

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	2024/25	When data sets are last complete.
Year 1	2025/26	When the CTS study is carried out.
Year 2	2026/27	When new rates are implemented.
Year 3	2027/28	
Year 4	2028/29	



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

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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)

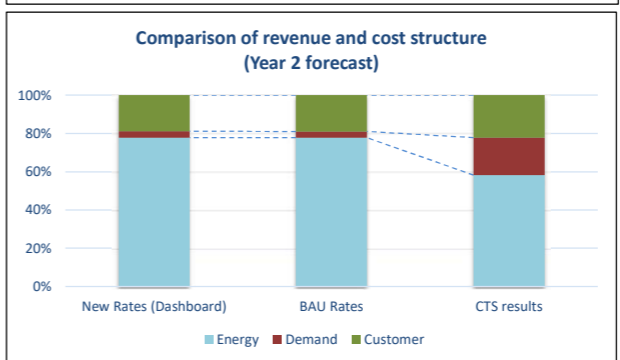
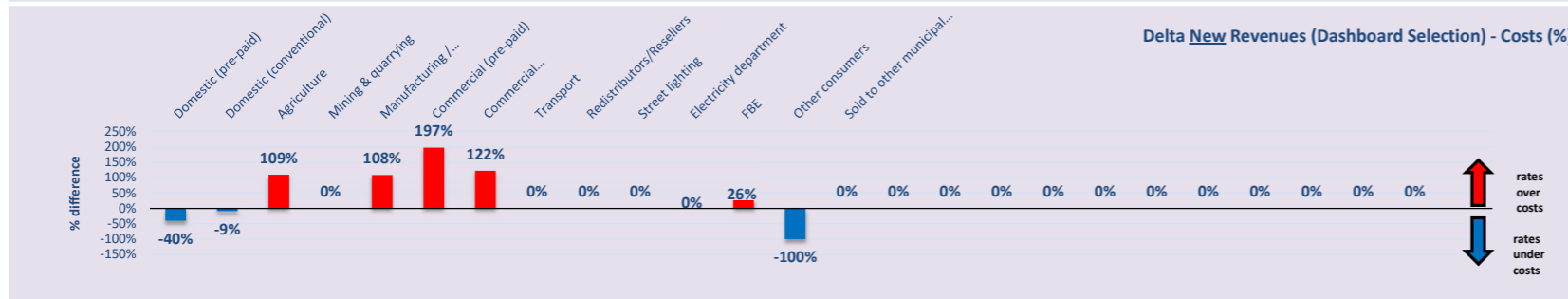
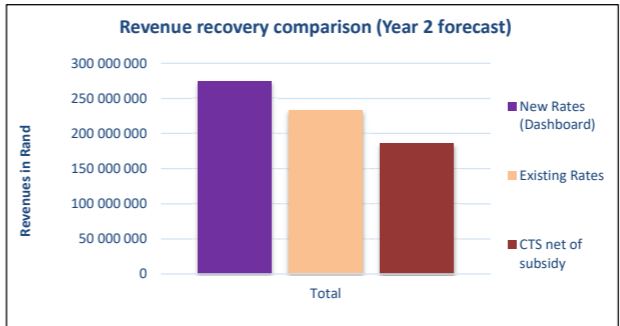
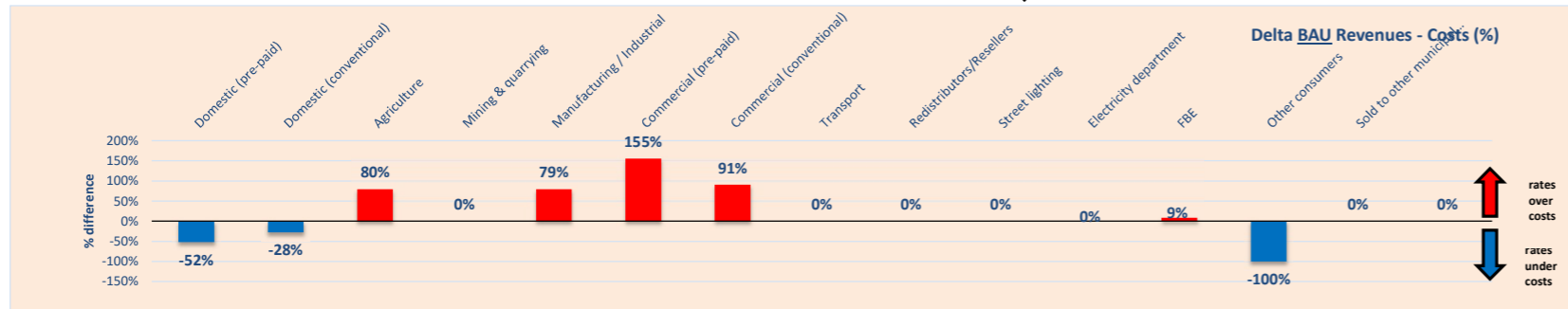
Rate Design Dashboard (Year 2)

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 subsidies)	New rates (Dashboard selection)
Total revenue forecast (with new rates)	233 102 497	185 396 585	273 762 493
	Delta =		88 365 909
Average increase in rates	17,4%		
Average increase in rates to reach overall cost-reflectivity	-20,5%		
Share of total cost recovered with the new rates	147,7%		
Share of total costs recovered (existing rates)	125,7%		

PHASING INPUTS	
Increase in rates to be phased over	1 year(s)
Show analysis for year #/1	1
	17,4% << A = Compounded increase at the end of FALSE
	18,5% << B = Year on Year increase in rates



Average rate inputs

Rate structure inputs

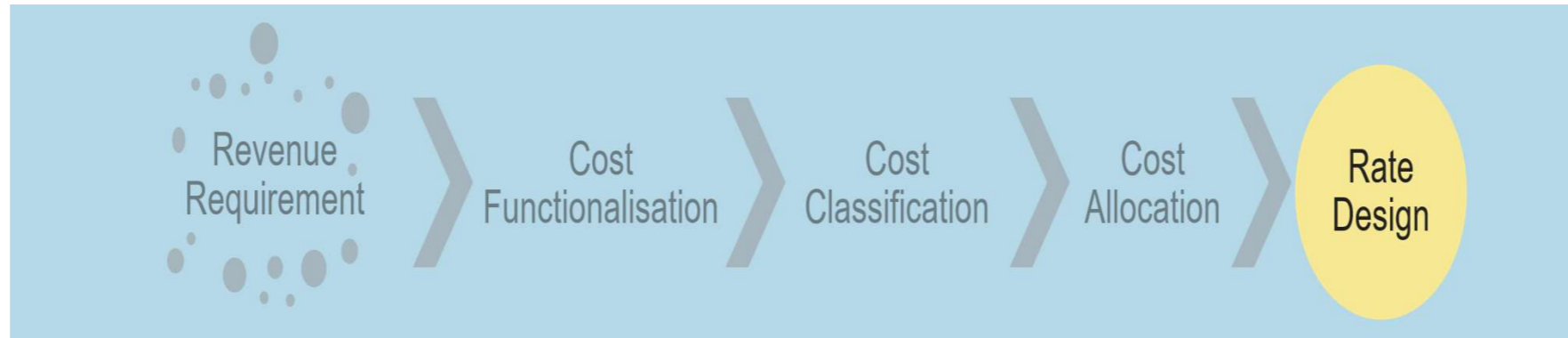
Customer Categories	Type of kVA charge		1		2		3		CTS		
			Share of revenues recovered from variable charges (c/kWh)	BAU	CTS	Share of revenues recovered from demand charges (R/kVA/month)	BAU	CTS		Share of revenues recovered from fixed charges (R/POD/month)	BAU
Domestic (pre-paid)	per KVA of MD metered	<<<<< - - ->>>>	100,0%	100%	44%	0,0%	0%	29%	0,0%	0%	27%
Domestic (conventional)	per KVA of MD metered	<<<<< - - ->>>>	76,2%	76%	54%	0,0%	0%	31%	23,8%	24%	15%
Agriculture	per KVA of MD metered	<<<<< - - ->>>>	70,2%	70%	49%	0,0%	0%	16%	29,8%	30%	35%
Mining & quarrying	per KVA of MD metered	<<<<< - - ->>>>	0,0%	0%	0%	0,0%	0%	0%	100,0%	0%	0%
Manufacturing / Industrial	per KVA of MD metered	<<<<< - - ->>>>	54,0%	54%	71%	34,4%	34%	18%	11,6%	12%	11%
Commercial (pre-paid)	per KVA of MD metered	<<<<< - - ->>>>	100,0%	100%	83%	0,0%	0%	8%	0,0%	0%	9%
Commercial (conventional)	per KVA of MD metered	<<<<< - - ->>>>	66,7%	67%	56%	0,0%	0%	19%	33,3%	33%	24%
Transport	per KVA of MD metered	<<<<< - - ->>>>	0,0%	0%	0%	0,0%	0%	0%	100,0%	0%	0%
Redistributors/Resellers	per KVA of MD metered	<<<<< - - ->>>>	0,0%	0%	0%	0,0%	0%	0%	100,0%	0%	0%
Street lighting	per KVA of MD metered	<<<<< - - ->>>>	0,0%	0%	0%	0,0%	0%	0%	100,0%	0%	0%
Electricity department	per KVA of MD metered	<<<<< - - ->>>>	0,0%	0%	0%	0,0%	0%	0%	100,0%	0%	0%
FBE	per KVA of MD metered	<<<<< - - ->>>>	100,0%	100%	97%	0,0%	0%	3%	0,0%	0%	0%
Other consumers	per KVA of MD metered	<<<<< - - ->>>>	0,0%	0%	65%	0,0%	0%	29%	100,0%	0%	6%
Sold to other municipal departmen	per KVA of MD metered	<<<<< - - ->>>>	0,0%	0%	0%	0,0%	0%	0%	100,0%	0%	0%
	per KVA of MD metered	<<<<< - - ->>>>	0,0%			0,0%			100,0%		
	per KVA of MD metered	<<<<< - - ->>>>	0,0%			0,0%			100,0%		
	per KVA of MD metered	<<<<< - - ->>>>	0,0%			0,0%			100,0%		
	per KVA of MD metered	<<<<< - - ->>>>	0,0%			0,0%			100,0%		
	per KVA of MD metered	<<<<< - - ->>>>	0,0%			0,0%			100,0%		
	per KVA of MD metered	<<<<< - - ->>>>	0,0%			0,0%			100,0%		
	per KVA of MD metered	<<<<< - - ->>>>	0,0%			0,0%			100,0%		
	per KVA of MD metered	<<<<< - - ->>>>	0,0%			0,0%			100,0%		
	per KVA of MD metered	<<<<< - - ->>>>	0,0%			0,0%			100,0%		
	per KVA of MD metered	<<<<< - - ->>>>	0,0%			0,0%			100,0%		
	per KVA of MD metered	<<<<< - - ->>>>	0,0%			0,0%			100,0%		
	per KVA of MD metered	<<<<< - - ->>>>	0,0%			0,0%			100,0%		

Tariff TOU design inputs

Tariff Schedule (Year 2) - concise

Customer Categories	RATE COMPARISON								REVENUE COMPARISON	
	New rates for Year 2 (dashboard) (Wires+Retail)				Existing rates in Year 1 (Wires + Retail)				Revenue from new rates	Revenue from existing rates
	Basic charge	Average demand rate	Average energy rate	Total average rate	Basic charge	Average demand rate	Average energy rate	Total average rate		
Rand/month	Rand/kVA/month	c/kWh	c/kWh	Rand/month	Rand/kVA/month	c/kWh	c/kWh	R million	R million	
Domestic (pre-paid)	-	-	407	407	-	-	326	326	25,4	20,3
Domestic (conventional)	414	-	385	505	331	-	308	404	12,3	9,9
Agriculture	2 480	-	420	599	2 132	-	361	515	128,5	110,5
Mining & quarrying	-	-	-	-	-	-	-	-	-	-
Manufacturing / Industrial	3 077	505	224	415	2 645	434	193	357	25,9	22,3
Commercial (pre-paid)	-	-	562	562	-	-	483	483	37,5	32,2
Commercial (conventional)	1 345	-	413	620	1 157	-	355	533	22,6	19,5
Transport	-	-	-	-	-	-	-	-	-	-
Redistributors/Resellers	-	-	-	-	-	-	-	-	-	-
Street lighting	-	-	-	-	-	-	-	-	-	-
Electricity department	-	-	-	-	-	-	-	-	-	-
FBE	-	-	391	391	-	-	336	336	21,6	18,5
Other consumers	-	-	-	-	-	-	-	-	-	-
Sold to other municipal departments	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
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Rate Impact Results (Year 2)

Year 2

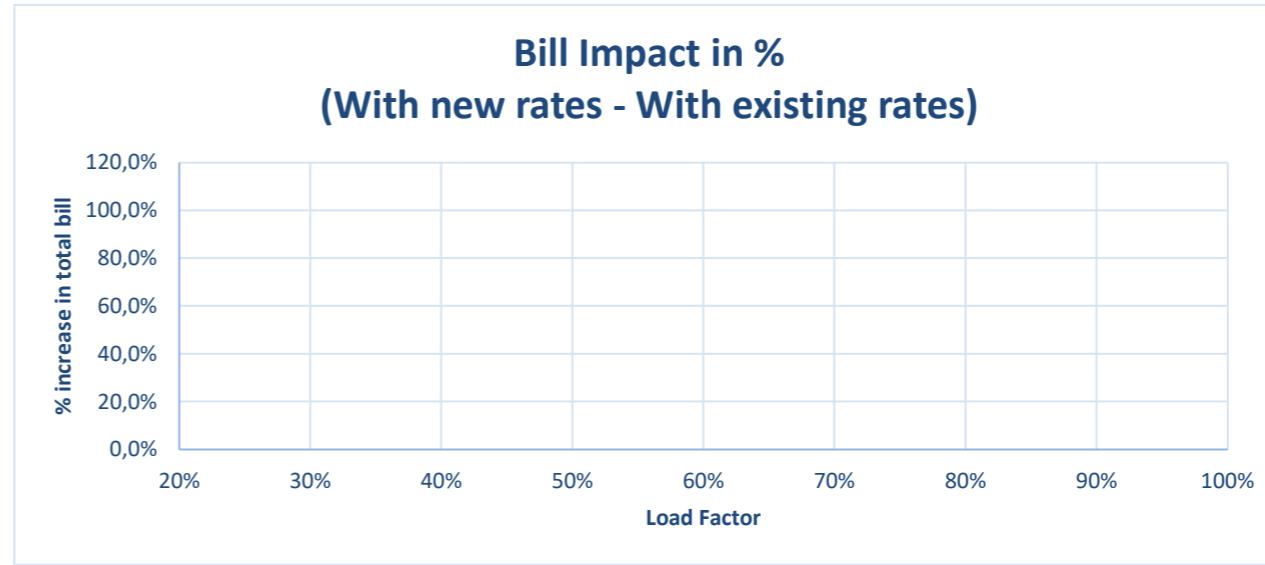
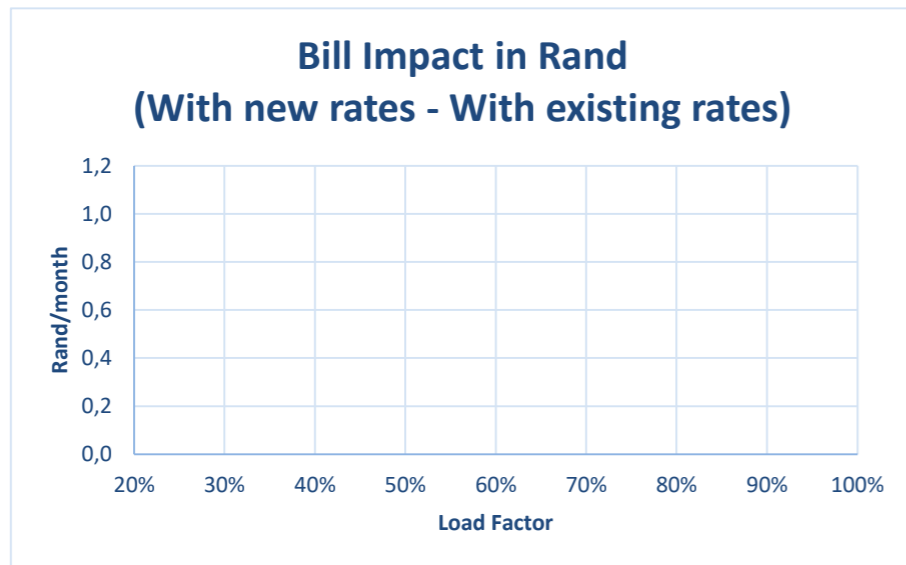
Note: "Wires+Retail" must be the option selected in the "Tariff Schedule" worksheet for this module to operate correctly

Dashboard

Customer category: **Residential 1-Phase (Scale 4)**

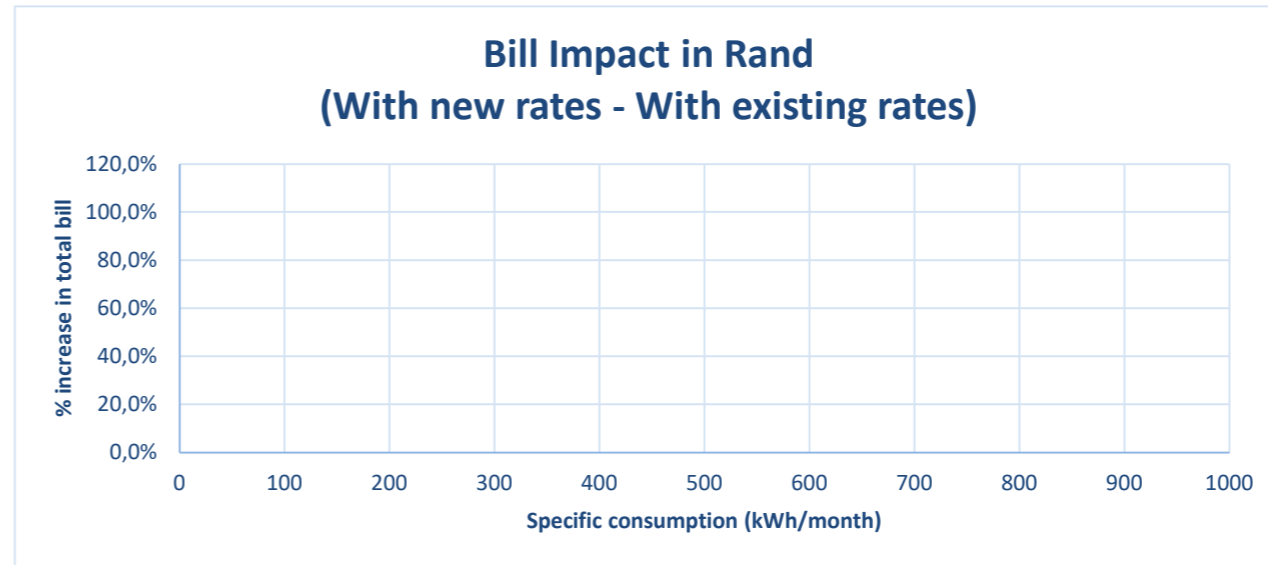
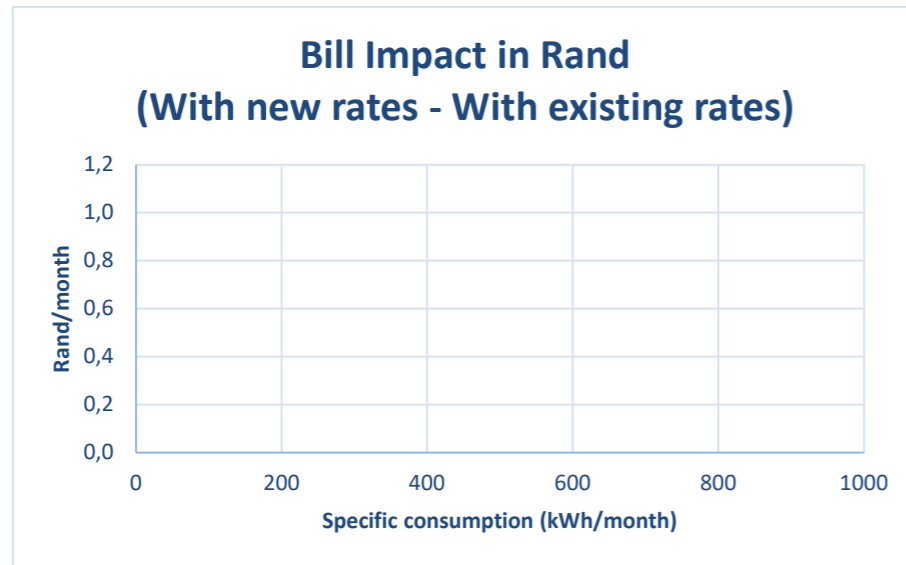
Monthly bill impact = f (customer load factor)

Monthly consumption (kWh/month):	651	Average in class	#N/A
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Monthly bill impact = f (consumption)

		Average in class
Load factor:	55%	#N/A
Start consumption (kWh)	100	
Increment in consumption (kWh):	10	



End of sheet

	Standard	High Season	0,00					-	-	-	-	-	-	-	-
	Peak	High Season	0,00					-	-	-	-	-	-	-	-
	All	High Season		0,0	0,0										

#			FALSE	FALSE	FALSE	FALSE	FALSE								
	OffPeak	High Season	0,00					-	-	-	-	-	-	-	-
	Standard	High Season	0,00					-	-	-	-	-	-	-	-
	Peak	High Season	0,00					-	-	-	-	-	-	-	-
	All	High Season		0,0	0,0										

#			FALSE	FALSE	FALSE	FALSE	FALSE								
	OffPeak	High Season	0,00					-	-	-	-	-	-	-	-
	Standard	High Season	0,00					-	-	-	-	-	-	-	-
	Peak	High Season	0,00					-	-	-	-	-	-	-	-
	All	High Season		0,0	0,0										

#			FALSE	FALSE	FALSE	FALSE	FALSE								
	OffPeak	High Season	0,00					-	-	-	-	-	-	-	-
	Standard	High Season	0,00					-	-	-	-	-	-	-	-
	Peak	High Season	0,00					-	-	-	-	-	-	-	-
	All	High Season		0,0	0,0										

#			FALSE	FALSE	FALSE	FALSE	FALSE								
	OffPeak	High Season						-	-	-	-	-	-	-	-
	Standard	High Season						-	-	-	-	-	-	-	-
	Peak	High Season						-	-	-	-	-	-	-	-
	All	High Season													

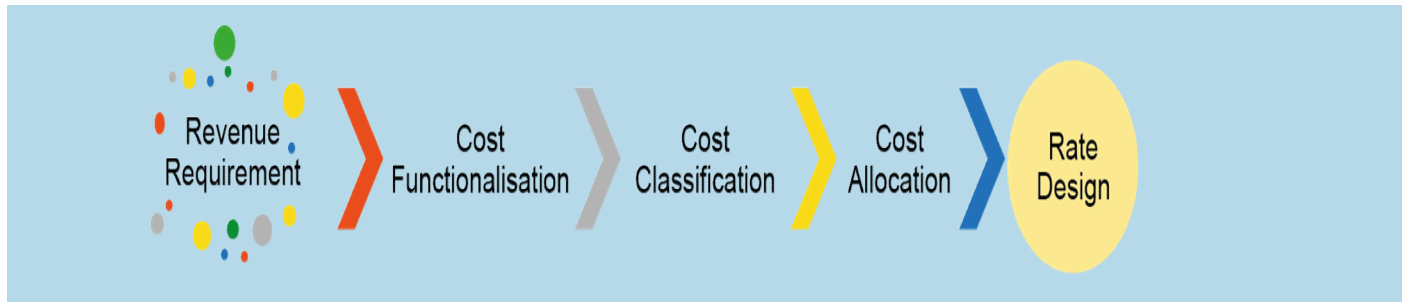
#			FALSE	FALSE	FALSE	FALSE	FALSE								
	OffPeak	High Season						-	-	-	-	-	-	-	-
	Standard	High Season						-	-	-	-	-	-	-	-
	Peak	High Season						-	-	-	-	-	-	-	-
	All	High Season													

#			FALSE	FALSE	FALSE	FALSE	FALSE								
	OffPeak	High Season						-	-	-	-	-	-	-	-
	Standard	High Season						-	-	-	-	-	-	-	-

	Peak	High Season						-	-	-	-	-	-	-	-
	All	High Season													
#			FALSE	FALSE	FALSE	FALSE	FALSE								
	OffPeak	High Season						-	-	-	-	-	-	-	-
	Standard	High Season						-	-	-	-	-	-	-	-
	Peak	High Season						-	-	-	-	-	-	-	-
	All	High Season													
#			FALSE	FALSE	FALSE	FALSE	FALSE								
	OffPeak	High Season						-	-	-	-	-	-	-	-
	Standard	High Season						-	-	-	-	-	-	-	-
	Peak	High Season						-	-	-	-	-	-	-	-
	All	High Season													

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							
			Unit: c/kWh	R/KVA/month (MD)	R/POD/month			c/kWh	R/KVA/month (MD)	R/KVA/month (NMD)	c/KVArh	R/POD/day	R/POD/month	R/account/day	0
			TOU?												
1 Domestic (pre-paid)			FALSE	FALSE	FALSE	FALSE	FALSE								
Domestic (pre-paid)	OffPeak	Low Season						407	-	-	-	-	-	-	-
Domestic (pre-paid)	Standard	Low Season						407	-	-	-	-	-	-	-
Domestic (pre-paid)	Peak	Low Season						407	-	-	-	-	-	-	-
Domestic (pre-paid)	All	Low Season	407,2	0,0	0,0										
2 Domestic (conventional)			FALSE	FALSE	FALSE	FALSE	FALSE								
Domestic (conventional)	OffPeak	Low Season						385	-	-	-	-	414	-	-
Domestic (conventional)	Standard	Low Season						385	-	-	-	-	414	-	-
Domestic (conventional)	Peak	Low Season						385	-	-	-	-	414	-	-
Domestic (conventional)	All	Low Season	385,0	0,0	413,6										
3 Agriculture			FALSE	FALSE	FALSE	FALSE	FALSE								
Agriculture	OffPeak	Low Season						420	-	-	-	-	2 480	-	-
Agriculture	Standard	Low Season						420	-	-	-	-	2 480	-	-



Results Benchmarking (Year 2)

This sheet compares the new tariff with NERSA's guidelines

Year 2

Financial Performance indicators as per NERSA

Performance Indicators	Benchmark guidance	Acceptable Range		COS input/result	Comparison Against Benchmark
		Minimum	Maximum		
Bulk Purchase Cost/Total ex	75%	58%	78%	66%	Within or Below Range
Energy Losses (%)	10%	5%	12%	12%	Within or Below Range
Repairs & Maintenance (% c	6%	6%	15%	8%	Within or Below Range
Net surplus percentage (%)	15%	10%	20%	10%	Within or Below Range

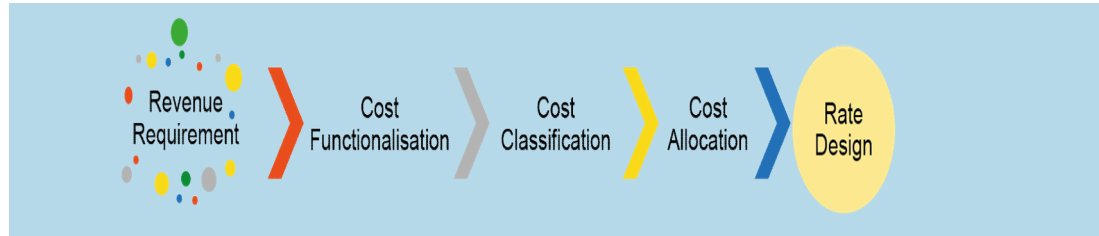
Allowable expense increases as per NERSA

Expenses	%Increase Guideline	COS input/result (% Increase to Year 1)	Comparison Against Benchmark
Bulk Purchases	8,61%	15,22%	Above Guideline
Repairs and Maintenance	4,40%	6,55%	Above Guideline
Other OPEX	4,11%	4,35%	Above Guideline

Tariff benchmark by customer category as per NERSA

Customer Category	Average Specific consumption (kWh/POD/month)	Customer Category as per NERSA	Acceptable Range (Rc/kWh)		Average calculated tariff (Rc/kWh)	Comparison Against Benchmark	Is the increase reasonable?
			Minimum	Maximum			
Domestic (pre-paid)	122	Average industrial high (730 000 k	231,82	241,47	407,19	Above Range	1
Domestic (conventional)	343				505,48		0
Agriculture	1 391				598,57		0
Mining & quarrying	-				0,00		0
Manufacturing / Industrial	6 373				414,93		0
Commercial (pre-paid)	2 140				562,14		0
Commercial (conventional)	653				619,51		0
Transport	-				0,00		0
Redistributors/Resellers	-				0,00		0
Street lighting	-				0,00		0
Electricity department	-				0,00		0
FBE	-				390,61		0
Other consumers	801				0,00		0
Sold to other municipal dep	-				0,00		0
0	-				0,00		0
0	-				0,00		0
0	-				0,00		0
0	-				0,00		0
0	-				0,00		0
0	-				0,00		0
0	-				0,00		0
0	-				0,00		0
0	-				0,00		No

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)	66%
Core KPI from NERSA	Energy Losses (%)	% of total losses in Year 2	29%
Core KPI from NERSA	Repairs & Maintenance (% of revenue)	% of repair and maintenance costs over all costs included in the revenue requirement for Year 2	8%
Core KPI from NERSA	Bulk Purchases increase (%)	% increase in bulk purchase between Year 1 and Year 2	11%
Core KPI from NERSA	Repairs and Maintenance increase (%)		7%
Core KPI from NERSA	Average increase in rates (%)	Average increase in rates for all customer categories based on the COS results	17%
Core KPI from NERSA	Other OPEX increase (%)		4%
Core KPI from NERSA	Are tariffs for all customer category in an acceptable Range?	Based on the "Results Benchmarking (Year2)", assessing if the average tariff for each customer category is in an acceptable range, defined by the benchmark from 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)	9%
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)	6%

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	8 700,47
OPEX efficiency	OPEX / Total sales in kWh	OPEX (excluding purchase) over total sales in kWh for Year 2	103%
OPEX efficiency	OPEX / Peak demand	OPEX (excluding purchase) in Year 0 divided by the peak demand in kVA in Year 0	744082831974%
OPEX efficiency	Bad debt (Year 0) / Total Opex (Year 0)	% of bad debt over the total OPEX (excluding energy purchase) for Year 0	0,10
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	5



Summary Charts (Year 2)

This sheet summarise all the charts from the COS study

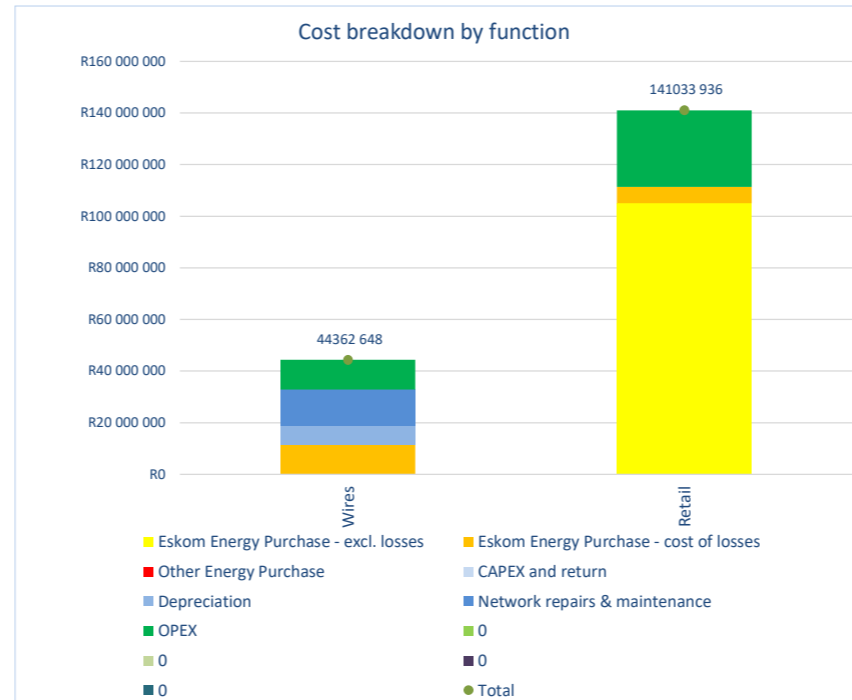
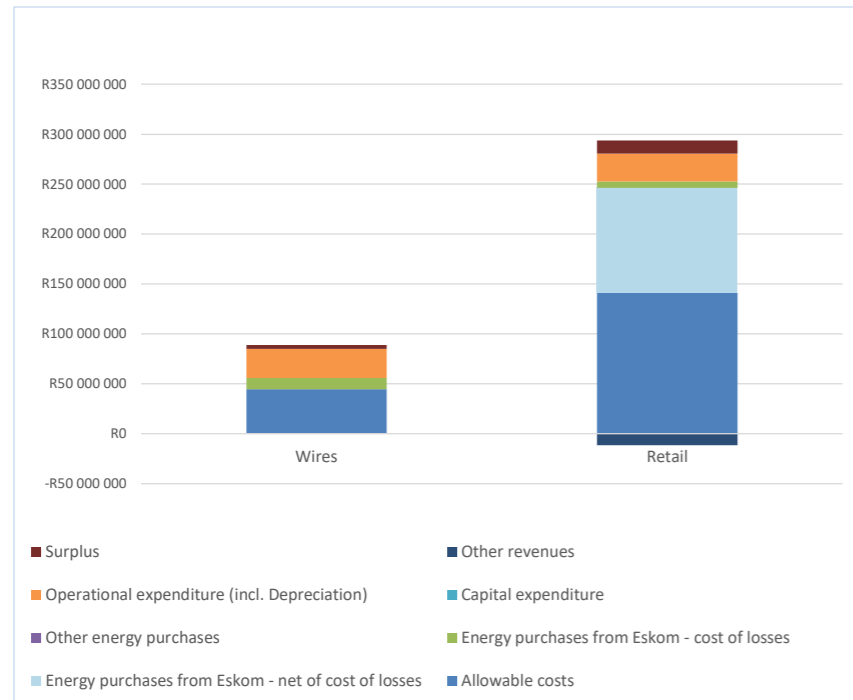


Chart a - Wires

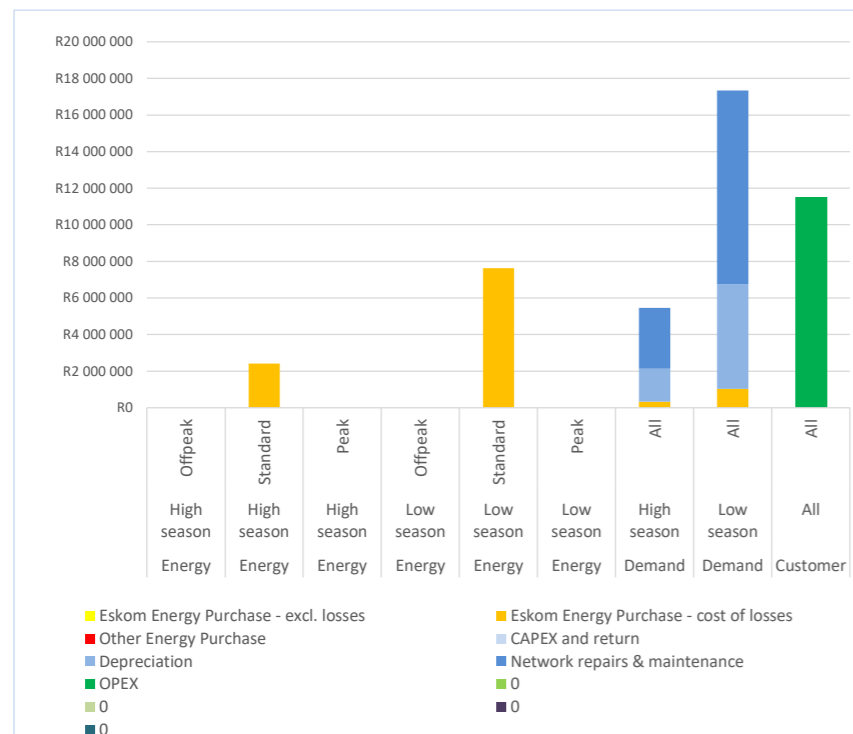


Chart b - Retail

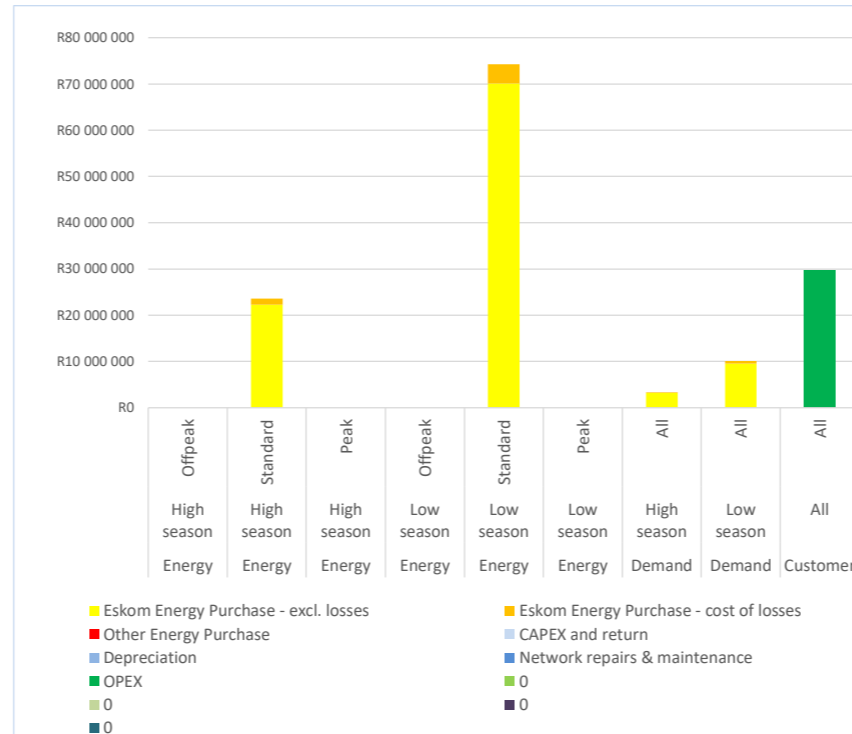


Chart 5

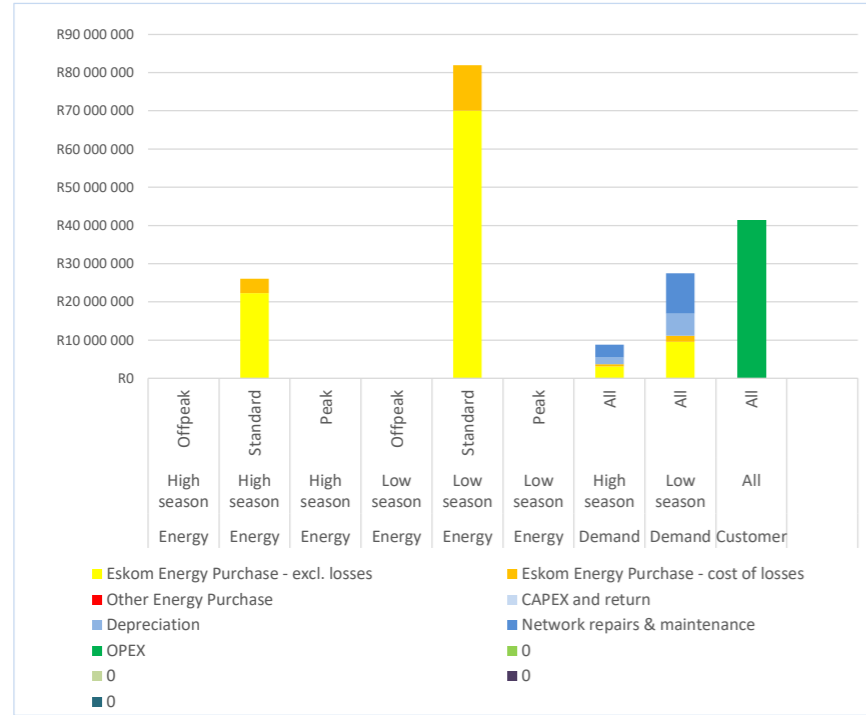
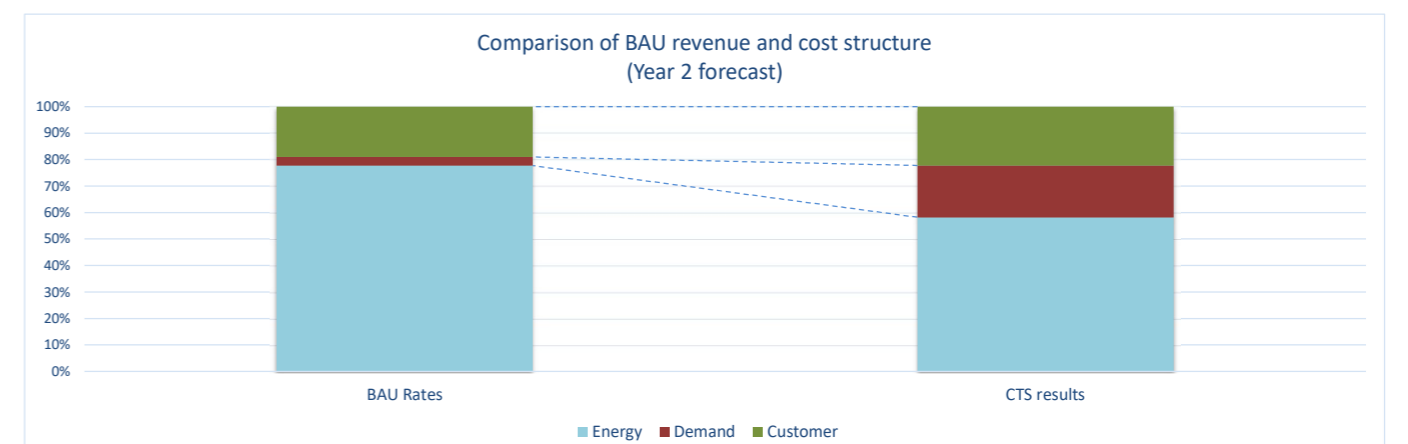
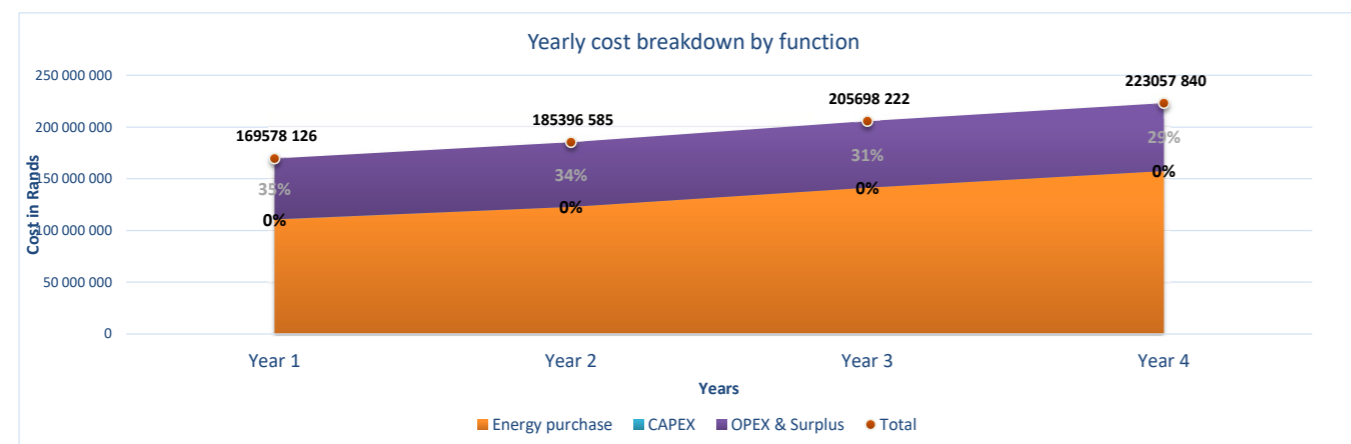
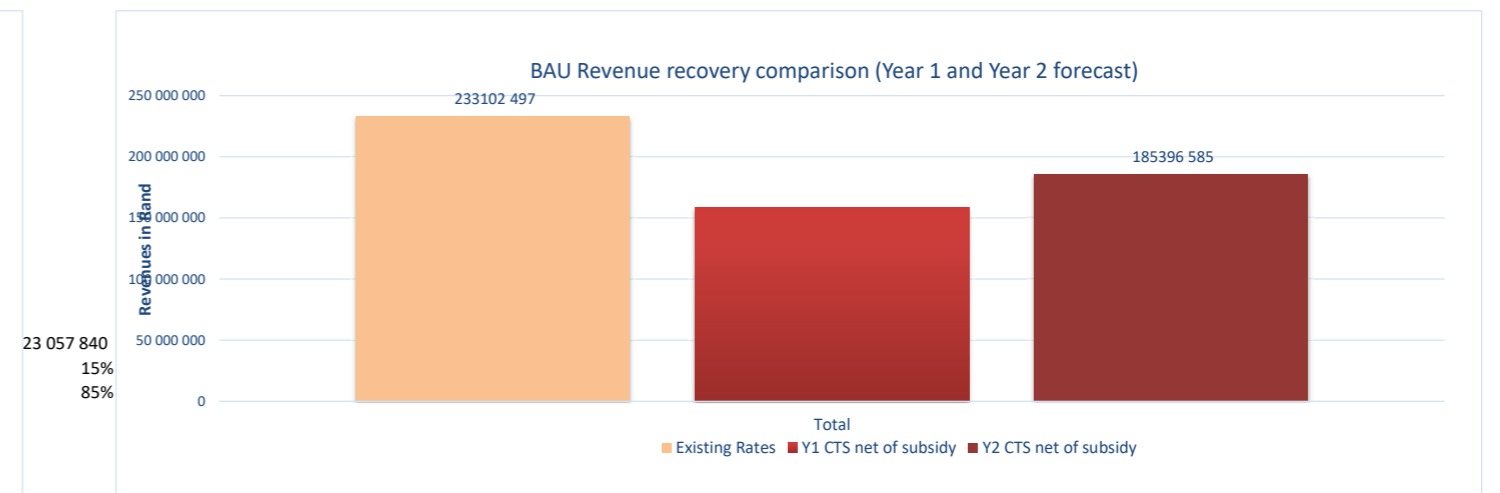
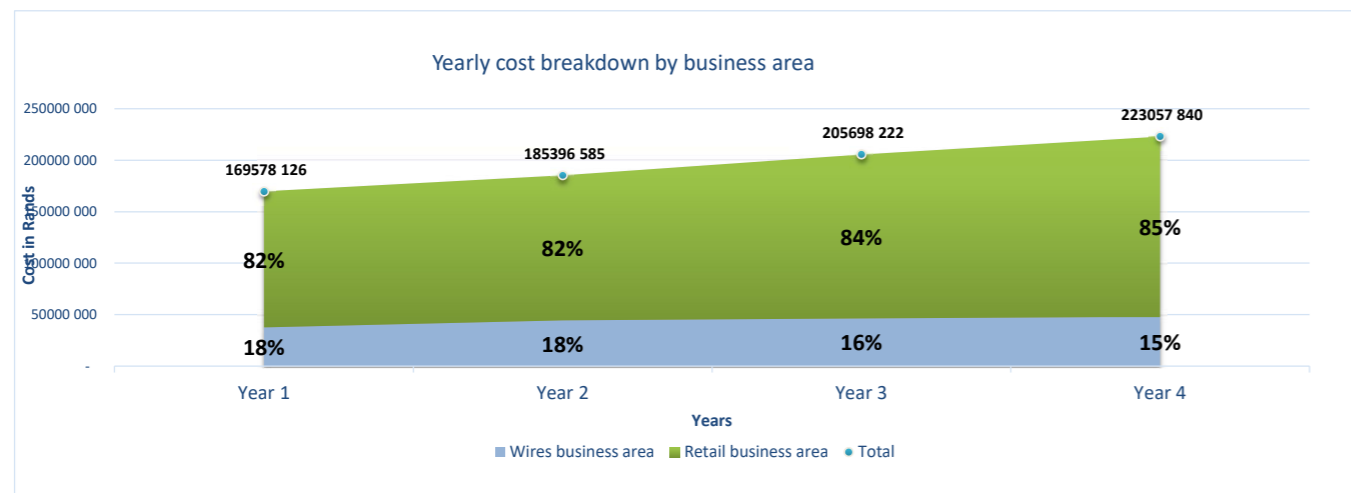


Chart 6



Chart 7



Increase of COSTS Year 1 to Year 2 =

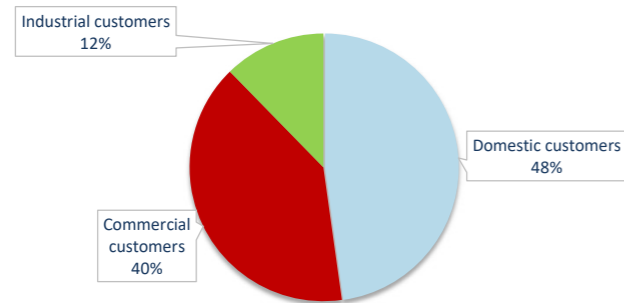
9,3% (including Eskom purchase)
6,2% (net of Eskom purchase)

Estimated ratio of revenues over allowable costs in Year 1=

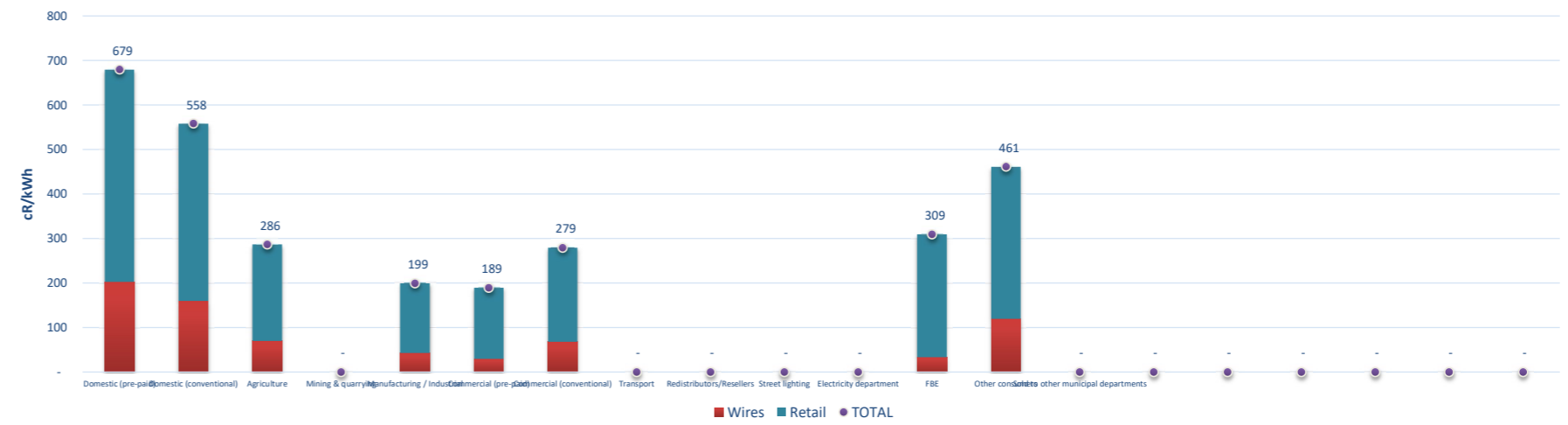
0,0%

Increase in **RATES** to achieve full cost-reflectivity in Year 1 = **-31,2%**
 Increase in **RATES** to achieve full cost-reflectivity in Year 2 = **-20,5%**

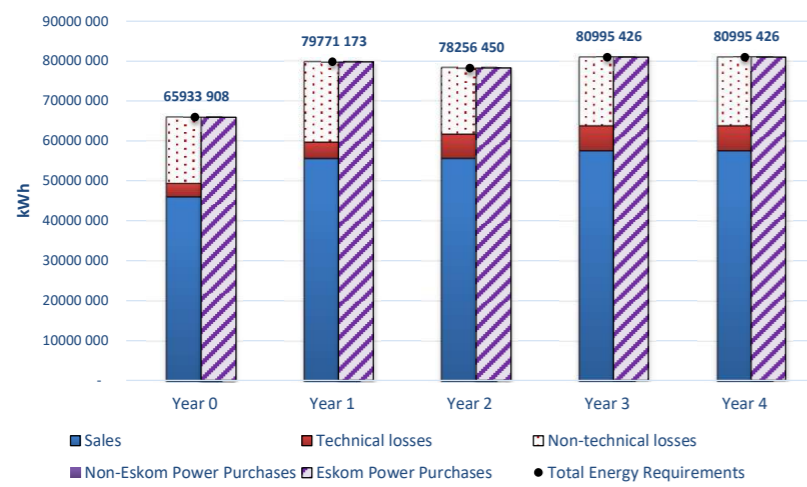
Cost allocation by customer category



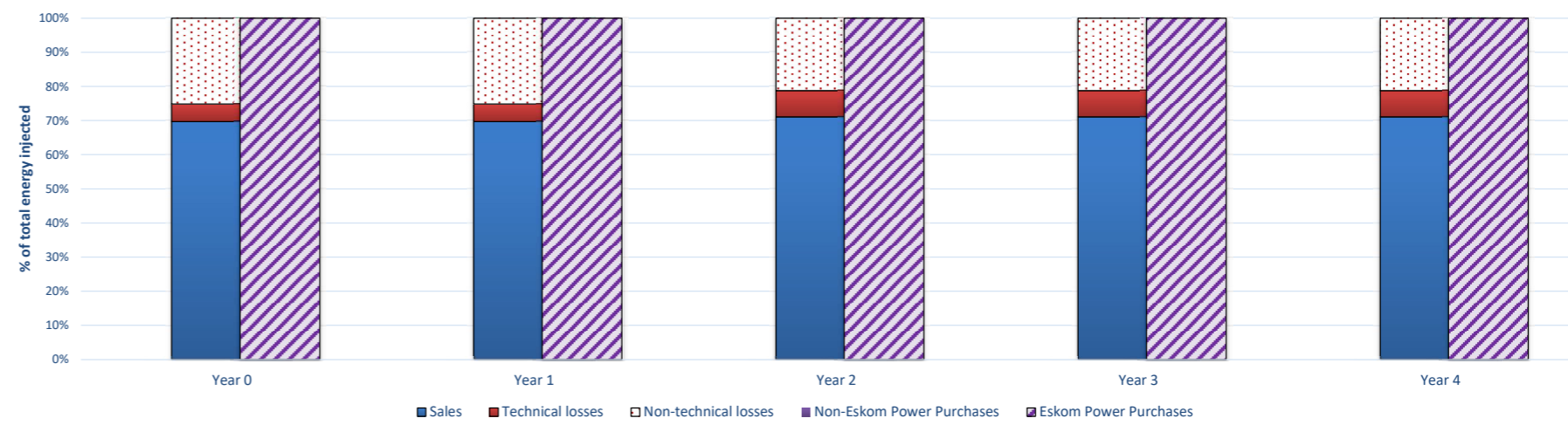
Average costs by business area



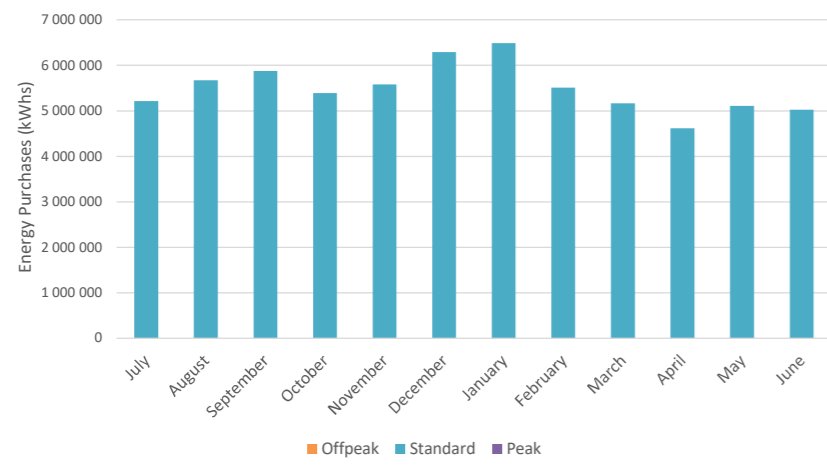
Energy balance forecasts



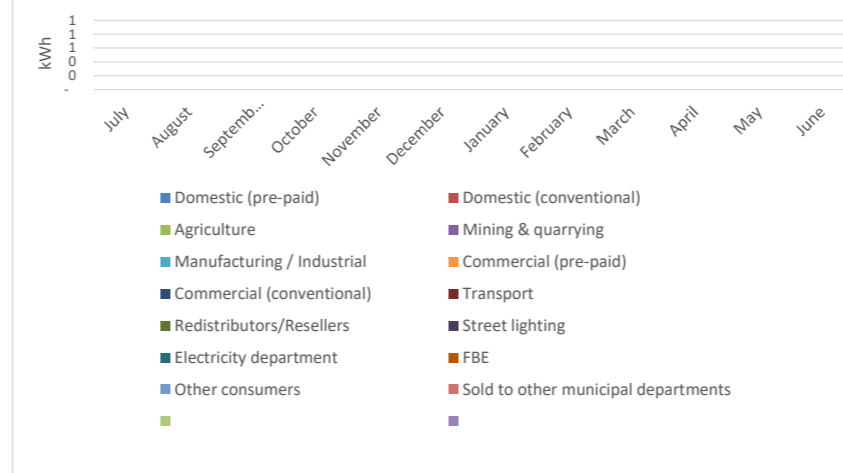
Energy balance forecasts



Breakdown of monthly energy purchases by TOU



Monthly customer sales for Year 0



Breakdown of monthly energy purchases by POD

