestic (conventional)</b>														
	Domestic (conventional)	OffPeak	Low Season					210	-	-	-	-	103	-	-
	Domestic (conventional)	Standard	Low Season					210	-	-	-	-	103	-	-
	Domestic (conventional)	Peak	Low Season					210	-	-	-	-	103	-	-
	Domestic (conventional)	All	Low Season	210	0	103									
<b>3</b>	<b>FBE</b>														
	FBE	OffPeak	Low Season					374	-	-	-	-	-	-	-
	FBE	Standard	Low Season					374	-	-	-	-	-	-	-
	FBE	Peak	Low Season					374	-	-	-	-	-	-	-
	FBE	All	Low Season	374											
<b>4</b>	<b>Commercial Conventional</b>														
	Commercial Conventional	OffPeak	Low Season					210	-	-	-	-	148	-	-
	Commercial Conventional	Standard	Low Season					210	-	-	-	-	148	-	-
	Commercial Conventional	Peak	Low Season					210	-	-	-	-	148	-	-
	Commercial Conventional	All	Low Season	210	0	148									

TRUE

End of sheet



**Eskom Tariff Inputs (Year 1)**  
This sheet contains information on Eskom Tariff

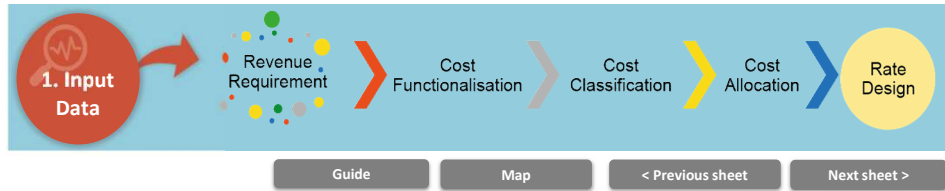
**Eskom Tariff Inputs (Year 1)**

**Eskom Purchase Tariff Inputs by POD - High Season**

POD	TOU period	Season	Active energy charge	Transmission network charge	Network capacity charge	Ancillary service charge	Administration charge	Reactive energy charge	Low voltage subsidy charge	Electrification subsidy charge	Network Demand Charge	0	Totals by type of charge and season								
			Unit: c/kWh	R/KVA/month (NMD)	R/KVA/month (NMD)	c/kWh	R/POD/day	c/KVAh	R/KVA/month (NMD)	c/kWh	R/KVA/month (NMD)		c/kWh	R/KVA/month (NMD)	R/KVA/month (NMD)	c/KVAh	R/POD/day	R/POD/month	0	0	
	TOU?		TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE										
<b>1/3234/ Prins Albert Municipality</b>																					
1/3234/ Prins Albert Municipi	OffPeak	High Season	93.85										110	-	43	11	171	-	-	-	
1/3234/ Prins Albert Municipi	Standard	High Season	172.79								12.2		189	-	56	11	171	-	-	-	
1/3234/ Prins Albert Municipi	Peak	High Season	570.45								12.2		587	-	56	11	171	-	-	-	
1/3234/ Prins Albert Municipi	All	High Season			43.43	0.71	173.12	11.02	0	15.07											

**Eskom Purchase Tariff Inputs by POD - Low Season**

POD	TOU period	Season	Active energy charge	Transmission network charge	Network capacity charge	Ancillary service charge	Administration charge	Reactive energy charge	Low voltage subsidy charge	Electrification subsidy charge	Network Demand Charge	0	Totals by type of charge and season								
			Unit: c/kWh	R/KVA/month (NMD)	R/KVA/month (NMD)	c/kWh	R/POD/day	c/KVAh	R/KVA/month (NMD)	c/kWh	R/KVA/month (NMD)		c/kWh	R/KVA/month (NMD)	R/KVA/month (NMD)	c/KVAh	R/POD/day	R/POD/month	0	0	
	TOU?		TRUE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	FALSE	TRUE										
<b>1/3234/ Prins Albert Municipality</b>																					
1/3234/ Prins Albert Municipi	OffPeak	Low Season	91.54										107	-	49	-	181	-	-	-	
1/3234/ Prins Albert Municipi	Standard	Low Season	144.35								13.7		160	-	63	-	181	-	-	-	
1/3234/ Prins Albert Municipi	Peak	Low Season	209.73								13.7		225	-	63	-	181	-	-	-	
1/3234/ Prins Albert Municipi	All	Low Season			48.95	0.008	181.34	0	0	15.67											



### FBE Inputs (Years 1-4)

This sheet contains information on Free Basic Electricity and subsidies

## FBE Inputs (Years 1-4)

### Direct subsidies

Types of subsidies		Value in Year 1	Value in Year 2	Value in Year 3	Value in Year 4
Free Basic Electricity		R 1 450 816	R 1 633 695		
<b>Total</b>		R 1 450 816	R 1 633 695	R -	R -

### Allocation of direct subsidy benefits by customer category

Customer Categories	Weighting factor	Monthly consumption per POD fully discounted (kWh/month/POD)
1 Domestic (pre-paid)	0	
2 Domestic (conventional)	0	
3 FBE	1	50
4 Commercial Conventional	0	
5 Commercial (pre-paid)	0	
6	0	
7	0	
8	0	
9	0	
10	0	
11	0	
12	0	

End of sheet



### Rate Design Dashboard (Year 2)

This sheet compares the Business As Usual and the Cost To Serve results and help the user fix its tariffs.

### Rate Design Dashboard (Year 2)

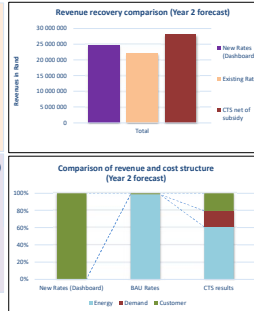
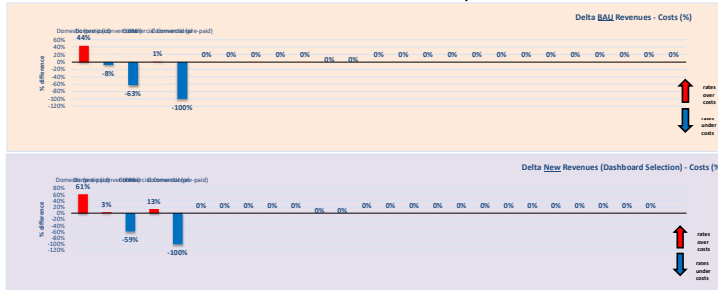
Results BEFORE phasing			
	BAU	CTS (net of subsidy)	New rates (Dashboard selection)
Total revenue forecast (with new rates)	22 041 885	28 139 562	24 686 911
Average increase in rates	12.0%		
Average increase in rates to reach overall cost-reflectivity	27.7%		
Share of total cost recovered with the new rates		87.7%	
Share of total costs recovered (existing rates)		78.3%	

**PHASING INPUTS**

Increase in rates to be phased over:  year(s)

12.0% = A = Compounded increase in period

3.8% = B = Annual increase in rates



### Average rate inputs

Customer Categories	Type of rate setting input selected	Average increase in rates (%)	Total average rate (€/kWh)	Increase required to reach full cost-reflectivity (%)	New total average rate (€/kWh)	Resulting tariff increase (%)	Observations - show notes
Domestic (pre-paid)	Average increase in rates (%)	12.0%		-31.6%	418.9	12.0%	None
Domestic (conventional)	Average increase in rates (%)	12.0%		8.6%	253.0	12.0%	None
FBE	Average increase in rates (%)	12.0%		174.4%	418.9	12.0%	None
Commercial Conventional	Average increase in rates (%)	12.0%		-4.0%	237.8	12.0%	None
Commercial (pre-paid)	Average increase in rates (%)	12.0%		0.0%	0.0	N/A	None

### Rate structure inputs

Customer Categories	Type of kWh charge	1		2		3		BAU	CTS	
		Share of revenues recovered from variable charges (€/kWh)	BAU	CTS	Share of revenues recovered from demand charges (€/kVA/month)	BAU	CTS			Share of revenues recovered from fixed charges (€/PDOC/month)
Domestic (pre-paid)		0.0%	100%	90%	0.0%	0%	0%	100.0%	0%	10%
Domestic (conventional)		0.0%	93%	95%	0.0%	0%	0%	100.0%	7%	5%
FBE		0.0%	100%	30%	0.0%	0%	10%	100.0%	0%	14%
Commercial Conventional		0.0%	90%	95%	0.0%	0%	2%	100.0%	5%	2%
Commercial (pre-paid)		0.0%	0%	54%	0.0%	0%	22%	100.0%	0%	23%

Tariff TOU design inputs

Customer Categories	TOU energy rates?	Seasonal energy rates?	Seasonal demand rates?
Domestic (pre-paid)	FALSE	FALSE	FALSE
Domestic (conventional)	FALSE	FALSE	FALSE
FBE	FALSE	TRUE	FALSE
Commercial Conventional	TRUE	TRUE	TRUE
Commercial (pre-paid)	FALSE	FALSE	FALSE
	FALSE	FALSE	FALSE
	FALSE	FALSE	FALSE
	TRUE	TRUE	TRUE
	FALSE	FALSE	FALSE
	FALSE	FALSE	FALSE
	FALSE	FALSE	FALSE
	FALSE	FALSE	FALSE
	FALSE	FALSE	FALSE
	FALSE	FALSE	FALSE
	FALSE	FALSE	FALSE
	TRUE	TRUE	TRUE
	TRUE	TRUE	TRUE
	TRUE	TRUE	TRUE
	TRUE	TRUE	TRUE
	TRUE	TRUE	TRUE
	TRUE	TRUE	TRUE

Rates below are "average energy rate during this specific TOU period" over "average energy rate during all TOU period"

Peak pricing signal	BAU	CTS	Standard pricing signal	BAU	CTS	Offpeak pricing signal	BAU	CTS
0%	100%	95%	0%	100%	98%		100%	63%
0%	100%	95%	0%	100%	98%		100%	63%
0%	100%	95%	0%	100%	98%		100%	63%
0%	100%	95%	0%	100%	98%		100%	63%
0%	0%	195%	0%	0%	98%	0%		63%
0%			0%					
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Wheeling / Retail: split of cross-subsidy (>0 or <0) between business area  
 The same weighting factor means that cross-subsidy for a particular category are split evenly between Wheeling (wheeling) and Retail rates, proportionately to the Wheeling/Retail ratio established in the CTS study.  
 When cross-subsidy = 0, decreasing the weighting factor will increase wheeling rates - conversely when cross-subsidy > 0, decreasing the weighting factor will decrease wheeling rates.

Customer Categories	Wheeling weighting factor	Retail weighting factor	Amount of cross-subsidy to split (USD)	Observations - please insert
Domestic (pre-paid)	0%	100%	4 125 658,3	None
Domestic (conventional)	0%	100%	138 713,6	None
FBE	0%	100%	7 270 300,2	None
Commercial Conventional	0%	100%	690 628,7	None
Commercial (pre-paid)	0%	100%	269 327,8	None
	0%	100%	-	None
	0%	100%	-	None
	0%	100%	-	None
	0%	100%	-	None
	0%	100%	-	None
	0%	100%	-	None
	0%	100%	-	None
	0%	100%	-	None
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	0%	100%	-	None
	0%	100%	-	None
	0%	100%	-	None
	0%	100%	-	None
	0%	100%	-	None

End of sheet



### Benchmarking Inputs (Year 2)

This sheet contains information on NERSA's acceptable range for the financial, expenses and tariffs

#### Financial Performance indicators as per NERSA

Performance Indicators	Benchmark	Acceptable Range	
		Minimum	Maximum
Bulk Purchase Cost/Total expenditure (%)	75%	58%	78%
Energy Losses (%)	10%	5%	12%
Repairs & Maintenance (% of revenue)	6%	6%	15%
Net surplus percentage (%)	15%	10%	20%

#### Allowable expense increases as per NERSA

Expenses	%Increase Guideline
Bulk Purchases	8.8%
Repairs and Maintenance	5.0%
Other OPEX	5.0%

Tariff benchmark by customer category as per NERSA

Customer Category	Acceptable Range (R/kWh)	
	Minimum	Maximum
Average domestic IBT (0-50 kWh)	1.2396	1.3523
Average domestic IBT (51-350 kWh)	1.6259	1.7386
Average domestic IBT (351-600 kWh)	2.3182	2.447
Average domestic IBT (>600 kWh)	2.7851	2.8817
Alternative domestic low IBT (0-350 kWh)	1.5776	1.6582
Alternative domestic low IBT (>350kWh)	2.286	2.3986
Alternative domestic high IBT (0-350 kWh)	1.5293	1.6259
Alternative domestic high IBT (>350 kWh)	2.2539	2.3504
Average domestic non-IBT (0-400 kWh)	1.7386	1.8513
Average domestic non-IBT (>400 kWh)	2.1894	2.2698
Average commercial prepaid: Single phase (2000 kWh)	2.8978	3.0104
Average commercial conventional low: Single phase (2000 kWh)	2.6884	2.769
Average commercial conventional medium: Single phase (3000 kWh)	2.5919	2.7045
Average commercial conventional high: Single phase (7000 kWh)	2.286	2.3986
Average commercial prepaid: Three phase (5500 kWh)	2.8978	3.0104
Average commercial conventional low: Three phase (5500 kWh)	2.286	2.3825
Average commercial conventional medium: Three phase (11500 kWh)	2.1733	2.2698
Average commercial conventional high: Three phase (22 000 kWh)	2.1249	2.2216
Agriculture Low (2000 kWh)	3.1231	3.2196
Agriculture Medium (3000 kWh)	2.9621	3.0588
Agriculture High (7000 kWh)	2.5274	2.6241
Average industrial low (43 800 kWh)	2.6241	2.7529
Average industrial medium (98 550 kWh)	2.5757	2.6723
Average industrial high (730 000 kWh)	2.3182	2.4147
Average industrial time of use (ToU): Megaflex (1 323 MWh)	2.0103	2.1125
Average industrial ToU: Nightsave (1 323 MWh)	2.9643	3.0664

End of sheet



### High-level CTS projections

This sheet provides a high level Cost To Serve forecast

Unit	0	1	2	3	4	
	Year 0	Year 1	Year 2	Year 3	Year 4	
<b>Energy balance</b>						
Sales	kWh	7 868 823	7 947 511	8 026 986	8 107 256	8 188 329
Non-Eskom Power Purchases	kWh	-	-	-	-	-
Eskom Power Purchases	kWh	9 499 707	9 594 704	9 690 651	9 787 558	9 885 433
<b>Total Energy Requirements</b>	kWh	<b>9 499 707</b>	<b>9 594 704</b>	<b>9 690 651</b>	<b>9 787 558</b>	<b>9 885 433</b>
Technical losses	kWh	1 124 143	1 135 385	1 156 924	1 168 493	1 180 178
Non-technical losses	kWh	506 741	511 808	506 741	511 808	516 926
<b>Total losses</b>	kWh	<b>1 630 884</b>	<b>1 647 193</b>	<b>1 663 665</b>	<b>1 680 301</b>	<b>1 697 104</b>
<b>Total losses</b>	% of total	<b>17%</b>	<b>17%</b>	<b>17%</b>	<b>17%</b>	<b>17%</b>
Allowed losses	% of total	12%	12%	12%	12%	12%
Allowed losses	kWh	1 139 965	1 151 364	1 162 878	1 174 507	1 186 252

<b>CTS calculations - Wires business area</b>						
Energy purchases from Eskom - excl. Losses	Rand					
Energy purchases from Eskom - Losses	Rand		2 236 685	2 636 938	3 081 447	3 600 887
Other energy purchases	Rand					
Capital expenditure	Rand		-	-	-	-
Operational expenditure (incl. Depreciation)	Rand		3 072 015	3 225 616	3 225 616	3 225 616
Other revenues	Rand		125 799	132 089	132 089	132 089
Surplus	Rand		518 290	573 046	617 497	669 441
<b>Total</b>	Rand		<b>5 701 190</b>	<b>6 303 511</b>	<b>6 792 471</b>	<b>7 363 854</b>
				10.6%	7.8%	8.4%
<b>Total net of purchases</b>	Rand		<b>3 464 505</b>	<b>3 666 573</b>	<b>3 711 023</b>	<b>3 762 967</b>
				5.8%	1.2%	1.4%

<b>CTS calculations - Retail business area</b>						
Energy purchases from Eskom - excl. Losses	Rand		15 656 434	18 295 640	21 379 736	24 983 718
Energy purchases from Eskom - Losses	Rand		31 479	13 570	15 858	18 531
Other energy purchases	Rand		-	-	-	-
Capital expenditure	Rand		-	-	-	-
Operational expenditure (incl. Depreciation)	Rand		2 172 070	2 462 996	2 462 996	2 462 996
Other revenues	Rand		353 836	371 528	371 528	371 528
Surplus	Rand		1 750 615	2 040 068	2 348 706	2 709 372
<b>Total</b>	Rand		<b>19 256 763</b>	<b>22 440 746</b>	<b>25 835 768</b>	<b>29 803 088</b>
				16.5%	15.1%	15.4%
<b>Total net of purchases</b>	Rand		<b>3 568 849</b>	<b>4 131 536</b>	<b>4 440 174</b>	<b>4 800 839</b>
				15.8%	7.5%	8.1%

<b>CTS calculations - ALL</b>						
Energy purchases from Eskom - excl. Losses	Rand		15 656 434.49	18 295 640	21 379 736	24 983 718
Energy purchases from Eskom - Losses	Rand		2 268 164	2 650 509	3 097 305	3 619 418
Other energy purchases	Rand		-	-	-	-
Capital expenditure	Rand		-	-	-	-
Operational expenditure (incl. Depreciation)	Rand		5 244 085	5 688 612	5 688 612	5 688 612
Other revenues	Rand		479 636	503 618	503 618	503 618
Surplus	Rand		2 268 905	2 613 114	2 966 203	3 378 813
<b>Total</b>	Rand		<b>24 957 953</b>	<b>28 744 257</b>	<b>32 628 238</b>	<b>37 166 943</b>
				15.2%	13.5%	13.9%
<b>Total net of purchases</b>	Rand		<b>7 033 354</b>	<b>7 798 108</b>	<b>8 151 197</b>	<b>8 563 807</b>
				10.9%	4.5%	5.1%

End of sheet

Year: 2

Table with multiple columns and rows, likely representing a detailed financial or operational data set.

Table with multiple columns and rows, featuring a color-coded layout with black, orange, and light blue background blocks.

Table with multiple columns and rows, containing detailed data points.

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Table with multiple columns and rows, containing detailed data points.











All sheets to the right of this sheet are COS calculations

**COS Calculations (Year 2) -->**

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- 1) Revenue Requirement (Year 2)
- 2) Cost Funct (Year 2)
- 3) Cost Classification (Year 2)
- 4) Cost Allocation (Year 2)
- 5) COS Results (Year 2)
- Summary Charts (Year 2)



## 1) Revenue Requirement (Year 2)

This sheet is calculation of the revenue requirement per business area

### 1) Revenue Requirement

This sheet presents the revenue requirement for the licensee. The data is drawn from the Inputs and Intermediary Calculations tabs.

Revenue Requirement components	Total cost (R)			% of Total
	Wires	Retail	Total	
<b>Allowable costs</b>	7 458 511	22 440 746	29 899 257	100%
Energy purchases from Eskom - net of cost of losses	-	18 295 640	18 295 640	61%
Energy purchases from Eskom - cost of losses	2 636 938	13 570	2 650 509	9%
Other energy purchases	-	-	-	0%
Capital expenditure	-	-	-	0%
Operational expenditure (incl. Depreciation)	4 275 616	2 462 996	6 738 612	23%
Other revenues	- 132 089	- 371 528	- 503 618	-2%
Surplus	678 046	2 040 068	2 718 114	9%
<b>Not allowable costs</b>	793 756	347 670	1 141 426	
Cost of losses disallowed	793 756	347 670	1 141 426	
<b>TOTAL COSTS</b>	<b>8 252 267</b>	<b>22 788 416</b>	<b>31 040 683</b>	
	27%	73%		

End of sheet



**2) Cost Funct (Year 2)**

This sheet functionalise costs for each business area

**2) Cost Functionalisation**

Cost functionalisation entails the arrangement of costs according to major operating functions of a licensee, such as production/generation, transmission, distribution or customer-related costs. This assists in facilitating a determination in terms of which customer groups are responsible for such costs. All costs should be assigned to the major functions of a licensee

Functions	Included in Surplus baseline	Total Functionalised Costs (R)			% of Total
		Wires	Retail	Total	
1 Eskom Energy Purchase - excl losses	FALSE	-	18 295 640	18 295 640	61%
2 Eskom Energy Purchase - cost of losses	FALSE	2 636 938	13 570	2 650 509	9%
3 Other Energy Purchase	FALSE	-	-	-	0%
4 CAPEX and return	FALSE	-	-	-	0%
5 Depreciation	TRUE	651 683	-	651 683	2%
6 Network repairs & maintenance	TRUE	2 117 275	-	2 117 275	7%
7 Salaries, wages and allowances including payments to consultants	TRUE	-	-	-	0%
8 Financial costs	TRUE	-	-	-	0%
9 Other expenses	TRUE	666 615	4 131 536	4 798 150	16%
# General expenses	TRUE	-	-	-	0%
# Notified Maximum Demand Cost	TRUE	-	-	-	0%
# Other 5	TRUE	-	-	-	0%
# Other 6	TRUE	-	-	-	0%
# Other 7	TRUE	-	-	-	0%
# 0	0%	210 000	-	210 000	1%
# 0	0%	210 000	-	210 000	1%
# 0	0%	210 000	-	210 000	1%
# 0	0%	210 000	-	210 000	1%
# 0	0%	210 000	-	210 000	1%
# 0	0%	210 000	-	210 000	1%
# 0	0%	210 000	-	210 000	1%
		<b>7 332 511</b>	<b>22 440 746</b>	<b>29 773 257</b>	
				<b>FALSE</b>	

Equivalent surplus ratios	
Wires	Retail
0%	0%
0%	0%
0%	0%
0%	0%
10%	0%
10%	0%
0%	0%
0%	0%
82%	98%
0%	0%
0%	0%
0%	0%
0%	0%
0%	0%
0%	0%
0%	0%
0%	0%
0%	0%
0%	0%





































































































































































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<b>Unit:</b>	c/kwh	c/kwh	c/kwh	c/kwh	c/kwh	c/kwh	c/kwh	c/kwh	c/kwh	c/kwh
<b>Weighted average (All):</b>	-	-	-	-	-	-	-	-	-	-

**Average cost-reflective charges by business area**

Business area:	Wires	Retail	Total
<b>Unit:</b>	c/kwh	c/kwh	c/kwh
<b>Customer Categories</b>			
1 Domestic (pre-paid)	38	222	260
2 Domestic (conventional)	33	212	245
3 FBE	397	744	1 141
4 Commercial Conventional	29	183	210
5 Commercial (pre-paid)	145	313	458
6	-	-	-
7	-	-	-
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#	-	-	-
<b>Unit:</b>	c/kwh	c/kwh	c/kwh
<b>Weighted average (All):</b>	-	-	-

End of sheet







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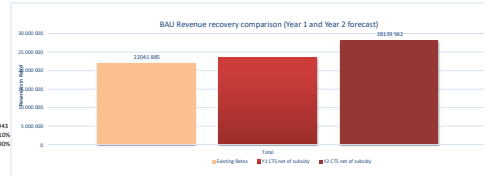
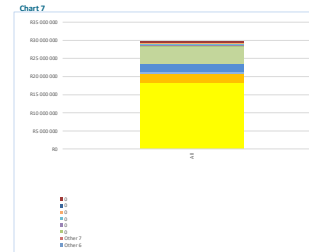
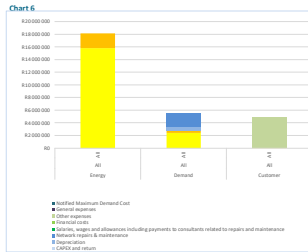
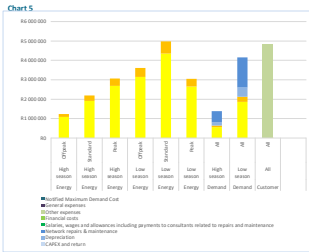
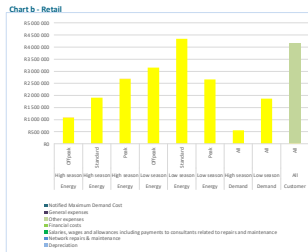
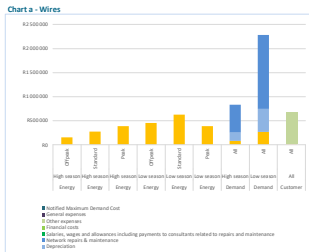
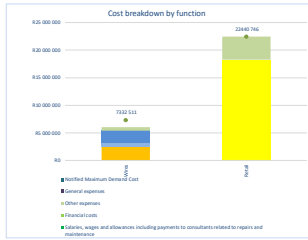
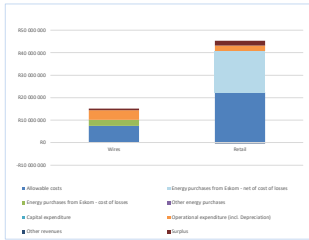






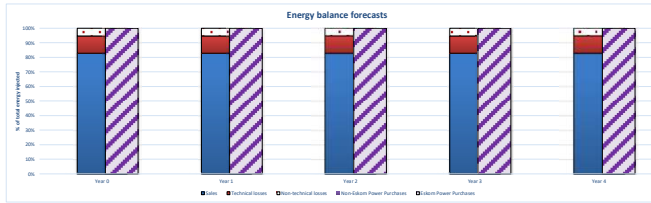
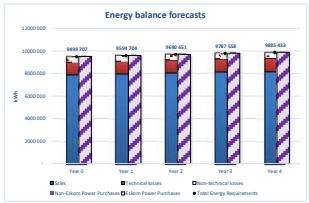
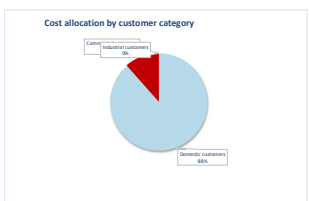
**Summary Charts (Year 2)**

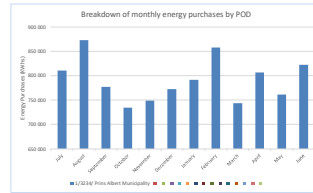
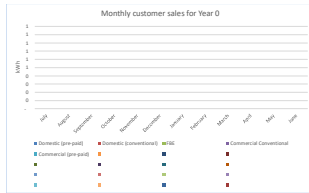
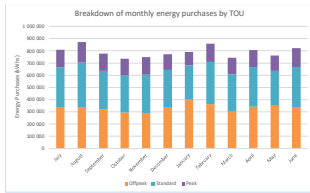
This sheet summarises all the charts from the COS study.



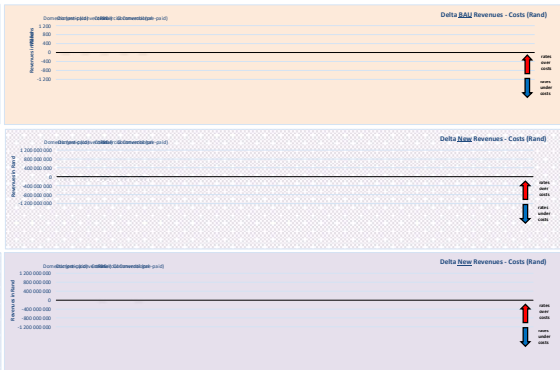
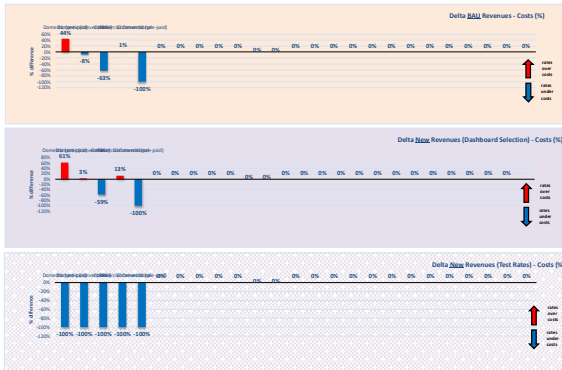
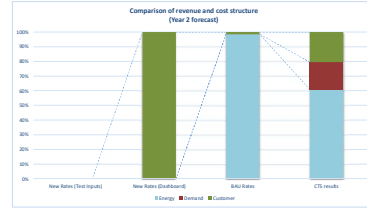
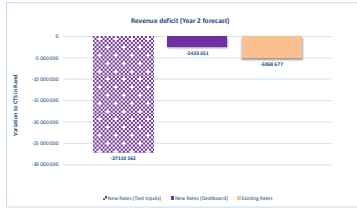
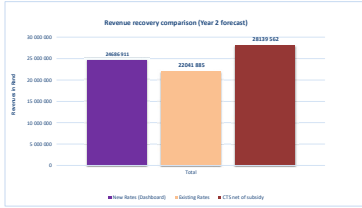
Increase of CTCs Year 1 to Year 2 = **15.2%** (inclusive Etoam purchase)      Estimated ratio of revenues over allowable costs in Year 1 = **0.0%**

Increase in MATES to achieve full cost reflectivity in Year 1 = **7.7%**      Increase in MATES to achieve full cost reflectivity in Year 2 = **27.3%**





RESULTS FOR ALL FOUR SCENARIOS



End of sheet



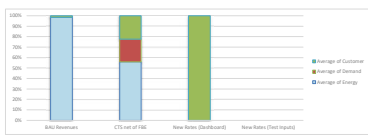
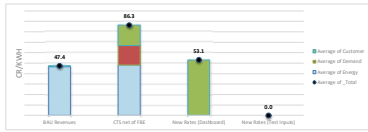




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**Summary Charts (Pivot Table)**  
This sheet shows the chart's that include Pivot Table

Customer category
Commercial (pre-paid)
Commercial Conventional
Domestic Conventional
Domestic (pre-paid)
FBE



Customer Category	Percentage of Customer	Percentage of Demand	Percentage of Customer	Percentage of Total
B&U Revenues	48.7	0.0	0.7	47.4
CTS net of FBE	48.2	18.7	15.5	86.3
New Rates (DisfBoard)	0.0	0.0	13.1	32.1
New Rates (FBE Impact)	0.0	0.0	0.0	0.0
<b>Customer Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

End of sheet



All sheets to the right of this sheet are Tariff Setting sheets

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**Tariff Setting -->**

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Rate Design Dashboard (Year 2)

Tariff Schedule (Year 2)

Rate Impact Results (Year 2)

New Rates\_Results (Year 2)

Results Benchmarking (Year 2)





## Rate Impact Results (Year 2)

### Year 2

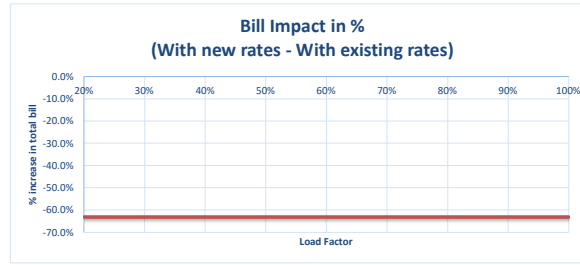
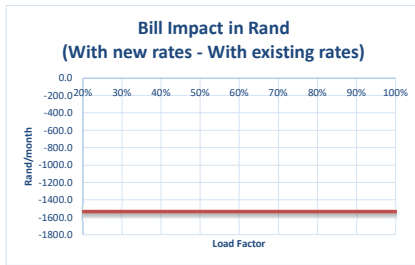
Note: "Wires+Retail" must be the option selected in the "Tariff Schedule" worksheet for this module to operate correctly

#### Dashboard

Customer category: **Domestic (pre-paid)**

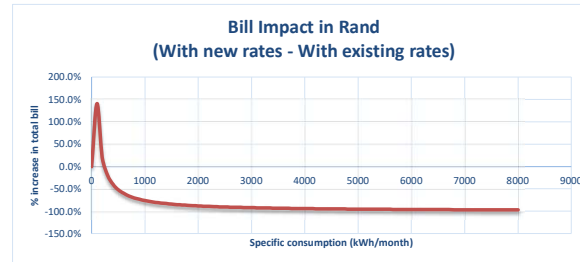
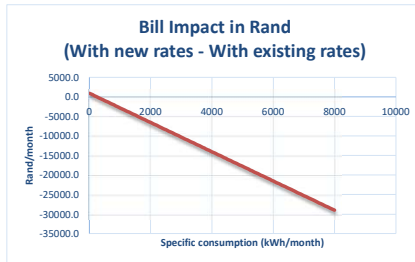
#### Monthly bill impact = f ( customer load factor )

	Average in class
Monthly consumption (kWh/month):	231
<b>651</b>	



#### Monthly bill impact = f ( consumption )

	Average in class
Load factor:	38%
Start consumption (kWh):	0
Increment in consumption (kWh):	100
<b>55%</b>	









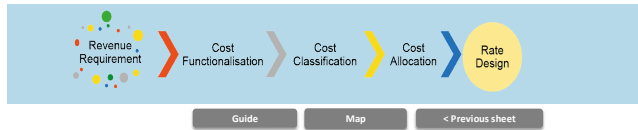




	Peak	Low Season	0.00					-	-	-	-	-	-	-	-
	All	Low Season		0.0	0.0										
#			FALSE	FALSE	FALSE	FALSE	FALSE								
	OffPeak	Low Season	0.00					-	-	-	-	-	-	-	-
	Standard	Low Season	0.00					-	-	-	-	-	-	-	-
	Peak	Low Season	0.00					-	-	-	-	-	-	-	-
	All	Low Season		0.0	0.0										
#			FALSE	FALSE	FALSE	FALSE	FALSE								
	OffPeak	Low Season	0.00					-	-	-	-	-	-	-	-
	Standard	Low Season	0.00					-	-	-	-	-	-	-	-
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	All	Low Season		0.0	0.0										
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	OffPeak	Low Season						-	-	-	-	-	-	-	-
	Standard	Low Season						-	-	-	-	-	-	-	-
	Peak	Low Season						-	-	-	-	-	-	-	-
	All	Low Season													
#			FALSE	FALSE	FALSE	FALSE	FALSE								
	OffPeak	Low Season						-	-	-	-	-	-	-	-
	Standard	Low Season						-	-	-	-	-	-	-	-
	Peak	Low Season						-	-	-	-	-	-	-	-
	All	Low Season													
#			FALSE	FALSE	FALSE	FALSE	FALSE								
	OffPeak	Low Season						-	-	-	-	-	-	-	-
	Standard	Low Season						-	-	-	-	-	-	-	-
	Peak	Low Season						-	-	-	-	-	-	-	-
	All	Low Season													
#			FALSE	FALSE	FALSE	FALSE	FALSE								
	OffPeak	Low Season						-	-	-	-	-	-	-	-
	Standard	Low Season						-	-	-	-	-	-	-	-
	Peak	Low Season						-	-	-	-	-	-	-	-
	All	Low Season													

End of sheet





### NERSA KPIs

This sheet compares the new tariff with NERSA's guidelines

#### Key Performance indicators

Category	Performance Indicators	Description	Results
Core KPI from NERSA	Bulk Purchase Cost / Total expenditure (%)	% of electricity purchase cost over total expenditure (CAPEX and OPEX)	73%
Core KPI from NERSA	Energy Losses (%)	% of total losses in Year 2	17%
Core KPI from NERSA	Repairs & Maintenance (% of revenue)	% of repair and maintenance costs over all costs included in the revenue requirement for Year 2	7%
Core KPI from NERSA	Bulk Purchases increase (%)	% increase in bulk purchase between Year 1 and Year 2	17%
Core KPI from NERSA	Repairs and Maintenance increase (%)		5%
Core KPI from NERSA	Average increase in rates (%)	Average increase in rates for all customer categories based on the COS results	12%
Core KPI from NERSA	Other OPEX increase (%)		15%
Core KPI from NERSA	Are tariffs for all customer category in an acceptable Range?	based on the results benchmarking (year 2), assessing if the average tariff for each customer category is in an acceptable range defined by the NERSA	No
Core KPI from NERSA	Increase of costs between Year 1 and Year 2 (including Eskom purchase)	Increase of costs between Year 1 and Year 2 (including Eskom purchase)	15%
Core KPI from NERSA	Increase of costs between Year 1 and Year 2 (excluding Eskom purchase)	Increase of costs between Year 1 and Year 2 (excluding Eskom purchase)	11%
Profitability	Net surplus percentage (%)	% chosen in the Methodology sheet	10%
Profitability	Rate of return requested for wires (%)	% chosen in the Methodology sheet	10%
Profitability	Rate of return requested for retail (%)	% chosen in the Methodology sheet	10%
OPEX efficiency	Total OPEX/ Total customers	Opex cost per customer for Year 0	2 316.88
OPEX efficiency	OPEX / Total sales in kWh	OPEX (excluding purchase) over total sales in kWh for Year 2	71%
OPEX efficiency	OPEX / Peak demand	OPEX (excluding purchase) in Year 0 divided by the peak demand in kVA in Year 0	73506069%
OPEX efficiency	Bad debt (Year 0) / Total Opex (Year 0)	% of bad debt over the total OPEX (excluding energy purchase) for Year 0	0.05
OPEX efficiency	Salaries (Year 0) / Total Opex (Year 0)	% of salaries costs over the total OPEX (excluding energy purchase) for Year 0	Missing inputs
OPEX efficiency	Total OPEX (Year 0) / Asset base (Year 0)	Total OPEX as a % of the asset base	0%
CAPEX efficiency	Total investment (Year 1 to 4) / Total sales (Year 1 to 4)	Difference between asset investment and sales between Year 1 and 4	
CAPEX efficiency	Total Asset (Year 2) / Total km (Year 2)	Ratio between the total assets and the total length of the infrastructure in km in %	
CAPEX efficiency	Depreciation (Year 0) / Total asset base (Year 0)	% of depreciation over the total asset base	0%
Data compliance	Sum data quality diagnostic sheet score	Data compliance Score out of 6	6