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GEORGE ELECTRICITY: RINGFENCING, COST OF SUPPLY AND TARIFF STUDY – 2023/2024 COSTS

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1. INTRODUCTION.

George Municipality (George) sanctioned a comprehensive electricity pricing study which contains 3 main components, more than that required by NERSA:

- Ringfencing electricity. The key objective of this part of the study is to establish the true cost and revenue of electricity supply in the municipality.
- The Cost of Supply study. The objective of the cost of supply study is to know the cost of supplying customers on each tariff and to compare this with the revenue from current tariffs and thus the cross-subsidies.
- Tariff study. The final step is to analyse the structure of the tariffs and how it differs from the cost structures and identify the cross subsidies within the tariffs and then to propose new tariffs.

This paper describes the details relating to all three components of the study undertaken for George Municipality. It contains the detailed results for the whole area.

2. INITIAL ASSESSMENT

This section summarises the findings in terms of the existing tariffs and related issues. This was determined through analysis of the existing tariffs and discussions with electricity staff:

Domestic tariffs: indigent; conventional and PP

- No fixed charges
- Two block IBT Energy charges
 - First block size 400 kWh plus 400kWh/m per backyard shack
 - Basic 20 Amp supply plus 10 Amps per backyard shack
 - The tariff provides big subsidies to the poor.

Domestic tariffs: 20 Amps

- No fixed charges are levied.
- Energy charge cover the energy costs but does not cover the fixed costs at low consumption levels.

Domestic tariffs: Non-indigents

- The basic and capacity charges are too low.
- Energy charges are too high.

Commercial Tariffs: Conventional and pre-paid

- The basic and capacity charges are too low.
- Energy charges are too high.

TOU for Bulk: LV and MV

- Correct structure.
- Small changes required to all charges.

Availability:

- This charge need to be reviewed.

SSEG tariff.

- Correct structure.
- Small changes required to all charges.

Wheeling charges

- Small changes required to all charges.

3. METHODOLOGY SUMMARY

The NERSA cost of supply Framework describes the steps as shown in **Figure 1**. It is considered to be an oversimplification and does not cover all aspects.

Figure 1



NRS058, the National Standard Specification “Cost of Supply Methodology for application in the Electrical Distribution Industry”, which was developed many years ago but never received final approval due to a legal dispute, shows the framework as in the

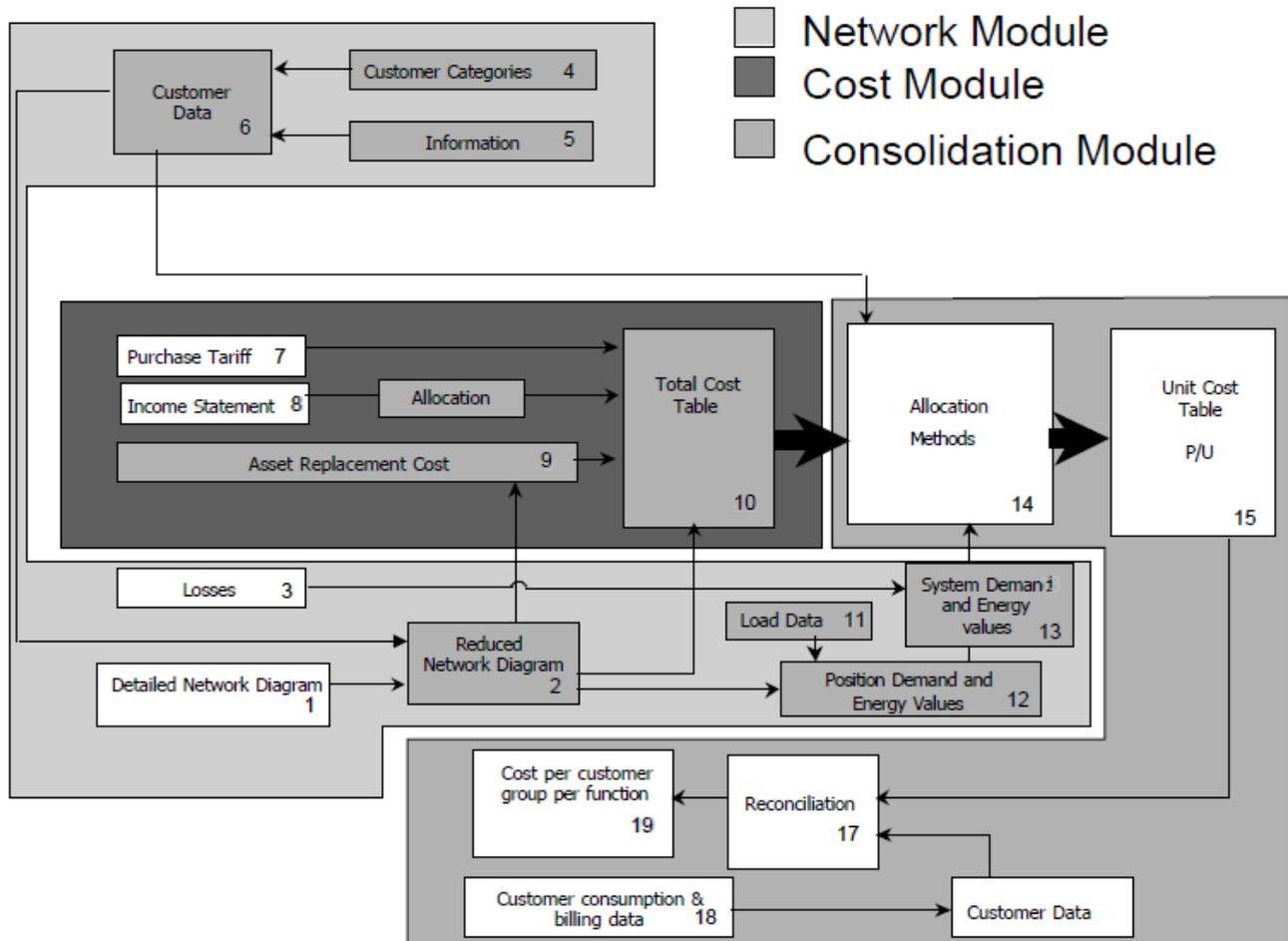
Figure 2.

Figure 2

| | Functionalize | Classify | Allocate/Calculate |
|-------------------------------|---|--|---|
| | Separate all cost into functions | Calculate total of each function and classify each function according to cost driver | Calculate per Unit value of each cost |
| | | (Total Rand) | (per Unit) |
| Phase 1 | Purchase | c/kWh R/kVA R/cust % | c/kWh R/kVA R/cust % |
| | Network Costs | ✓ ✓ | x x |
| | Support Costs | ✓ ✓ | x x |
| Phase 2 Phase 3 Phase 4 | Indirect Costs | ✓ ✓ ✓ | x x x |
| | | | Add similar unit costs for every customer group |
| Revenue Requirement | Apply unit costs to customer information and scale to ensure recovery | | Unit Cost per Customer Group |

Later in the NRS058 standard, a procedure diagram is provided as is shown in **Figure 3**. The NERSA framework does not feature any of these very important steps.

Figure 3



This report will thus follow the NERSA framework, but it must be realised that it is an over implication of a much more complex process and thus feature many more steps. It must also be remembered that NRS058 was developed largely by an Eskom employee who only undertook cost of supply in Eskom. The issues of ring-fencing of electricity from the rest of the municipality do thus not feature in NRS058. For a proper study, Ringfencing must be done.

It is however proposed that anybody who really wants to appreciate the complexity of this cost of supply study should read the Interim NRS058 before reading this report.

Before starting with the ringfencing study, some background calculations need to be done as detailed in the next few sections.

4. ESKOM ANALYSIS.

4.1. Historic bills.

George receives its electricity from Eskom at 5 points of supply 2 points at Schaapkop. These are shown in Table 1. More than 98% is on TOU and with Eskom's proposed MunicFlex all will be one TOU.

Table 1

| ESKOM POS | | Annual Bill | % | |
|--|---|--------------|--------|-------|
| PREMISEIDNUMBER 4528897191 TARIFF NAME: Megaflex Diversity | SCHAAPKOP: GEORGE | R410 615 422 | 57.4% | |
| PREMISEIDNUMBER 8043008954 TARIFF NAME: Megaflex Diversity | MUNISIPALITEIT GEORGE 1/3219 REMOTE | R258 282 700 | 36.1% | |
| PREMISEIDNUMBER 6774174230 TARIFF NAME: Nightsave Urban kVa Interval | CBS4 UNIONDALE:GARDEN ROUTE KLEIN KAROO DISTR | R11 413 290 | 1.6% | |
| PREMISEIDNUMBER 5970969104 TARIFF NAME:Miniflex | WILDERNIS MUNIC 1/3219/1 REMOTE | R35 137 731 | 4.9% | 98.4% |
| | | R715 449 142 | 100.0% | |

A Summary of the past year Eskom bills is shown in Table 2 below.

Table 2

| ESKOM UNITS SUMMARY | YEAR TOTALS |
|--|----------------------|
| ENERGY CONSUMPTION OFF PEAK kWh 4101600.00 | 174 243 908 |
| ENERGY CONSUMPTION STD kWh 4176384.00 | 173 517 760 |
| ENERGY CONSUMPTION PEAK kWh 1661424.00 | 70 480 932 |
| ENERGY CONSUMPTION ALL kWh 9939408.00 | R 418 242 600 |
| DEMAND CONSUMPTION - PEAK 26666.92 | 1 218 085 |
| SIMULTANEOUS MAX DEMAND(2023/07/31@19:00:00) 24918.05 | 925 517 |
| ACCESS DEMAND | 1 117 158 |
| EXCESS ACCESS DEMAND | 42 040 |
| EXCESS REACTIVE ENERGY 5323.20 | 100 677 |
| lf | 46.9% |
| RAND TOTAL | |
| Administration Charge @ R223.36 per day for 31 days R 6924.16 | R 281 264 |
| TX Network Capacity Charge 25468.18 kVa @ R14.24 : = R14.24/kVA R 362666.88 | R 14 855 430 |
| Network Capacity Charge 25000 kVA @ R10.25 : = R10.25/kVA R 256250.00 | R 14 375 168 |
| Excess Network Capacity Charge 400.43 kVa @ R43.37 : = R43.37/kVA R 17366.65 | R 1 823 254 |
| Network Demand Charge 24918.06 kVA @ R18.96 : = R18.96 /kVA R 472446.42 | R 20 674 904 |
| Urban Low Voltage Subsidy 25468.18 kVa @ R25.10 : = R25.10/kVA R 639251.32 | R 25 659 185 |
| Ancillary Service Charge 9939408 kWh @ R0.0065 /kWh R 64606.15 | R 2 732 672 |
| High Season Off Peak Energy Charge 4101600 kWh @ R0.9088 /kWh R 3727534.08 | R 209 787 471 |
| High Season Peak Energy Charge 1661424 kWh @ R5.5243 /kWh R 9178204.60 | R 176 862 005 |
| High Season Standard Energy Charge 4176384 kWh @ R1.6736 /kWh R 6989596.26 | R 184 965 894 |
| Electrification and rural subsidy 9939408 kWh @ R0.139 /kWh R 1381577.71 | R 58 135 721 |
| High Season Reactive Energy Charge 5323 kvarh @ R0.2511 /kvarh R 1336.61 | R 11 275 |
| Energy Demand Charge 1580.09 kVA @ R413.74 : = R413.74 /kVA R 653746.44 | R 2 429 742 |
| SERVICE CHARGE R 216819.89 | R 2 821 139 |
| Residual Connection Charge @ R2834.89 R 2834.89 | R 34 019 |
| TOTAL CHARGES R 23297214.08 | R 715 449 142 |

4.2. Historic bills.

NERSA has in principle approved the implementation of Municflex and published new details. These new details will impact the cost of supply. There are two key changes. The first being the change in TOU periods. Figure 4 and Figure 5 shows the existing and new TOU periods.

Figure 4

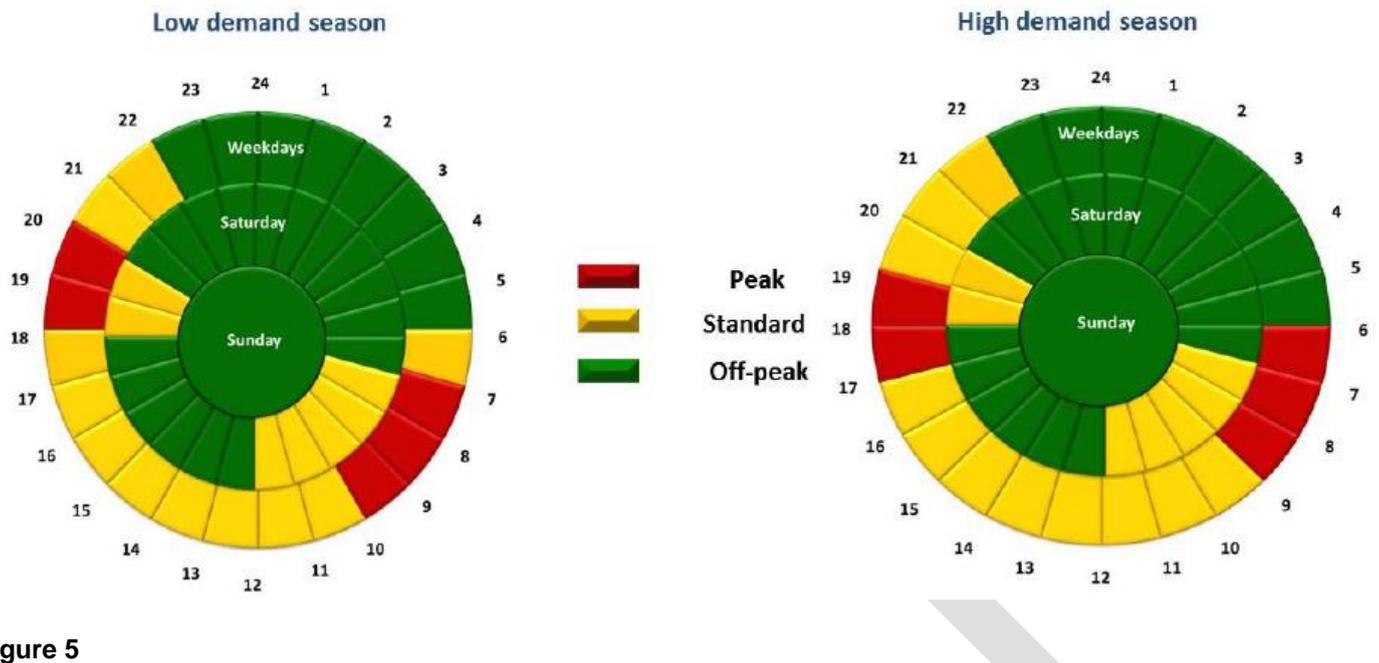
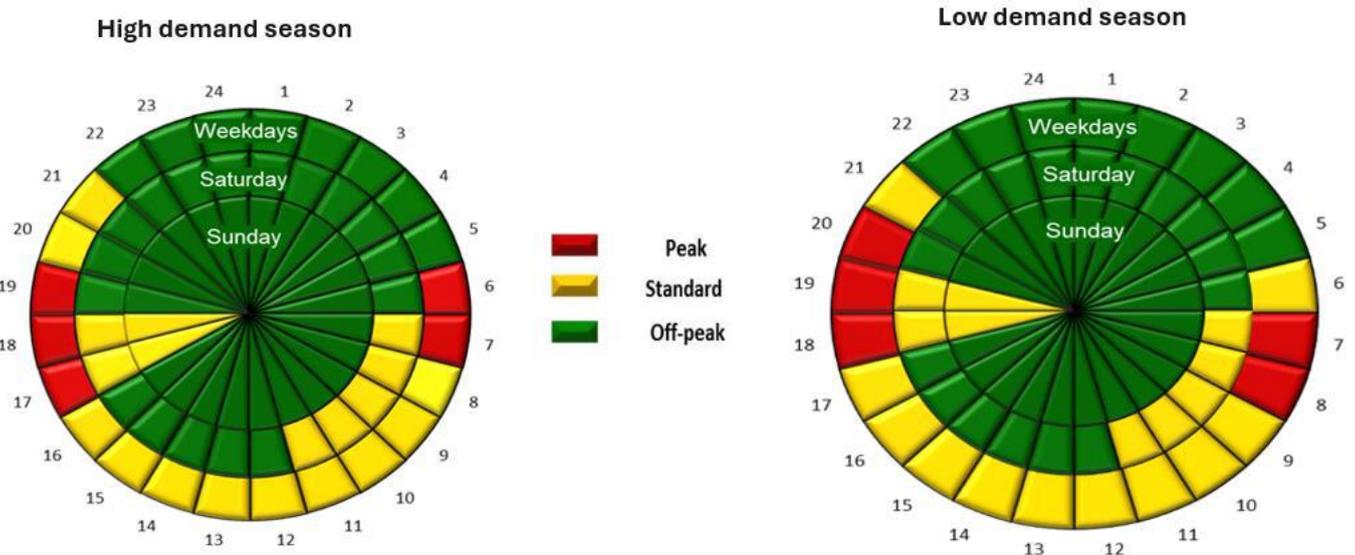


Figure 5



The change in TOU quantities for the whole of George is shown in Table 3

Table 3

| HIGH SEASON | | | LOW SEASON | | |
|-------------|-----------|-----------|------------|-----------|-----------|
| P | S | O | P | S | O |
| kWh (for) | kWh (for) | kWh (for) | kWh (for) | kWh (for) | kWh (for) |
| 4.54% | 10.81% | 10.84% | 12.73% | 29.75% | 31.33% |
| 4.62% | 11.12% | 10.45% | 12.84% | 30.78% | 30.19% |

The second change relate to the tariff structure changes. The annual increase for municipalities is 11.32%. The 20224/2025 Megaflex plus 11.32% for and the 2025/2025 Municflex rates for George is shown in

Table 4 .

Final

Table 4

| TOU TARIFFS | | Megaflex | | | |
|-----------------------------------|---------------------------------------|-----------|--------|--------|--------|
| | | Basic | Access | Demand | |
| Existing Megaflex 66 KV 2024/2025 | Basic: MD (Hi / Low): MD/Acc | 19 762.63 | 62.22 | 23.79 | |
| | Energy: High: P/St/OP (R/kWh) | 7.1145 | 2.2826 | 1.3229 | 0.3150 |
| | 11.32% Energy: Low: P/St/OP : R/kvarh | 2.4437 | 1.7385 | 1.1696 | |
| Municflex | Basic: MD (Hi / Low): MD/Acc | 6 730.90 | 33.72 | 9.60 | |
| LV | Energy: High: P/St/OP (R/kWh) | 6.7375 | 1.8818 | 1.3422 | 0.3250 |
| | Energy: Low: P/St/OP : R/kvarh | 2.9500 | 1.7739 | 1.3422 | |
| Change to Municflex | | -65.9% | -45.8% | -59.6% | |
| | Energy: High: P/St/OP (R/kWh) | -5.3% | -17.6% | 1.5% | 3.2% |
| | Energy: Low: P/St/OP : R/kvarh | 20.7% | 2.0% | 14.8% | |

This shows a reduction in fixed charges and increase in energy rates in the Low demand season.

The impact of this tariff change on the average bulk purchase cost will be addressed in the application for annual price increase.

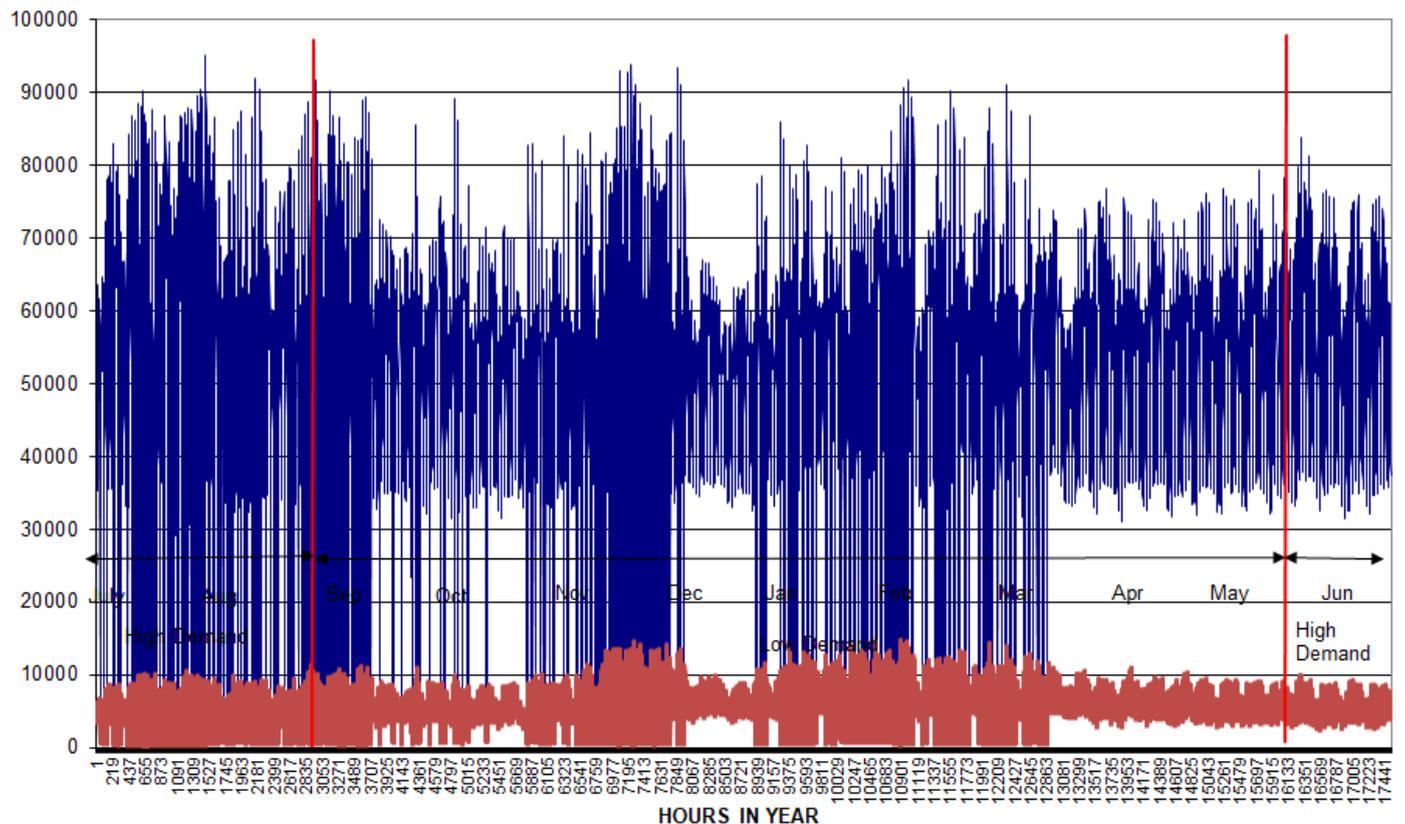
4.3. Load profile analysis.

Next is to analyse the load profiles of the supplies from Eskom. The ½ hourly profiles for the last few financial years were obtained from Eskom for each of the points of supply.

Figure 6 shows the total ½ hourly KVA purchases (Y-Axis) for George over the 12 months (X-Axis).

Figure 6

TOTAL ANNUAL kVA / kvarh PROFILE



The following observations can be made from this:

- The municipality has a generally flat load throughout the year.
- It shows much higher peaks during the periods of load shedding which probably could be accounted to the cold load pickup after load shedding.
- The period from April 2024 shows a very significant reduction in peak demand which is due to Eskom not applying load shedding during this period.

Due to the fact that load shedding is now applied to a much lesser extent and will continue to be applied that way the adjusted load profile will be used where the majority of load shedding is removed and replaced with non-load shedding periods. The bit of load shedding remaining is because there is still some loads shedding taking place and could happen again in the next year. The modified profile is shown in Figure 7.

Figure 7

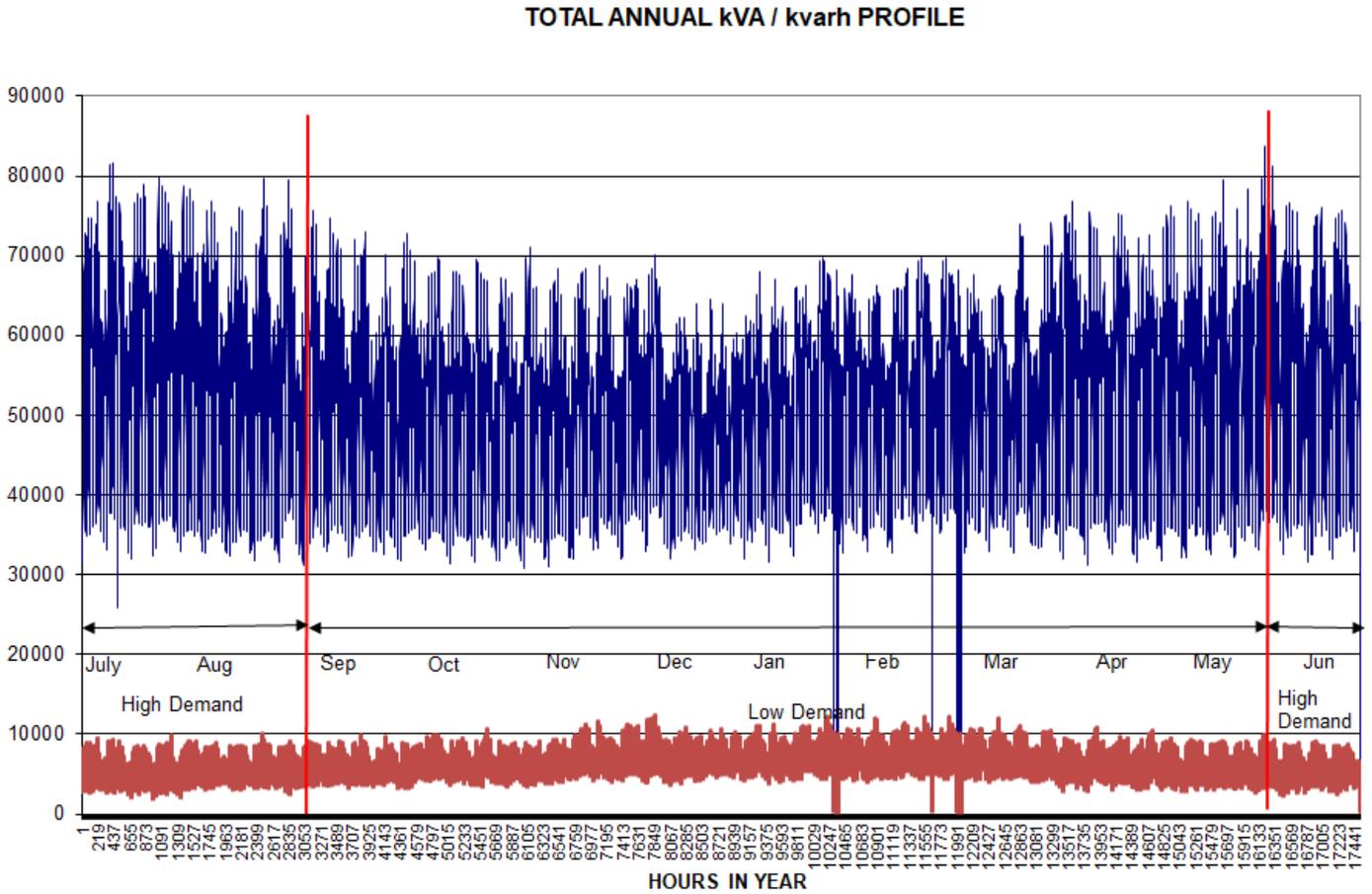
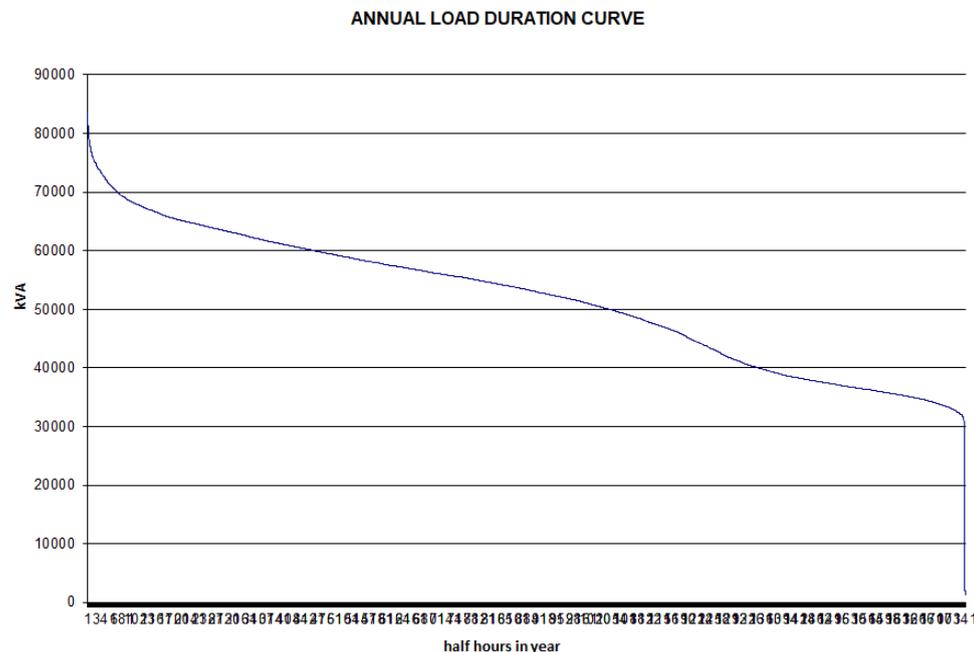


Figure 8 shows the annual load duration curve. This shows the highest to the lowest 1/2 hourly kVA (Y-axis) for all the 1/2 hours of the year (x-axis) and gives an indication of the potential to reduce the peak demand.

Figure 8



George already has a geyser control system by which it controls the maximum demand and shifts load out of the peak times. It is difficult to comment on further potential in view of the load shedding.

The ½ hourly kVA values (Y-axis) for the following average weeks (7 day ½ hours per week = x-axis) of the total Eskom supply in the year: Figure 9 for the actual profile and Figure 10 for the adjusted profile.

- Average for whole year.
- Average for high-demand period
- Average for low-demand period.

Figure 9

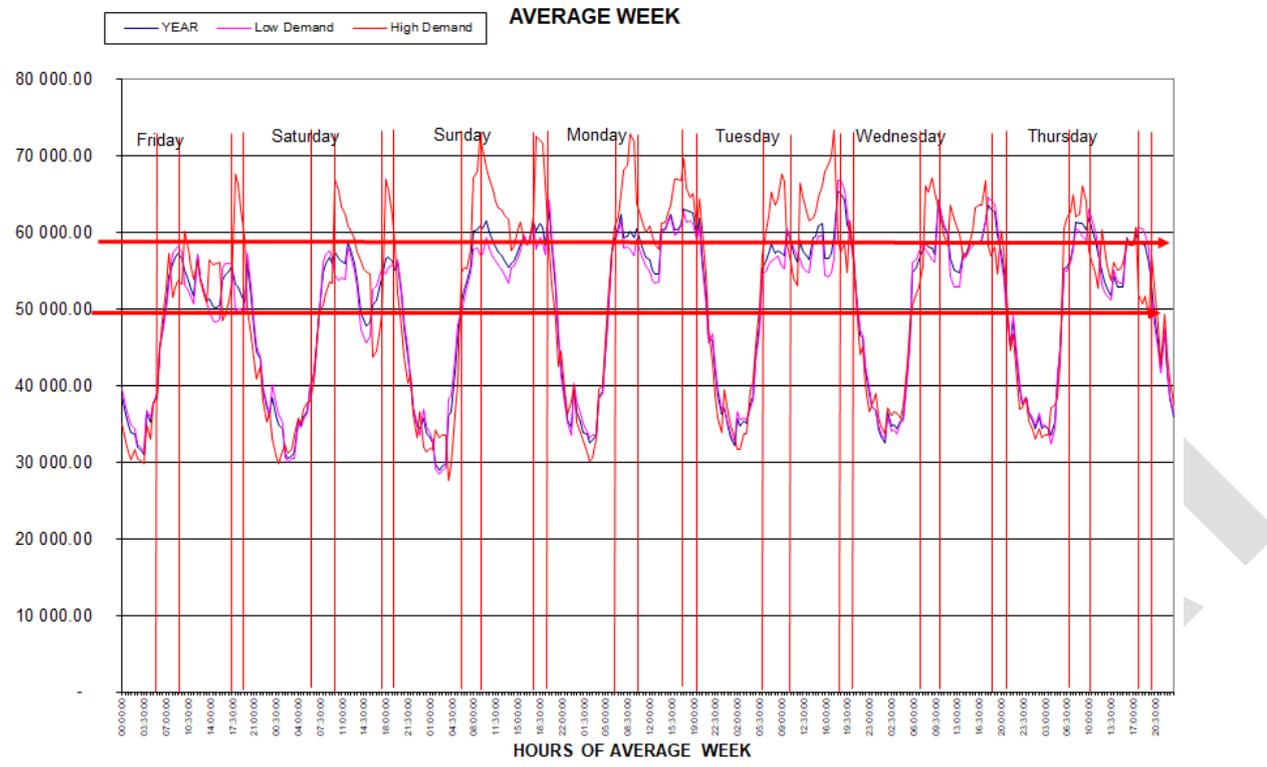
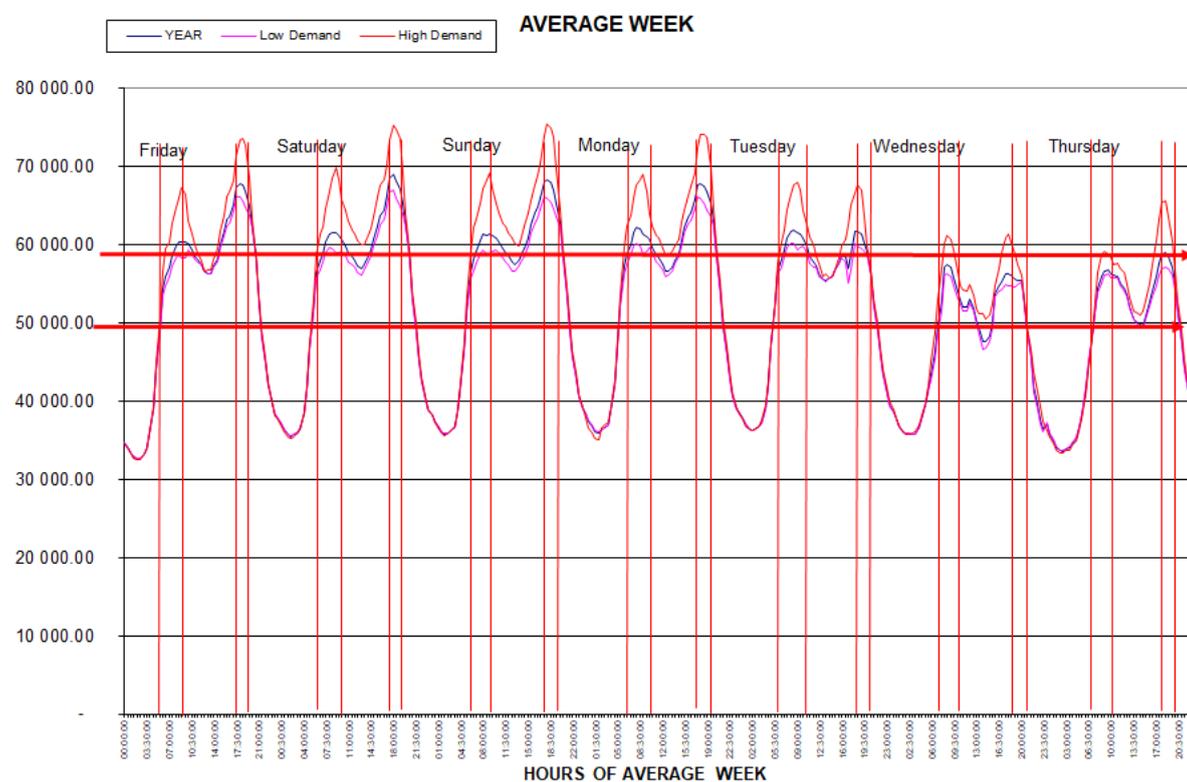


Figure 10



The following can be said in this respect:

- It shows the massive distortion due to load shedding vs non load shedding periods.
- This is similar to other town profiles.
- It shows the very high morning and evening peaks especially in the High demand period (mainly from domestic customers).
- Generally lower demand during the weekends.
- Very low levels of consumption during the night.

Figure 11 for the load shedding period and **Figure 12** for non-load shedding period, shows the ½ hourly kVA values (Y-axis) for every week of the year (7 day ½ hours per week = x-axis). This is a very important graph as the previous average graph easily hides very important information.

Figure 11

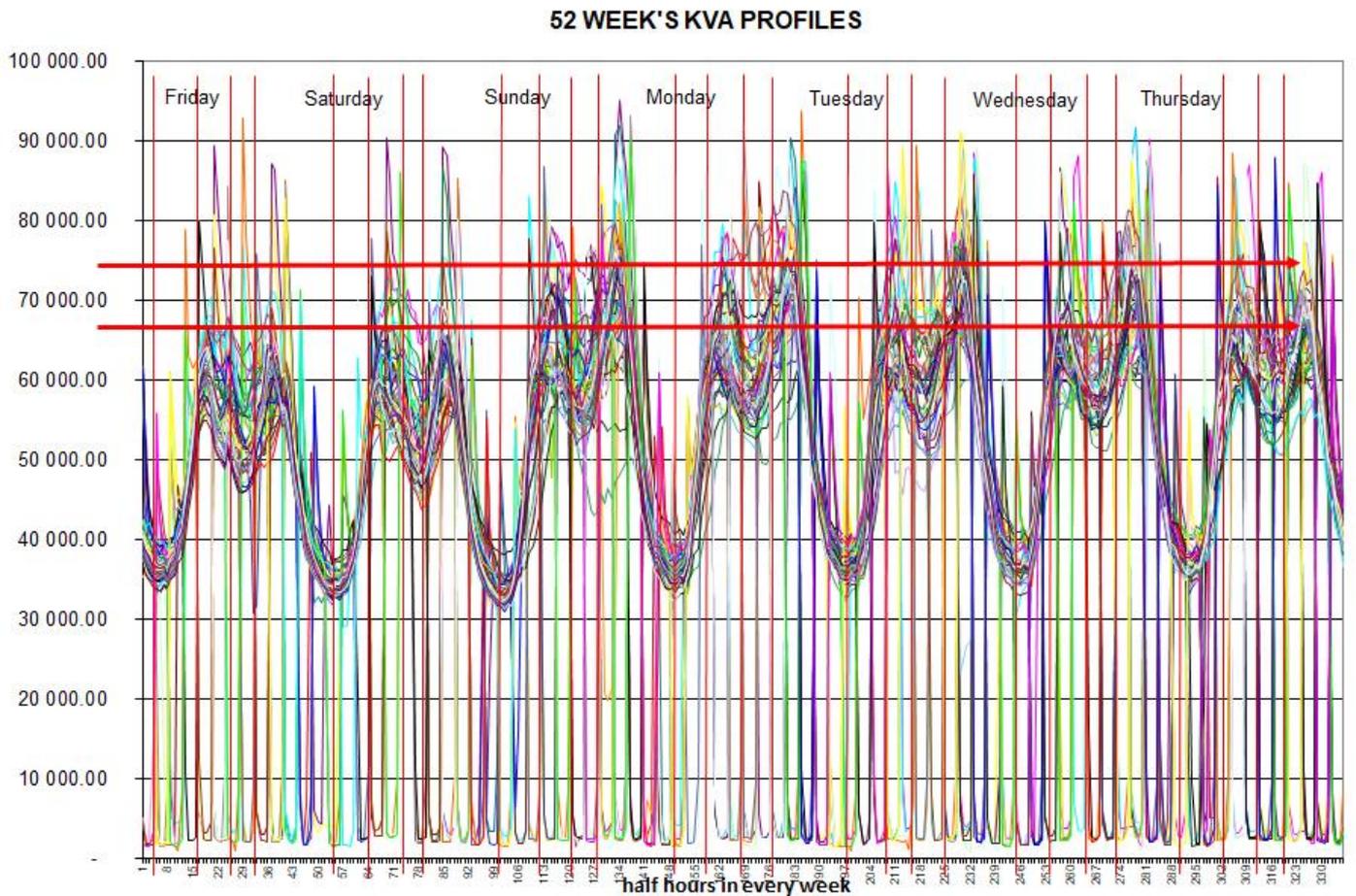
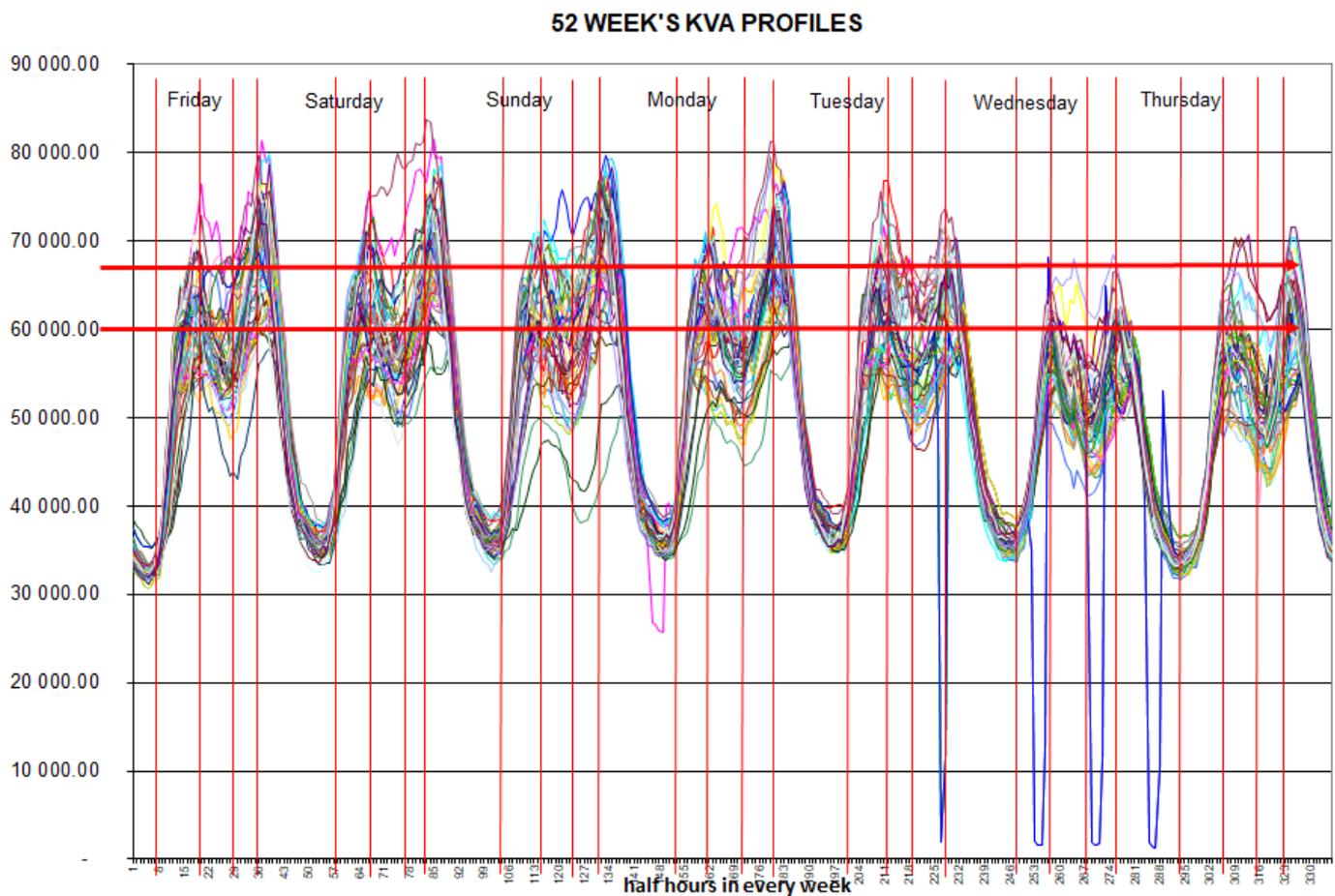


Figure 12



The following can be seen from this:

- There are high peaks during the mornings and evenings with the highest peak during the late evening.
- It also shows that there are only a few days in the year where the demand exceeds 83.8 MW.
- This very high consumption cannot be explained. There was no loads shedding, and it was cloudy but not more than surrounding days.
- This is a clear message that the key focus for demand reduction must be on domestic evening peaks, but the rising morning peaks cannot be ignored.

The objectives of the implementation of Capacity charges and TOU tariffs are as follows:

- To encourage consumers to manage their capacity by shifting load out of the peak times.
- This should lead to a reduction in local network and Eskom peak demands thus decreasing Maximum demand and access charges.
- This should also lead to a reduction in peak consumption.

The realities in respect of capacity charges are as follows:

- The capacity charges have only been applied in respect of stage 1 of the phase in plan and thus the charges are still relatively low and thus consumers have still selected higher capacity than is actually required.
- The actual capacity has only been set at the lower levels in respect of 20% of the consumers thus consumers have not yet been exposed to the actual limits and thus load shifting has not been optimal yet.

This has caused the load shifting not to be as would have been expected. The Total George Eskom load profile has been analysed and the results are shown below in Table 5.

Table 5

| KVA LOAD FACTOR | HIGH SEASON | | | LOW SEASON | | |
|-----------------|-------------|-----------|-----------|------------|-----------|-----------|
| | P | S | O | P | S | O |
| | % | kWh (for) | kWh (for) | kWh (for) | kWh (for) | kWh (for) |
| 63.06% | 3.97% | 10.52% | 9.11% | 13.32% | 33.19% | 29.89% |
| 63.51% | 4.15% | 10.67% | 8.89% | 13.33% | 33.00% | 29.96% |
| 59.80% | 4.18% | 10.54% | 8.87% | 13.47% | 32.98% | 29.96% |
| 61.91% | 4.20% | 10.85% | 9.22% | 13.09% | 32.55% | 30.08% |
| 56.32% | 3.98% | 10.45% | 9.03% | 13.38% | 32.75% | 30.42% |
| 60.28% | 4.36% | 10.55% | 9.15% | 13.40% | 32.39% | 30.15% |
| 41.73% | 4.69% | 11.51% | 10.06% | 12.89% | 31.33% | 29.52% |
| 52.39% | 4.58% | 11.06% | 9.71% | 13.20% | 30.94% | 30.51% |
| 62.34% | 4.77% | 11.06% | 9.95% | 13.17% | 30.69% | 30.36% |

Unfortunately, this data is distorted by the extensive load shedding that has been applied by Eskom during the 2023/2024 year. This shows a deterioration in the load factor, as confirmed by the load profile analysis in Figure 6. The results do however show a marked reduction in peak consumption down to 3.6% during the High demand period and 12.6% during the Low demand period.

The municipality will thus be encouraged to accelerate increasing the capacity charges and actually reducing the installed capacities of all consumers as per the selected capacity.

5. NETWORK CAPITAL COST ANALYSIS

The first step in analysing network assets is to develop a Reduced network diagram (RND). Figure 13 illustrates this for the George network. Most rural supplies in the area are provided by Eskom.

Figure 13

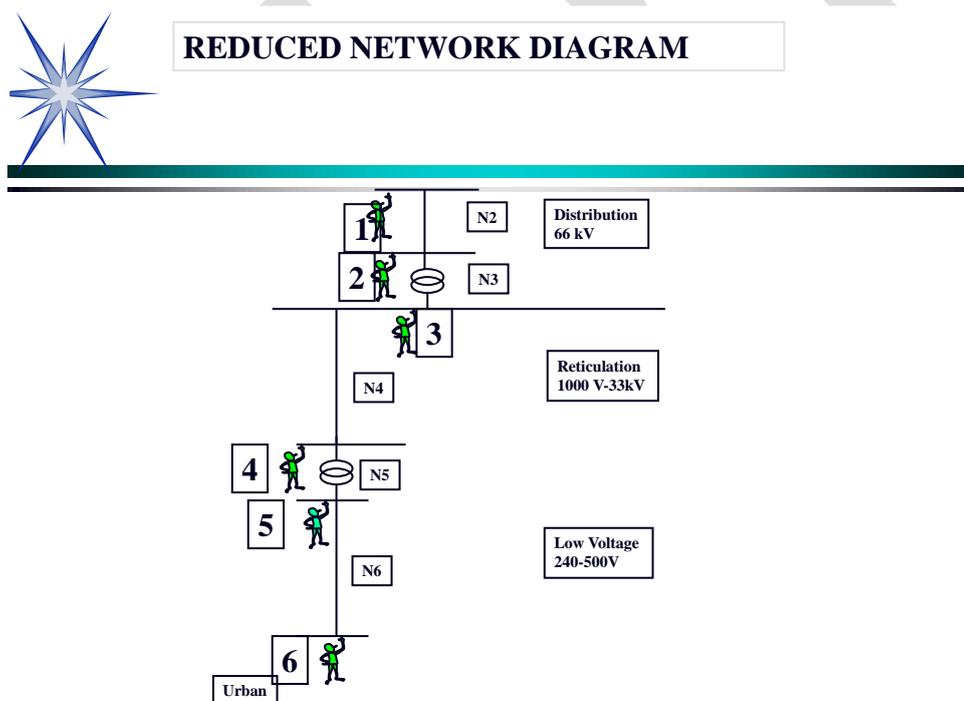


Table 6 shows the reduced network diagram (RND) in table below. All costs and customers will be linked to these networks in the cost of supply study.

Table 6

| NETWORK CONSTRUCTION | | | Table 1 |
|-----------------------------|------------------------------|---------------------|------------------------|
| PRIMARY DESCRIPTION | SECONDARY DESCRIPTION | NETWORK CODE | VOLTAGE |
| Distribution | LG Distribution | N2 | 132 & 66 and 132/66 KV |
| Distribution/retic transf. | Distribution subs | N3 | 66 to 11 KV |
| Reticulation | Reticulation urban | N4 | 11 KV |
| Retic/LV transf | Retic subs urban | N5 | 11 KV to 400 V |
| LV | LV urban | N6 | 400 V |
| | | | |

The following comments in this respect:

The summary of electrical assets in the financial assets register was studied and the following found:

- The asset descriptions are not detailed enough: cable and line lengths not shown.
- No replacement values provided.

The technical asset details were then obtained from the GIS data base.

The replacement costs were calculated using actual project costs. Some examples are shown in Table 7.

Table 7

| ABP PHASE 1 | | | |
|---|----------------|----------------|-----------------------|
| 2024 | MATERIAL | LABOUR | TOTAL |
| Mulberry MV O/H line | | | |
| Total cost | R 1 072 576.00 | R 706 190.00 | R 1 778 766.00 |
| Minus remove of existing | R - | R (151 325.00) | R -151 325.00 |
| Net | R 1 072 576.00 | R 554 865.00 | R 1 627 441.00 |
| Establishment | | | 7.31% |
| Markup | | | 12.1% |
| Total cost | | | R 1 958 394.31 |
| meters of line | | | 4 300.00 |
| R/meter | | | R 455.44 |
| 185mm² Al x 3 Core | | | |
| Total cost | R 1 018 824.00 | R 199 295.00 | R 1 218 119.00 |
| Net | R 1 018 824.00 | R 199 295.00 | R 1 218 119.00 |
| Common | | R 17 000.00 | 0.77% |
| Establishment | | | 6.21% |
| Markup | | | 12.1% |
| Total cost | | | R 1 461 926.15 |
| meters of line | | | 1 390.00 |
| R/meter | | | R 1 051.75 |
| 185mm² Al x 4 core LV cable | | | |
| Total cost | R 248 967.00 | R 23 135.00 | R 272 102.00 |
| Excl DB and 50% ternals | R (24 707.00) | R (1 840.00) | R -26 547.00 |
| Net | R 224 260.00 | R 21 295.00 | R 245 555.00 |
| Establishment | | | 6.21% |
| Markup | | | 12.1% |
| Total cost | | | R 292 452.23 |
| meters of line | | | 510.00 |
| R/meter | | | R 573.44 |
| MS- ASZ No.2 (800kVA) | | | |
| Total cost | R 969 020.00 | R 21 780.00 | R 990 800.00 |
| Net | R 969 020.00 | R 21 780.00 | R 990 800.00 |
| Common | R - | R 17 000.00 | R 0.01 |
| Establishment | | | 6.21% |
| Markup | | | 12.1% |
| Total cost | | | R 1 189 109.13 |
| meters of line | | | 1.00 |
| R/meter | | | R 1 189 109.13 |
| DB | | | |
| Total cost | R 22 578.00 | R 1 875.00 | R 24 453.00 |
| 50% ternals | R 3 371.00 | R 500.00 | R 3 871.00 |
| Net | R 25 949.00 | R 2 375.00 | R 28 324.00 |
| Establishment | | | 6.21% |
| Markup | | | 12.1% |
| Total cost | | | R 33 733.45 |
| 1 DB | | | 1.00 |
| R/meter | | | R 33 733.45 |
| Beka LEDlume-mini 37W | | | |
| Total cost | R 382 496.00 | R 71 460.00 | R 453 956.00 |
| Net | R 382 496.00 | R 71 460.00 | R 453 956.00 |
| Establishment | | | 6.21% |
| Markup | | | 12.1% |
| Total cost | | | R 540 654.61 |
| meters of line | | | 28.00 |
| R/meter | | | R 19 309.09 |
| Beka LEDlume-midi 104W | | | |
| Total cost | R 261 156.00 | R 171 360.00 | R 432 516.00 |
| Net | R 261 156.00 | R 171 360.00 | R 432 516.00 |
| Establishment | 6.21% | 6.21% | 6.21% |
| Markup | 10.5% | 10.5% | 12.1% |
| Total cost | R 306 490.57 | R 201 106.71 | R 515 119.90 |
| meters of line | 13.00 | 13.00 | 13.00 |
| R/meter | R23 576.20 | R15 469.75 | R 39 624.61 |

A summary of these values is shown in Table 8.

Table 8

| Unit cost 2024 | | | | | | |
|--|-----------------|-------------------|-------------------|--------------------|------------------------|-----------------|
| Summary | (22063E) | GRG 321: 1 | GRG 321: 2 | ABP PHASE 1 | 10525r PartC2.2 | Proposed |
| Building | R 5 253 304 | | | | | R 5 253 304 |
| TRFR | R 30 244 302 | | | | | R 30 244 302 |
| 66kV Breakers | R 1 222 483 | | | | | R 1 222 483 |
| 66 kV Isolator / Eart switch | R 196 250 | | | | | R 196 250 |
| 66 kV CTs | R 233 031 | | | | | R 233 031 |
| 66 kV VTs | R 177 190 | | | | | R 177 190 |
| 66 kV Arrestors | R 36 633 | | | | | R 36 633 |
| 66 kV Single AAAC Sycamore | R 2 516 | | | | | R 2 516 |
| MV Panels | R 841 604 | | | | | R 841 604 |
| Mulberry MV O/H line | | | | R 455 | | R 329 |
| 11kV O/H Line Mulberry | | | R 202 | | | |
| 185mm² Al x 3 Core | | | | R 1 052 | | R 1 052 |
| 12kV drop-out fuses assembly, complete | | | R 9 079 | | | R 9 079 |
| 300 kVA 11/0.42kV Pole mounted Peanut transformer complete. | | | R 580 002 | | | R 580 002 |
| 100 kVA 11/0.42kV Pole mounted transformer complete | | | R 333 559 | | | R 333 559 |
| MS- ASZ No.2 (800kVA) | | | | R 1 189 109 | | R 1 189 109 |
| Fibre Glass kiosks9 circuit | | R 24 028 | | | | R 28 881 |
| DB | | | | R 33 733 | | |
| Lv PVC SWA PVC cables (120 mm ave) | | R 893 | | | | R 893 |
| Supply, install and test 185 mm ² Al cable | | | R 1 335 | | | R 954 |
| 185mm ² Al x 4 core LV cable | | | | R 573 | | |
| Beka LEDlume-mini 37W | | | | R 19 309 | | R 18 399 |
| Beka 36W LED sreetlight luminaires | | R 34 566 | | | | |
| Beka LEDlume-midi 104W | | | | R 39 625 | | |
| LED Streetlight luminaire,104 and 37 Watt | | | | | R 17 488.58 | |
| Service LV PVC SWA PVC Cu cables | | R 7 997 | | | | R 7 997 |
| Split PLC Prepayment metering units | | R 3 708 | | | | R 3 708 |

The original calculation of consumer services and streetlight costs are shown in Table 9. The consumer costs from the asset register is too low costs thus own calculations are used. The asset register streetlight details show too few lights but high cost per light. The values in the Financial Asset Register (FAR) was then escalated to 2024/2025 and these values will be used.

Table 9

| ASSET VALUE COMPARISONS | | | | | |
|---|--|-------------|--------|------------|--------------|
| Connection cost | | CRC | Units | Unit value | |
| Connections (own calcs) | | 460 278 367 | 33 850 | R13 597.6 | Per customer |
| CONSUMER SERVICES: Assets register | | R61 541 472 | 33 850 | R1 818.1 | Per customer |
| | | | | | |
| Streetlights: Including Bollards | | | | | |
| Technical assets | | 43 789 227 | 3 500 | R12 511 | Per light |
| FAR escalated | | 77 213 044 | 10 000 | R7 721 | Per light |

The summary of the technical data with replacement values are shown in Table 10.

Table 10

| ASSET SUMMARY | | | | 2024 |
|---------------------------------|--------------|--------|----------|-----------------------|
| | Number | Length | Unit CRC | Total CRC |
| POWER SYSTEMS' | 1 | | | R22 050 000 |
| 132 & 66 kV circuits | 312 | | | R311 430 790 |
| 66 /11 kV transformation | 93 | | | R565 930 346 |
| MV network | 2691 | | | R216 252 145 |
| MV/LV transformation | 1423 | | | R727 938 370 |
| LV Network | 5 355 | | | R588 751 160 |
| CONSUMER SERVICES | 3596 | | | R61 541 472 |
| STREETLIGHTS | 3500 | | | R43 789 227 |
| | | | | |
| GRAND TOTAL | | | | R2 493 738 896 |

The power systems include some small diesel generators and the 1 MW PV plant owned and used by electricity.

The depreciation and ROA making up the total Capital revenue requirement is shown in Table 11.

Table 11

| ASSETS SUMMARY | Sum of Quantity | Service connection | Meter Incl Inst | Current Replacement cost | Life expectancy Years | CRC Depreciation | ROA @ 3.5% | Total Capex provision | Current Depreciation | Current Interest | Total current provision | Capital ratios |
|-----------------------|-----------------|--------------------|-----------------|--------------------------|-----------------------|------------------|-------------|-----------------------|----------------------|------------------|-------------------------|----------------|
| Energy | 1 | | | 22 050 000 | 20 | 1 102 500 | 771 750 | 1 874 250 | 297 814 | 75 182 | 372 996 | 1.0% |
| HV | 312 | | | 311 430 790 | 50 | 6 228 616 | 10 900 078 | 17 128 693 | 1 682 510 | 1 061 865 | 2 744 375 | 7.3% |
| HV/MV | 93 | | | 565 930 346 | 50 | 11 318 607 | 19 807 562 | 31 126 169 | 3 057 448 | 1 929 616 | 4 987 064 | 13.3% |
| MV | 2 691 | | | 216 252 145 | 45 | 4 805 603 | 7 568 825 | 12 374 428 | 1 298 118 | 737 341 | 2 035 458 | 5.4% |
| MV to LV | 1 423 | | | 727 938 370 | 40 | 18 198 459 | 25 477 843 | 43 676 302 | 4 915 874 | 2 482 004 | 7 397 878 | 19.7% |
| LV | 5 355 | | | 588 751 160 | 35 | 16 821 462 | 20 606 291 | 37 427 752 | 4 543 911 | 2 007 426 | 6 551 338 | 17.4% |
| 1 PH kWh Pre-paid | 28 268 | 8 000 | 4 000 | 339 213 000 | 10 | 33 921 300 | 11 872 455 | 45 793 755 | 9 163 020 | 1 156 592 | 10 319 612 | 27.5% |
| 3 PH kWh Pre-paid | 1 | 9 600 | 5 200 | 14 800 | 10 | 1 480 | 518 | 1 998 | 400 | 50 | 450 | 0.0% |
| 1 PH kWh | 3 164 | 8 000 | 4 000 | 37 964 000 | 30 | 1 265 467 | 1 328 740 | 2 594 207 | 341 835 | 129 443 | 471 279 | 1.3% |
| 3 Ph kWh | 1 665 | 9 600 | 5 200 | 24 638 300 | 30 | 821 277 | 862 341 | 1 683 617 | 221 848 | 84 008 | 305 856 | 0.8% |
| 3 TOU | 184 | 9 600 | 8 000 | 3 236 933 | 30 | 107 898 | 113 293 | 221 190 | 29 146 | 11 037 | 40 183 | 0.1% |
| 3 PH TOU & ct's | 487 | 12 000 | 10 000 | 10 721 333 | 30 | 357 378 | 375 247 | 732 624 | 96 537 | 36 556 | 133 093 | 0.4% |
| TOU RMU & CT/VT's | 68 | 450 000 | 10 000 | 31 050 000 | 30 | 1 035 000 | 1 086 750 | 2 121 750 | 279 580 | 105 869 | 385 449 | 1.0% |
| TOU at HV sub With CB | 14 | 950 000 | 10 000 | 13 440 000 | 30 | 448 000 | 470 400 | 918 400 | 121 616 | 45 825 | 166 842 | 0.4% |
| Streetlight | 10 000 | | | 77 213 044.02 | 15 | 5 147 536 | 2 702 457 | 7 849 993 | 1 390 483 | 263 268 | 1 653 751 | 4.4% |
| TOTALS | 53 319 | | | 2 969 844 221 | | 101 580 582 | 103 944 548 | 205 525 130 | 27 439 540 | 10 126 084 | 37 565 623 | 100.0% |

The following in this respect:

- CRC depreciation – Calculated using the NERSA prescribed life expectancy.
- ROA - Return on Assets. The 3.5% is a real rate return considered internationally acceptable. This component is to cover the average cost of capital, including interest and return.

The process followed is to calculate the total capital provision as by international standards (depreciation plus ROA also called levelised cost) and then the ratio of these provisions relative to the total provision. Then apportion the current total provision (depreciation and interest) to the various asset categories using these ratios. These values will be used as a basis for the cost of supply analysis.

6. CUSTOMER / SALES / REVENUE ANALYSIS.

Before one can start classifying costs, some calculations need to be done which will be used in the classification process. It starts off with the analysis of customers, tariffs and revenue.

Table 12 shows the 2024/2025 tariffs. The current tariffs are used to ensure that any restructuring that was done during the last tariff change is incorporated.

Table 12

| GEORGE | | CHARGES APPLICABLE FOR ALL MONTHS OF THE YEAR | | | | | | | | |
|---|------------|---|----------|----------|----------------|------------|-------------|-------------|-------------|-------------|
| year | 30/06/2024 | 2024/2025 TARIFF RATES | | | | | | | | |
| TARIFF CHARGES | M | Customer service | Basic | Access | MD (aLL hours) | ALL Energy | Block 1 kWh | Block 2 kWh | Block 3 kWh | Block 4 kWh |
| TARIFF NAME | | R/cust/m | R/POS/m | R/kVA/m | R/kVA/m | R/ kWh | 50.000 | 350.000 | 600.000 | >600 |
| Domestic Indigent PP | | | | | | | R 0.0000 | R 2.3466 | R 3.3961 | |
| Domestic Indigent Conv | | | | | | | R 0.0000 | R 2.3466 | R 3.3961 | |
| Domestic 20 Amp PP | | | | | | R 3.102 | | | | |
| Domestic 20 Amp Conv | | | | | | R 3.102 | | | | |
| Domestic > 20 Amp PP | | R 96.61 | R 5.83 | | | R 2.699 | | | | |
| Domestic > 20 Amp Conv | | R 96.61 | R 5.83 | | | R 2.699 | | | | |
| Domestic > 20 Amp 3 ph Conv | | R 96.61 | R 5.83 | | | R 2.699 | | | | |
| Commercial PP = 20 Amps 1 ph | | | | | | R 3.102 | | | | |
| Commercial Credit = 20 Amps 1 ph | | | | | | R 3.102 | | | | |
| Commercial PP > 20 Amps 1 ph | | R 88.43 | R 9.70 | | | R 3.033 | | | | |
| Commercial Credit > 20 Amps 1 ph | | R 88.43 | R 9.70 | | | R 3.033 | | | | |
| Commercial Credit > 20 Amps 3 ph | | R 88.43 | R 9.70 | | | R 3.033 | | | | |
| 5.1. Agric 10 kVA to 16 kVA | | R 403.90 | | | | R 2.946 | | | | |
| 5.2 Agric above 16 kVA. up to 25 kVA | | R 683.36 | | | | R 2.946 | | | | |
| 5.3 Agric above 25 kVA. up to 50 kVA | | R 1 366.75 | | | | R 2.946 | | | | |
| 5.4 Agric above 50 kVA. up to 100 kVA | | R 1 514.95 | | | | R 2.946 | | | | |
| 1.D.Domestic Flex (TOUP, TOUS, TOU) < 100 kVA | | R 97.33 | R 5.88 | | | | | | | |
| 2.C.Commercial Flex (TOUP, TOUS, TOU) < 100 kVA | | R 360.18 | R 9.70 | | | | | | | |
| 3.A. GEORGE TIME OF USE: LV > 100 kVA | | R 748.28 | R 81.72 | R 171.59 | | | | | | |
| 3.B. GEORGE TIME OF USE: MV | | R 3 676.52 | R 85.35 | R 124.38 | | | | | | |
| 3.C. GEORGE TIME OF USE: MV at HV substation. | | R 6 312.10 | R 71.73 | R 99.31 | | | | | | |
| 3.D. Embedded Generation Tariff (Tariff Code : TOUBP, TOUBS, TOUBO, IMBB1) | | | | | | | | | | |
| 6.1. STREET LIGHTING (Tariff code : 1530, 1531, 1559) | | R 120.65 | | | | R 3.57 | | | | |
| 6.2. NON MUNICIPAL STREETLIGHTS, SECURITY CAMERAS, SPORTS FIELDS AND FACILITIES (Tariff code : 1556, 1587, TOU56) | | | | | | | | | | |
| Wheeling | | | | | | | | | | |
| Availability | | 1.239% | R 258.17 | 0.00 | 236 083 601 | | | | | |

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| GEORGE | | CHARGES | HIGH SEASON CHARGES | | | LOW SEASON CHARGES | | |
|---|------------|------------------|---------------------|-----------------|-----------------|--------------------|-----------------|-----------------|
| year | 30/06/2024 | 2024/2025 T | Months in year. | | | Months in year. | | |
| TARIFF CHARGES | M | Customer service | Energy Peak | Energy Standard | Energy Off-Peak | Energy Peak | Energy Standard | Energy Off-Peak |
| TARIFF NAME | | R/cust/m | c/kWh | c/kWh | c/kWh | c/kWh | c/kWh | c/kWh |
| Domestic Indigent PP | | | | | | | | |
| Domestic Indigent Conv | | | | | | | | |
| Domestic 20 Amp PP | | | | | | | | |
| Domestic 20 Amp Conv | | | | | | | | |
| Domestic > 20 Amp PP | | | | | | | | |
| Domestic > 20 Amp Conv | | | | | | | | |
| Domestic > 20 Amp 3 ph Conv | | | | | | | | |
| Commercial PP = 20 Amps 1 ph | | | | | | | | |
| Commercial Credit = 20 Amps 1 ph | | | | | | | | |
| Commercial PP > 20 Amps 1 ph | | | | | | | | |
| Commercial Credit > 20 Amps 1 ph | | | | | | | | |
| Commercial Credit > 20 Amps 3 ph | | | | | | | | |
| 5.1. Agric 10 kVA to 16 kVA | | | | | | | | |
| 5.2 Agric above 16 kVA. up to 25 kVA | | | | | | | | |
| 5.3 Agric above 25 kVA. up to 50 kVA | | | | | | | | |
| 5.4 Agric above 50 kVA. up to 100 kVA | | | | | | | | |
| 1.D.Domestic Flex (TOUP, TOUS, TOU) < 100 kVA | | | R 6.6172 | R 2.4725 | R 1.6493 | R 2.7460 | R 1.9537 | R 1.3144 |
| 2.C.Commercial Flex (TOUP, TOUS, TOU) < 100 kVA | | | R 6.6172 | R 2.4725 | R 1.6493 | R 2.7460 | R 1.9537 | R 1.3144 |
| 3.A. GEORGE TIME OF USE: LV > 100 kVA | | | R 6.7400 | R 2.5568 | R 1.7245 | R 2.6962 | R 2.0857 | R 1.5933 |
| 3.B. GEORGE TIME OF USE: MV | | | R 6.1815 | R 2.3521 | R 1.6082 | R 2.4127 | R 1.8509 | R 1.4928 |
| 3.C. GEORGE TIME OF USE: MV at HV substation. | | | R 5.8751 | R 2.2194 | R 1.5083 | R 2.2810 | R 1.7448 | R 1.3979 |
| 3.D. Embedded Generation Tariff (Tariff Code : TOUBP, TOUBS, TOUBO, IMBB1) | | | | | | | | |
| 6.1. STREET LIGHTING (Tariff code : 1530, 1531, 1559) | | | | | | | | |
| 6.2. NON MUNICIPAL STREETLIGHTS, SECURITY CAMERAS, SPORTS FIELDS AND FACILITIES (Tariff code : 1556, 1587, TOU56) | | | | | | | | |
| Wheeling | | | | | | | | |
| Availability | | 1.239% | | | | | | |

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Table 13 shows the 2022/2023 consumptions details.

Table 13

| GEORGE | | | | | | | | | | |
|--|-------------------|-----------------|--------------------|----------------------|----------------|---------------|---------------|-------------|-------------|--|
| QUANTITIES CHARGEABLE FOR ALL MONTHS OF THE YEAR | | | | | | | | | | |
| CONSUMPTION | Number of custome | Number of POD's | Highest MD in year | Σ MDs all hours / 12 | ALL Energy | Block 1 kWh | Block 2 kWh | Block 3 kWh | Block 4 kWh | |
| TARIFF NAME | 7 rs | POD's | Amps or kVA | kVA | kWh | kWh | kWh | kWh | kWh | |
| Domestic Indigent PP | | 18 848 | 376 957 | | 36 718 496.90 | 12 627 020.00 | 24 091 476.90 | | | |
| Domestic Indigent Conv | | | - | | | | | | | |
| Domestic 20 Amp PP | | 5 129 | 102 572 | | 8 683 888.30 | | | | | |
| Domestic 20 Amp Conv | | 1 338 | 26 750 | | 2 586 324 | | | | | |
| Domestic > 20 Amp PP | | 26 975 | 947 839 | | 110 938 747.27 | | | | | |
| Domestic > 20 Amp Conv | | 681 | 24 197 | | 1 367 443 | | | | | |
| Domestic > 20 Amp 3 ph Conv | | 151 | 11 637 | | 661 777 | | | | | |
| Commercial PP = 20 Amps 1 ph | | 1 620 | 32 407 | | 39 909.20 | | | | | |
| Commercial Credit = 20 Amps 1 ph | | 948 | 18 965 | | 8 150 329 | | | | | |
| Commercial PP > 20 Amps 1 ph | | 1 051 | 34 469 | | 14 620 820.40 | | | | | |
| Commercial Credit > 20 Amps 1 ph | | 197 | 46 981 | | 10 010 553 | | | | | |
| Commercial Credit > 20 Amps 3 ph | | 1 385 | 167 994 | | 6 763 693 | | | | | |
| 5.1. Agric 10 kVA to 16 kVA | | 35 | 567 | | 323 258 | | | | | |
| 5.2 Agric above 16 kVA. up to 25 kVA | | 33 | 821 | | 260 466 | | | | | |
| 5.3 Agric above 25 kVA. up to 50 kVA | | 10 | 483 | | 86 578 | | | | | |
| 5.4 Agric above 50 kVA. up to 100 kVA | | 51 | 5 125 | | 773 898 | | | | | |
| 1.D.Domestic Flex (TOUP. TOUS .TOU) < 100 kVA. | | 91 | 6 877 | | 435 987 | | | | | |
| 2.C.Commercial Flex (TOUP. TOUS . TOU) < 100 kVA. | | 93 | 14 631 | | 7 470 216 | | | | | |
| 3.A. GEORGE TIME OF USE: LV > 100 kVA | | 487 | 27 092 | 258 438 | 67 360 493 | | | | | |
| 3.B. GEORGE TIME OF USE: MV | | 68 | 17 611 | 172 710 | 58 296 888 | | | | | |
| 3.C. GEORGE TIME OF USE: MV at HV substation. | | 14 | 12 563 | 117 450 | 40 034 278 | | | | | |
| 3.D. Embedded Generation Tariff (Tariff Code : TOUBP. TOUBS. TOUBO. IMBB1) | | | | | | | | | | |
| 6.1. STREET LIGHTING (Tariff code : 1530. 1531. 1559) | | 10 000 | | | 5 943 416 | | | | | |
| 6.2. NON MUNICIPAL STREETLIGHTS. SECURITY CAMERAS. SPOR | | 43 | | | 119 614 | | | | | |
| Wheeling | | 2 | 279 | 3 708 | | | | | | |
| Availability | | 1 496 | 23 936 | | | | | | | |
| 386 372 144 | 100.00% | 70 745 | 1 900 752 | 552 306 | 381 647 073 | 12 627 020 | 24 091 477 | | | |
| 1.00 | | Losses | | Purchase | 418 242 600 | 8.75% | Losses | | | |

| GEORGE | | | | | | | | | | |
|---|-------------------|------------------------|-----------------|-----------------|-----------------------|-----------------|-----------------|------------|--|--|
| QUANTITE | | | | | | | | | | |
| CONSUMPTION | Number of custome | HIGH SEASON QUANTITIES | | | LOW SEASON QUANTITIES | | | | | |
| | | Energy Peak | Energy Standard | Energy Off-Peak | Energy Peak | Energy Standard | Energy Off-Peak | | | |
| TARIFF NAME | 7 rs | kWh | kWh | kWh | kWh | kWh | kWh | kWh | | |
| Domestic Indigent PP | | | | | | | | | | |
| Domestic Indigent Conv | | | | | | | | | | |
| Domestic 20 Amp PP | | | | | | | | | | |
| Domestic 20 Amp Conv | | | | | | | | | | |
| Domestic > 20 Amp PP | | | | | | | | | | |
| Domestic > 20 Amp Conv | | | | | | | | | | |
| Domestic > 20 Amp 3 ph Conv | | | | | | | | | | |
| Commercial PP = 20 Amps 1 ph | | | | | | | | | | |
| Commercial Credit = 20 Amps 1 ph | | | | | | | | | | |
| Commercial PP > 20 Amps 1 ph | | | | | | | | | | |
| Commercial Credit > 20 Amps 1 ph | | | | | | | | | | |
| Commercial Credit > 20 Amps 3 ph | | | | | | | | | | |
| 5.1. Agric 10 kVA to 16 kVA | | | | | | | | | | |
| 5.2 Agric above 16 kVA. up to 25 kVA | | | | | | | | | | |
| 5.3 Agric above 25 kVA. up to 50 kVA | | | | | | | | | | |
| 5.4 Agric above 50 kVA. up to 100 kVA | | | | | | | | | | |
| 1.D.Domestic Flex (TOUP. TOUS . TOU) < 100 kVA. | | | 21 981 | 44 229 | 62 484 | 46 080 | 95 750 | 165 462 | | |
| 2.C.Commercial Flex (TOUP. TOUS . TOU) < 100 kVA. | | | 253 921 | 1 050 936 | 644 562 | 796 874 | 2 805 736 | 1 918 187 | | |
| 3.A. GEORGE TIME OF USE: LV > 100 kVA | | | 2 940 446 | 7 610 283 | 7 096 030 | 8 323 522 | 20 166 384 | 21 223 829 | | |
| 3.B. GEORGE TIME OF USE: MV | | | 2 333 737 | 5 680 359 | 6 564 576 | 6 953 931 | 16 513 923 | 20 250 361 | | |
| 3.C. GEORGE TIME OF USE: MV at HV substation. | | | 1 565 977 | 3 971 488 | 4 107 544 | 4 942 745 | 12 306 428 | 13 140 096 | | |
| 3.D. Embedded Generation Tariff (Tariff Code : TOUBP. TOUBS. TOUBO. IMBB1) | | | | | | | | | | |
| 6.1. STREET LIGHTING (Tariff code : 1530. 1531. 1559) | | | | | | | | | | |
| 6.2. NON MUNICIPAL STREETLIGHTS. SECURITY CAMERAS. SPORTS FIELDS AND FACILITIES (Tariff code : 1556. 1587. TOU36) | | | | | | | | | | |
| Wheeling | | | | | | | | | | |
| Availability | | | | | | | | | | |
| 386 372 144 | 100.00% | 7 116 060 | 18 357 296 | 18 475 197 | 21 063 153 | 51 888 221 | 56 697 935 | | | |

Table 14 shows the 2023/2024 consumption statistics.

These values all makes sense and will thus be used as such.

Various reports had to be used to determine the sales per tariff. Table 15 shows the sales for pre-payment consumers.

Table 15

| Tariff Name | Sum of Fixed Amount | Sum of Meter Count | Sum of Resource Units | Sum of Free Units | Sum of Total Units | Sum of Total Amount |
|---|---------------------|--------------------|-----------------------|-------------------|--------------------|---------------------|
| 1.A.1 - Domestic Indigent (20A) | 1 875 | 217 118 | 22 640 795 | 11 951 450 | 34 592 245 | 66 832 112 |
| 1.A.1 - Domestic Indigent (30A) | 214 123 | 2 211 | 336 609 | 84 560 | 421 169 | 1 305 609 |
| 1.A.1 - Domestic Indigent (30A) - 1 Dweller | - | 4 327 | 615 284 | 470 680 | 1 085 964 | 1 880 714 |
| 1.A.1 - Domestic Indigent (40A) | 173 542 | 1 423 | 252 447 | 52 990 | 305 437 | 971 804 |
| 1.A.1 - Domestic Indigent (40A) - 1 Dweller | 1 940 | 10 | 4 171 | 1 120 | 5 291 | 13 690 |
| 1.A.1 - Domestic Indigent (40A) - 2 Dweller | - | 184 | 25 013 | 31 290 | 56 303 | 73 321 |
| 1.A.1 - Domestic Indigent (50A) | 22 828 | 131 | 49 132 | 5 600 | 54 732 | 167 660 |
| 1.A.1 - Domestic Indigent (60A) | 135 592 | 747 | 163 012 | 27 650 | 190 662 | 687 519 |
| 1.A.1 - Domestic Indigent (60A) - 1 Dweller | 4 336 | 23 | 5 015 | 1 680 | 6 695 | 20 667 |
| 1.B - Domestic 1 Phase (20A) | - | 61 543 | 8 682 824 | - | 8 682 824 | 33 830 985 |
| 1.C - Domestic 1 or 3 Phase (>20A) | - | 48 | 55 480 | - | 55 480 | 157 385 |
| 1.C - Domestic 1 or 3 Phase (30A) | 87 | 216 102 | 50 560 965 | - | 50 560 965 | 157 393 898 |
| 1.C - Domestic 1 or 3 Phase (40A) | 390 | 75 423 | 38 352 373 | - | 38 352 373 | 109 448 685 |
| 1.C - Domestic 1 or 3 Phase (50A) | - | 5 656 | 2 465 775 | - | 2 465 775 | 7 080 994 |
| 1.C - Domestic 1 or 3 Phase (60A) | 2 590 | 26 373 | 13 687 161 | - | 13 687 161 | 39 802 548 |
| 1.C - Domestic 1 or 3 Phase (70A) | - | 16 | 22 067 | - | 22 067 | 95 230 |
| 1.C - Domestic 1 or 3 Phase (80A) | - | 78 | 200 126 | - | 200 126 | 551 950 |
| 1.C - Domestic 3 Phase (100A) | - | 3 | 39 909 | - | 39 909 | 109 800 |
| 2.A - Commercial Small 1 Phase (20A) | - | 19 444 | 4 805 275 | - | 4 805 275 | 19 044 804 |
| 2.B - Commercial Normal (>20A) | - | 4 149 | 7 226 395 | - | 7 226 395 | 22 523 182 |
| 2.B - Commercial Normal (100A) | - | 32 | 43 403 | - | 43 403 | 134 165 |
| 2.B - Commercial Normal (30A) | - | 2 197 | 1 035 322 | - | 1 035 322 | 3 251 336 |
| 2.B - Commercial Normal (40A) | - | 1 497 | 832 619 | - | 832 619 | 2 624 023 |
| 2.B - Commercial Normal (50A) | - | 880 | 646 546 | - | 646 546 | 2 027 173 |
| 2.B - Commercial Normal (60A) | - | 3 375 | 3 368 490 | - | 3 368 490 | 10 588 884 |
| 2.B - Commercial Normal (70A) | - | 3 | 7 829 | - | 7 829 | 24 200 |
| 2.B - Commercial Normal (80A) | - | 475 | 1 460 215 | - | 1 460 215 | 4 519 772 |
| Tariff Name | - | - | - | - | - | - |
| TOTAL: | 557 302 | 643 468 | 157 584 253 | 12 627 020 | 170 211 273 | 485 162 110 |

Table 16 shows the conventional consumer sales data excluding basic charges.

Table 16

| Row Labels | Sum of Year | | | | | | | | | | | |
|---|---------------|--------------------|----------|-------------------|--------------------|--------------------|-------------------|------------------|-------------------|--------------------|------------|-----------|
| | COUNTER | CONSUM1 | ESTIMA T | BASIC | MINCHG | CONSUM2 | Rand | EXTRA/KVA | SURCHG | VAT | TOTAL | inc vat |
| TOUCO 2C TOU COMMERCIAL FLEX OFF-PEAK | 93 | 2 030 968 | - | - | - | 2 451 754 | - | - | - | - | 367 763 | 2 819 517 |
| TOUCP 2C TOU COMMERCIAL FLEX PEAK | 190 | 997 841 | - | 180 038 | 1 520 565 | 2 910 592 | - | - | - | 691 679 | 5 302 874 | |
| TOUCS 2C TOU COMMERCIAL FLEX STANDARD | 91 | 1 994 068 | - | - | - | 3 601 015 | - | - | - | 540 152 | 4 141 167 | |
| TOU1A 3A TOU LV ACCESS | 238 | 325 107 | - | - | 23 304 097 | - | - | - | - | 3 077 880 | 26 381 978 | |
| TOU1 3A TOU LV DEMAND | 487 | 258 438 | - | 1 918 459 | - | - | - | 38 881 183 | - | 5 459 222 | 46 258 864 | |
| TOUO1 3A TOU LV OFF-PEAK | 488 | 28 319 859 | - | - | - | 40 337 478 | - | - | - | 5 317 182 | 45 654 660 | |
| TOUP1 3A TOU LV PEAK | 484 | 11 263 967 | - | - | - | 36 274 116 | - | - | - | 4 901 216 | 41 175 331 | |
| TOUS1 3A TOU LV STANDARD | 486 | 27 776 667 | - | - | - | 53 722 011 | - | - | - | 7 258 792 | 60 980 803 | |
| TOUSA 3B TOU MV ACCESS | 34 | 211 335 | - | - | 15 825 087 | - | - | - | - | 1 842 710 | 17 667 797 | |
| TOUSD 3B TOU MV DEMAND | 68 | 172 710 | - | 1 306 087 | - | - | - | 18 846 238 | - | 2 353 536 | 22 505 861 | |
| TOUOS 3B TOU MV OFF-PEAK | 70 | 26 814 937 | - | - | - | 35 721 888 | - | - | - | 3 885 405 | 39 607 293 | |
| TOUPM 3B TOU MV PEAK | 68 | 9 287 668 | - | - | - | 26 646 044 | - | - | - | 3 058 105 | 29 704 149 | |
| TOUSM 3B TOU MV STANDARD | 66 | 22 194 282 | - | - | - | 38 330 445 | - | - | - | 4 372 369 | 42 702 813 | |
| TOU2A 3C TOU MV SUB ACCESS | 7 | 150 751 | - | - | 9 483 852 | - | - | - | - | 1 422 578 | 10 906 429 | |
| TOU2 3C TOU MV SUB DEMAND | 14 | 117 450 | - | 464 974 | - | - | - | 10 231 263 | - | 1 604 435 | 12 300 672 | |
| TOUO2 3C TOU MV SUB OFF-PEAK | 14 | 17 247 640 | - | - | - | 21 535 806 | - | - | - | 3 230 371 | 24 766 177 | |
| TOUP2 3C TOU MV SUB PEAK | 14 | 6 508 721 | - | - | - | 17 806 440 | - | - | - | 2 670 966 | 20 477 406 | |
| TOUS2 3C TOU MV SUB STANDARD | 14 | 16 277 916 | - | - | - | 26 508 746 | - | - | - | 3 976 312 | 30 485 058 | |
| 1541 Agricultural Consumption (1541) | 35 | 323 258 | - | 45 652 | - | 836 617 | - | - | - | 132 340 | 1 014 608 | |
| 1542 Agricultural Consumption (1542) | 33 | 260 466 | - | 41 763 | - | 648 099 | - | - | - | 103 479 | 793 342 | |
| 1543 Agricultural Consumption (1543) | 10 | 86 578 | - | 21 632 | - | 224 694 | - | - | - | 36 949 | 283 275 | |
| 1544 Agricultural Consumption (1544) | 38 | 469 466 | - | 157 095 | - | 1 220 057 | - | - | - | 206 573 | 1 583 725 | |
| 1545 Agricultural Consumption (1545) | 13 | 304 432 | - | 63 826 | - | 785 384 | - | - | - | 127 382 | 976 592 | |
| 1582 Business S/P Uniondale(1582) = 20 Amps | 78 | 581 884 | - | - | - | 1 949 385 | - | - | - | 273 978 | 2 223 363 | |
| 1584 Business T/P Uniondale (1584) > 20 Amps | 39 | 68 792 | - | 12 074 | - | 212 645 | - | - | - | 33 708 | 258 428 | |
| 1583 Business Three Phase Uniondale (1583) 3 Phase = 20 Amps | 15 | 32 334 | - | - | - | 106 951 | - | - | - | 13 160 | 120 111 | |
| 1581 Consumers Domestic (1581) > 20 Amps | 1 | - | - | - | - | - | - | - | - | - | - | |
| 1503 Consumers S/P (1503) DOMESTIC = 20 AMPS | 1 312 | 2 509 157 | - | - | - | 6 824 163 | - | - | - | 1 023 215 | 7 847 378 | |
| 1504 Consumers S/P (1504) DOMESTIC > 20 AMPS | 677 | 1 297 928 | - | 210 980 | - | 3 527 400 | - | - | - | 560 546 | 4 298 926 | |
| 1580 Consumers S/P (1580) Domestic = 20 Amps | 26 | 77 167 | - | - | - | 211 357 | - | - | - | 31 703 | 243 060 | |
| 1506 Consumers T/P (1506) DOMESTIC 3 PHASE > 20 AMPS | 151 | 661 777 | - | 45 733 | - | 1 778 067 | - | - | - | 273 572 | 2 097 373 | |
| 1591 Eleccons T/P Uniondale 2C (1591) > 20 Amps | 3 | 69 515 | - | 935 | - | 216 052 | - | - | - | 32 548 | 249 535 | |
| 1556 Non Municipal Streetlights, Sport Fields and Facilities (1556) | 43 | 119 614 | - | - | - | 375 244 | - | - | - | 56 287 | 431 530 | |
| 1509 Normal General Consumers S/P (1509) >20 Amps | 33 | 99 755 | - | 9 332 | - | 401 235 | - | - | - | 59 674 | 470 241 | |
| 1511 Normal General Consumers S/P (1511) > 20 Amps | 164 | 2 728 117 | - | 46 699 | - | 8 565 172 | - | - | - | 1 184 441 | 9 796 312 | |
| 1512 Normal General Consumers T/P (1512) > 20 Amps | 3 | 67 205 | - | 933 | - | 225 085 | - | - | - | 33 903 | 259 920 | |
| 1551 Normal General Consumers T/P (1551) | 3 | 53 087 | - | 932 | - | 147 627 | - | - | - | 22 284 | 170 844 | |
| 1561 Normal General Consumers T/P (1561) >20 Amps | 517 | 7 045 620 | - | 153 504 | - | 21 915 402 | - | - | - | 2 813 830 | 24 882 735 | |
| PCOM Prepaid George Commercial (PCOM) | 992 | 1 064 | - | 750 819 | 6 473 510 | - | - | - | - | 1 083 335 | 8 307 664 | |
| PDOM Prepaid George Domestic (PDOM) | 24 316 | 90 567 | - | 19 536 968 | 42 353 295 | - | - | - | - | 9 278 891 | 71 169 155 | |
| PDOMI Prepaid Indigent(PDOMI) | 994 | 1 | - | - | - | - | - | - | - | - | - | |
| PCOMU Prepaid Uniondale Commercial (PCOMU) | 10 | - | - | 8 545 | 71 641 | - | - | - | - | 12 028 | 92 213 | |
| PDOMU Prepaid Uniondale Domestic (PDOMU) | 264 | - | - | 171 023 | 340 560 | - | - | - | - | 75 880 | 587 463 | |
| REACT Prepaid Uniondale Domestic (PDOMU) | 284 | 5 504 233 | - | - | - | - | - | 1 327 953 | - | 153 621 | 1 481 573 | |
| 1507 Small General Consumers. (1507) = 20 AMPS | 868 | 7 515 358 | - | - | - | 24 797 980 | - | - | - | 3 075 419 | 27 873 400 | |
| 1508 Small General Consumers. (1508) = 3 PHASE 20 AMPS | 808 | 6 731 359 | - | - | - | 22 240 004 | - | - | - | 3 104 570 | 25 344 575 | |
| TOUMO SSEG Commercial OFF-PEAK | 64 | 277 183 | - | - | - | 192 942 | - | - | - | 24 677 | 217 619 | |
| TOUMP SSEG Commercial PEAK | 64 | 46 967 | - | - | - | 81 688 | - | - | - | 9 967 | 91 655 | |
| TOUMS SSEG Commercial Standard | 64 | 330 709 | - | - | - | 368 757 | - | - | - | 44 328 | 413 085 | |
| 1530 Street lighting (1530) | 15 | 5 930 216 | - | 3 834 376 | - | 18 674 033 | - | - | - | - | 22 508 409 | |
| 1559 Street lighting (1559) | 3 | 13 200 | - | 86 710 | - | 41 524 | - | - | - | - | 128 234 | |
| TOU20 Time of Use TOU TOU20 Domestic | 344 | 531 781 | - | 87 370 | 433 265 | 1 253 233 | - | - | - | 266 084 | 2 039 952 | |
| TOU56 Time of Use TOU TOU56 Sports Fields | 9 | 52 954 | - | - | - | 163 613 | - | - | - | 9 820 | 173 433 | |
| TOU61 Time of Use TOU TOU61Business | 207 | 1 862 604 | - | 47 994 | - | 5 797 305 | - | - | - | 868 336 | 6 713 636 | |
| TOUAW Wheeling DEMAND | 8 | 3 708 | - | 7 361 | - | - | - | 276 905 | - | 42 640 | 326 906 | |
| TOU1B TIME OF USE TOU1B | 2 | 42 | - | - | - | 100 | - | - | - | 15 | 114 | |
| TOUDO Domestic Flex TOUDO Standard | 91 | 227 946 | - | - | - | 279 557 | - | - | - | 41 934 | 321 490 | |
| TOUDP SSEG DOMESTIC Peak | 137 | 10 569 | - | 60 434 | - | 17 281 | - | - | - | 6 472 | 49 625 | |
| TOUDS SSEG DOMESTIC Standard | 93 | 115 271 | - | - | - | 128 897 | - | - | - | 19 335 | 148 232 | |
| TOULV TIME OF USE TOULV | 2 | 11 384 | - | - | - | 12 691 | - | - | - | 1 904 | 14 595 | |
| TOULW Wheeling ACCESS | 2 | 279 | - | 7 211 | - | - | - | 41 926 | - | 7 371 | 56 508 | |
| TOUOD SSEG DOMESTIC Off-Peak | 93 | 42 916 | - | - | - | 29 642 | - | - | - | 4 477 | 34 319 | |
| TOUOO Wheeling TOU Off-peak | 7 | 41 387 | - | - | - | 38 679 | - | - | - | 5 802 | 44 481 | |
| TOUSO Wheeling TOU Standard | 7 | 45 124 | - | - | - | 63 821 | - | - | - | 9 573 | 73 394 | |
| TOUPO Wheeling TOU Peak | 7 | 5 174 | - | - | - | 10 153 | - | - | - | 1 523 | 11 676 | |
| TOUSP Domestic Flex TOU Peak | 183 | 68 061 | - | 46 904 | 271 370 | 228 691 | - | - | - | 82 044 | 629 009 | |
| TOUSS Domestic Flex TOU Standard | 91 | 139 980 | - | - | - | 256 821 | - | - | - | 38 523 | 295 344 | |
| Grand Total | 36 147 | 218 406 518 | - | 29 326 364 | 100 077 243 | 428 830 463 | 68 277 516 | 1 327 953 | 81 079 451 | 708 918 988 | | |

Table 17 shows a summary of the 2022/2023 actual revenue from the sales reports.

Table 17

| GEORGE | | REVENUES FROM CHARGES APPLICABLE ALL MONTHS OF THE YEAR | | | | | | | | |
|---|-------------|---|------------|------------|-----------------|----------------|-------------|-------------|-------------|-------------|
| ACTUAL REVENUE | | Customer service | Basic | Access | Σ MDs all hours | ALL Energy | Block 1 kWh | Block 2 kWh | Block 3 kWh | Block 4 kWh |
| TARIFF NAME | 7 | R/year | R/year | R/year | R/year | R/year | R/year | R/year | R/year | R/year |
| Domestic Indigent PP | 0 | - | - | - | - | 71 953 095.74 | - | - | - | - |
| Domestic Indigent Conv | 0 | - | - | - | - | - | - | - | - | - |
| Domestic 20 Amp PP | 0 | - | - | - | - | 33 830 984.81 | - | - | - | - |
| Domestic 20 Amp Conv | 0 | - | - | - | - | 7 035 520 | - | - | - | - |
| Domestic > 20 Amp PP | 0 | - | 19 707 991 | 42 693 855 | - | 314 640 490.91 | - | - | - | - |
| Domestic > 20 Amp Conv | 0 | - | 211 915 | 909 110 | - | 3 743 452 | - | - | - | - |
| Domestic > 20 Amp 3 ph Conv | 0 | - | 45 733 | 426 474 | - | 1 778 067 | - | - | - | - |
| Commercial PP = 20 Amps 1 ph | 0 | - | - | - | - | 19 044 804.24 | - | - | - | - |
| Commercial Credit = 20 Amps 1 ph | 79893174.02 | - | 932 | - | - | 26 894 993 | - | - | - | - |
| Commercial PP > 20 Amps 1 ph | 0 | - | 759 364 | 6 545 151 | - | 45 692 734.26 | - | - | - | - |
| Commercial Credit > 20 Amps 1 ph | 0 | - | 222 541 | 2 862 774 | - | 31 319 539 | - | - | - | - |
| Commercial Credit > 20 Amps 3 ph | 0 | - | - | 116 507 | - | 22 346 955 | - | - | - | - |
| 5.1. Agric 10 kVA to 16 kVA | 0 | - | 45 652 | - | - | 836 617 | - | - | - | - |
| 5.2 Agric above 16 kVA up to 25 kVA | 0 | - | 41 763 | - | - | 648 099 | - | - | - | - |
| 5.3 Agric above 25 kVA up to 50 kVA | 0 | - | 21 632 | - | - | 224 694 | - | - | - | - |
| 5.4 Agric above 50 kVA up to 100 kVA | 0 | - | 220 921 | - | - | 2 005 442 | - | - | - | - |
| 1.D.Domestic Flex (TOUP, TOUS, TOU) | 0 | - | - | 271 370 | 271 370 | 765 069 | - | - | - | - |
| 2.C.Commercial Flex (TOUP, TOUS, T) | 0 | - | - | 1 953 831 | 3 056 593 | 7 214 151 | - | - | - | - |
| 3.A. GEORGE TIME OF USE: LV > 100 | 0 | - | 1 918 459 | 23 304 097 | 38 881 183 | 130 333 605 | - | - | - | - |
| 3.B. GEORGE TIME OF USE: MV | 0 | - | 1 306 087 | 15 825 087 | 18 846 238 | 100 698 376 | - | - | - | - |
| 3.C. GEORGE TIME OF USE: MV at H | 0 | - | 464 974 | 9 483 852 | 10 231 263 | 65 850 993 | - | - | - | - |
| 3.D. Embedded Generation Tariff (Tariff | 0 | - | - | - | - | - | - | - | - | - |
| 6.1. STREET LIGHTING (Tariff code: 1) | 0 | - | 3 921 086 | 271 370 | - | 18 715 556 | - | - | - | - |
| 6.2. NON MUNICIPAL STREETLIGHTS | 0 | - | - | - | - | 375 244 | - | - | - | - |
| Wheeling | 0 | - | 7 211 | 41 926 | 276 905 | - | - | - | - | - |
| Availability | 0 | - | 2 925 548 | - | - | - | - | - | - | - |
| | 913 992 573 | 1 114 039 248 | -21.9% | 31 821 810 | 104 705 404 | 71 563 552 | 905 948 482 | - | - | - |

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Table 18 shows the calculated revenue by multiplying the 2023/2024 consumption by the 2024/2025 tariffs.

Table 18

| GEORGE | | REVENUES FROM CHARGES APPLICABLE FOR ALL MONTHS OF THE YEAR | | | | | | | | |
|---|---------------|---|------------|------------|----------------|-------------|-------------|-------------|---------------|--|
| 30/06/2024 | | Customer service | Basic | Access | MD (aLL hours) | ALL Energy | Block 1 kWh | Block 3 kWh | Other charges | |
| TARIFF NAME | 7 | R/year | R/year | R/year | R/year | R/year | R/year | R/year | ? | |
| Domestic Indigent PP | 0 | - | - | - | - | - | 56 533 060 | - | - | |
| Domestic Indigent Conv | 0 | - | - | - | - | - | - | - | - | |
| Domestic 20 Amp PP | 0 | - | - | - | - | 26 936 553 | - | - | - | |
| Domestic 20 Amp Conv | 0 | - | - | - | - | 8 022 518 | - | - | - | |
| Domestic > 20 Amp PP | 0 | - | 31 272 560 | 66 310 801 | - | 299 412 585 | - | - | - | |
| Domestic > 20 Amp Conv | 0 | - | 789 690 | 1 692 828 | - | 3 690 592 | - | - | - | |
| Domestic > 20 Amp 3 ph Conv | 0 | - | 174 767 | 814 123 | - | 1 786 070 | - | - | - | |
| Commercial PP = 20 Amps 1 ph | 0 | - | - | - | - | 123 794 | - | - | - | |
| Commercial Credit = 20 Amps 1 ph | 0 | - | - | - | - | 25 281 506 | - | - | - | |
| Commercial PP > 20 Amps 1 ph | 0 | - | 1 114 925 | 4 012 179 | - | 44 337 638 | - | - | - | |
| Commercial Credit > 20 Amps 1 ph | 0 | - | 208 783 | 5 468 549 | - | 30 357 002 | - | - | - | |
| Commercial Credit > 20 Amps 3 ph | 0 | - | 1 469 530 | 19 554 466 | - | 20 510 899 | - | - | - | |
| 5.1. Agric 10 kVA to 16 kVA | 0 | - | 171 658 | - | - | 952 286 | - | - | - | |
| 5.2 Agric above 16 kVA up to 25 kVA | 0 | - | 269 244 | - | - | 767 307 | - | - | - | |
| 5.3 Agric above 25 kVA up to 50 kVA | 0 | - | 158 543 | - | - | 255 050 | - | - | - | |
| 5.4 Agric above 50 kVA up to 100 kVA | 0 | - | 931 694 | - | - | 2 279 826 | - | - | - | |
| 1.D.Domestic Flex (TOUP, TOUS, TOU) | 0 | - | 106 479 | 485 257 | - | - | - | - | - | |
| 2.C.Commercial Flex (TOUP, TOUS, T) | 0 | - | 400 880 | 1 703 033 | - | - | - | - | - | |
| 3.A. GEORGE TIME OF USE: LV > 100 | 0 | - | 4 375 941 | 26 567 775 | 44 345 369 | - | - | - | - | |
| 3.B. GEORGE TIME OF USE: MV | 0 | - | 2 977 981 | 18 037 478 | 21 481 656 | - | - | - | - | |
| 3.C. GEORGE TIME OF USE: MV at H | 0 | - | 1 060 433 | 10 813 363 | 11 663 925 | - | - | - | - | |
| 3.D. Embedded Generation Tariff (Tariff | 0 | - | - | - | - | - | - | - | - | |
| 6.1. STREET LIGHTING (Tariff code: 1) | 0 | - | 14 478 000 | - | - | 21 227 505 | - | - | - | |
| 6.2. NON MUNICIPAL STREETLIGHTS | 0 | - | - | - | - | - | - | - | - | |
| Wheeling | 0 | - | - | - | - | - | - | - | - | |
| Availability | 0 | - | 4 634 608 | 297 | - | - | - | - | - | |
| | 1 114 039 248 | 1 197 517 501 | - | 64 595 718 | 155 460 150 | 77 490 951 | 485 941 130 | 56 533 060 | - | |

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| GEORGE | | 30/06/2024 | | REVENUES | HIGH SEASON REVENUES | | | LOW SEASON REVENUES | | |
|---|----------------------|------------|-------------------|-------------------|----------------------|-------------------|-------------------|---------------------|--|--|
| CALCULATED REVENUE | | Customer # | Energy Peak | Energy Standard | Energy Off-Peak | Energy Peak | Energy Standard | Energy Total | | |
| TARIFF NAME | R/year | R/ | Rand /season | Rand /season | Rand /season | Rand /season | Rand /season | Rand /season | | |
| Domestic Indigent PP | 0 | - | - | - | - | - | - | - | | |
| Domestic Indigent Conv | 0 | - | - | - | - | - | - | - | | |
| Domestic 20 Amp PP | 0 | - | - | - | - | - | - | - | | |
| Domestic 20 Amp Conv | 0 | - | - | - | - | - | - | - | | |
| Domestic > 20 Amp PP | 0 | - | - | - | - | - | - | - | | |
| Domestic > 20 Amp Conv | 0 | - | - | - | - | - | - | - | | |
| Domestic > 20 Amp 3 ph Conv | 0 | - | - | - | - | - | - | - | | |
| Commercial PP = 20 Amps 1 ph | 0 | - | - | - | - | - | - | - | | |
| Commercial Credit = 20 Amps 1 ph | 0 | - | - | - | - | - | - | - | | |
| Commercial PP > 20 Amps 1 ph | 0 | - | - | - | - | - | - | - | | |
| Commercial Credit > 20 Amps 1 ph | 0 | - | - | - | - | - | - | - | | |
| Commercial Credit > 20 Amps 3 ph | 0 | - | - | - | - | - | - | - | | |
| 5.1. Agric 10 kVA to 16 kVA | 0 | - | - | - | - | - | - | - | | |
| 5.2 Agric above 16 kVA. up to 25 kVA | 0 | - | - | - | - | - | - | - | | |
| 5.3 Agric above 25 kVA. up to 50 kVA | 0 | - | - | - | - | - | - | - | | |
| 5.4 Agric above 50 kVA. up to 100 kVA | 0 | - | - | - | - | - | - | - | | |
| 1.D.Domestic Flex (TOUP. TOUS . TOL | 0 | - | 145 451 | 109 357 | 103 056 | 126 537 | 187 068 | 217 483 | | |
| 2.C.Commercial Flex (TOUP. TOUS . T | 0 | - | 1 680 244 | 2 598 440 | 1 063 076 | 2 188 217 | 5 481 566 | 2 521 265 | | |
| 3.A. GEORGE TIME OF USE: LV > 100 | 0 | - | 19 818 603 | 19 457 971 | 12 237 104 | 22 441 879 | 42 061 027 | 33 815 927 | | |
| 3.B. GEORGE TIME OF USE: MV | 0 | - | 14 425 995 | 13 360 773 | 10 557 151 | 16 777 750 | 30 565 620 | 30 229 739 | | |
| 3.C. GEORGE TIME OF USE: MV at H | 0 | - | 9 200 269 | 8 814 321 | 6 195 408 | 11 274 401 | 21 472 255 | 18 368 541 | | |
| 3.D. Embedded Generation Tariff (Tariff | 0 | - | - | - | - | - | - | - | | |
| 6.1. STREET LIGHTING (Tariff code : 1 | 0 | - | - | - | - | - | - | - | | |
| 6.2. NON MUNICIPAL STREETLIGHTS | 0 | - | - | - | - | - | - | - | | |
| Wheeling | 0 | - | - | - | - | - | - | - | | |
| Availability | 0 | - | - | - | - | - | - | - | | |
| 1 114 039 248 | 1 197 517 501 | - | 45 270 561 | 44 340 861 | 30 155 796 | 52 808 784 | 99 767 536 | 85 152 955 | | |

Table 19 shows a summary of the newly calculated revenue compared with the actual revenue.

Table 19

| GEORGE | | TOTAL | Actual: Reference | |
|---|----------------------|----------------------|-------------------|--------------|
| TARIFF NAME | R/year | Total | Difference | % Diff |
| Domestic Indigent PP | 56 533 060 | 71 953 096 | -15 420 036 | -21.4% |
| Domestic Indigent Conv | - | - | - | #DIV/0! |
| Domestic 20 Amp PP | 26 936 553 | 33 830 985 | -6 894 432 | -20.4% |
| Domestic 20 Amp Conv | 8 022 518 | 7 035 520 | 986 998 | 14.0% |
| Domestic > 20 Amp PP | 396 995 947 | 377 042 337 | 19 953 610 | 5.3% |
| Domestic > 20 Amp Conv | 6 173 110 | 4 864 477 | 1 308 633 | 26.9% |
| Domestic > 20 Amp 3 ph Conv | 2 774 960 | 2 250 275 | 524 686 | 23.3% |
| Commercial PP = 20 Amps 1 ph | 123 794 | 19 044 804 | -18 921 010 | -99.3% |
| Commercial Credit = 20 Amps 1 ph | 25 281 506 | 26 895 925 | -1 614 420 | -6.0% |
| Commercial PP > 20 Amps 1 ph | 49 464 743 | 52 997 249 | -3 532 506 | -6.7% |
| Commercial Credit > 20 Amps 1 ph | 36 034 334 | 34 404 854 | 1 629 480 | 4.7% |
| Commercial Credit > 20 Amps 3 ph | 41 534 895 | 22 463 463 | 19 071 433 | 84.9% |
| 5.1. Agric 10 kVA to 16 kVA | 1 123 943 | 882 269 | 241 675 | 27.4% |
| 5.2 Agric above 16 kVA. up to 25 kVA | 1 036 551 | 689 863 | 346 688 | 50.3% |
| 5.3 Agric above 25 kVA. up to 50 kVA | 413 593 | 246 326 | 167 267 | 67.9% |
| 5.4 Agric above 50 kVA. up to 100 kVA | 3 211 520 | 2 226 363 | 985 158 | 44.2% |
| 1.D.Domestic Flex (TOUP. TOUS . TOL | 1 480 687 | 1 307 808 | 172 879 | 13.2% |
| 2.C.Commercial Flex (TOUP. TOUS . T | 17 636 722 | 12 224 574 | 5 412 148 | 44.3% |
| 3.A. GEORGE TIME OF USE: LV > 100 | 225 121 595 | 194 437 345 | 30 684 250 | 15.8% |
| 3.B. GEORGE TIME OF USE: MV | 158 414 145 | 136 675 789 | 21 738 356 | 15.9% |
| 3.C. GEORGE TIME OF USE: MV at H | 98 862 916 | 86 031 081 | 12 831 835 | 14.9% |
| 3.D. Embedded Generation Tariff (Tariff | - | - | - | #DIV/0! |
| 6.1. STREET LIGHTING (Tariff code : 1 | 35 705 505 | 22 908 012 | 12 797 492 | 55.9% |
| 6.2. NON MUNICIPAL STREETLIGHTS | - | 375 244 | -375 244 | -100.0% |
| Wheeling | - | 326 042 | -326 042 | -100.0% |
| Availability | 4 634 905 | 2 925 548 | 1 709 357 | 58.4% |
| 1 114 039 248 | 1 197 517 501 | 1 114 039 248 | 83 478 253 | 7.49% |
| | 1 114 039 248 | 6.97% | 14.75% | 7.78% |

This shows a total increase of 6.97% which is less than the average price increase of 14.59%.

These values will be used to calculate various cost of supply factors.

7. NETWORK LOSSES.

The losses in the network are required in various instances. The first step is to determine the amount of energy flowing through each of the networks for each representative load profile. This is done by obtaining the kWh from each customer category from the actual consumption table and allocating it to the relevant point on the network. The result is shown in Table 20.

Table 20

| kWh CONNECTED BY NETWORK | | | | | | | | | | | | | |
|--------------------------|--------------|------------|------------|------------|-----------|---------|-------------|------------|-----------|-----------|-----|-------------|-------------|
| Supply position | MV at HV sub | MV | LV | Comm | Comm TOU | Dom TOU | Dom | Dom poor | Lights | Agric | | Total | |
| | P01 | P01 | P02 | P03 | P03 | P04 | P05 | P06 | P06 | P07 | P08 | | |
| S00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| S01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| S02 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| S03 | 40 034 278 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40 034 278 | |
| S04 | 0 | 58 296 888 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 58 296 888 | |
| S05 | 0 | 0 | 67 360 493 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 67 360 493 | |
| S06 | 0 | 0 | 0 | 44 350 670 | 7 470 216 | 435 987 | 112 967 967 | 47 988 709 | 6 063 030 | 1 444 200 | 0 | 220 720 780 | |
| S07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| S08 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| S09 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 40 034 278 | 58 296 888 | 67 360 493 | 44 350 670 | 7 470 216 | 435 987 | 112 967 967 | 47 988 709 | 6 063 030 | 1 444 200 | 0 | 386 412 439 | |
| | | | | | | | | | | | | Bulk +SSEG | 420 890 968 |
| | | | | | | | | | | | | Difference | 8.19% |
| | | | | | | | | | | | | | 386 412 439 |
| | | | | | | | | | | | | | -34 478 530 |

The next step in the process, to calculate the losses of every network component, is as follows:

- An estimate is made about the loss % for every network component. This is done by considering the impedances of individual network components, the numbers involved and the loads flowing through it.
- The total infeed loads are then added to the relevant losses for every network through which it flows and are then added to the loads through all other networks to yield the total load.
- The loss factors are then modified until the total load, as calculated, is equal to the total load supplied in bulk. This is done by modifying the first pass estimation loss factors by the loss adjustment factor.

The resultant calculations are shown in **Table 21** and **Table 22**

Table 21

| ENERGY BALANCING | | | | | | | | | | | | | |
|---|-------------|-----------------|-------------|-------------|------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|---------|
| FIRST PASS - BALANCE TOTALS BY CHANGING LOSS FACTORS ONLY | | | | | | | | | | | | | |
| Supply position | kWh | Through Network | Grand Total | HIGH SEASON | | | | LOW SEASON | | | | MAX DEM | |
| | | | | P | S | O | Tot | P | S | O | Tot | Tot kWh | KVA |
| TOTAL | 386 412 439 | | 420 890 968 | 19294241 | 46468907 | 42799559 | 105653020 | 53663265.54 | 129365395.1 | 126634553.2 | 313 050 827 | 418 703 846 | 862 110 |
| S0 | 0 | NL0 | 420 890 968 | 17514345 | 45184420 | 42954254 | 105653020 | 52818727.35 | 129130325.9 | 131101773.4 | 313 050 827 | 418 703 846 | 888 710 |
| S1 | 0 | NL1 | 420 890 968 | 17 514 345 | 45 184 420 | 42 954 254 | 105 653 020 | 52 818 727 | 129 130 326 | 131 101 773 | 313 050 827 | 418 703 846 | 888 710 |
| S2 | 0 | NL2 | 420 890 968 | 17514345 | 45184420 | 42954254 | 105653020 | 52818727.35 | 129130325.9 | 131101773.4 | 313 050 827 | 418 703 846 | 888 710 |
| S3 | 40 034 278 | NL3 | 415 301 115 | 17514345 | 45184420 | 42954254 | 105653020 | 52818727.35 | 129130325.9 | 131101773.4 | 313 050 827 | 418 703 846 | 888 710 |
| S4 | 58 296 888 | NL4 | 366 960 306 | 15765355 | 40591183 | 38476494 | 94833031 | 47235039.87 | 114451125.9 | 116737330.8 | 278 423 497 | 373 256 527 | 814 623 |
| S5 | 67 360 493 | NL5 | 300 464 701 | 13195430 | 33796631 | 31295988 | 78288049 | 39197366.46 | 94449873.4 | 95054179.44 | 228 701 419 | 306 989 469 | 704 227 |
| S6 | 220 720 780 | NL6 | 220 720 780 | 10173574 | 25443522 | 23658456 | 59275553 | 29969259.49 | 70813587.4 | 71875382.2 | 172 658 229 | 231 933 782 | 588 508 |
| S7 | 0 | NL7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - |
| S8 | 0 | NL8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - |
| S9 | 0 | NL9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - |

| COMPARISONS | | | | | | | | | | | | |
|---------------------------------------|-------------|------------|----------------|------------|-------------|--------------|--------------|--------------|-------------|-------------|-----------|--|
| Supply position | Grand Total | Low Season | | | | High Season | | | | MAX DEM | | |
| | Total | Sub-tot | Off-peak | Standard | Peak | Sub-tot | Off-peak | Standard | Peak | Tot kWh | KVA | |
| Bulk Purchases | 420890968.1 | 19 294 241 | 46 468 907 | 42 799 559 | 105 653 020 | 53 663 266 | 129 365 395 | 126 634 553 | 313 050 827 | 418 703 846 | 862 110 | |
| Total calculated | 420890968.1 | 17 514 345 | 45 184 420 | 42 954 254 | 105 653 020 | 52 818 727 | 129 130 326 | 131 101 773 | 313 050 827 | 418 703 846 | 888 710 | |
| Difference | (0.00) | ##### | (1 284 487.25) | 154 695.42 | | (844 538.19) | (235 069.17) | 4 467 220.24 | | - | 26 599.32 | |
| % Difference | 0.00% | -9.23% | -2.76% | 0.36% | 0.00% | -1.57% | -0.18% | 3.53% | 0.00% | 0.00% | 3.09% | |
| Total losses | 8.19% | | | | | | | | | | | |
| Adjust losses to balance grand totals | | | | | | | | | | | | |

It is important to note that the losses refer to all losses from the Eskom infeed points right down to the customers connected on the LV network and include non-technical losses.

Table 22

| GEORGE | | | | |
|-----------------|----------------------|----------------------|---------------|-----------------------|
| NETWORK LOSSES | | | | |
| Supply position | Per Network Estimate | Per Network Adjusted | Network Point | Total at Supply Point |
| N0 | 0.00% | 0.00% | S0 | 0.00% |
| N1 | 0.00% | 0.00% | S1 | 0.00% |
| N2 | 0.00% | 0.00% | S2 | 0.00% |
| N3 | 1.50% | 1.33% | S3 | 1.33% |
| N4 | 2.50% | 2.21% | S4 | 3.57% |
| N5 | 3.00% | 2.66% | S5 | 6.32% |
| N6 | 6.00% | 5.31% | S6 | 11.97% |
| N7 | 0.00% | 0.00% | S6 | 11.97% |
| | | | | |
| | | | | |
| | | Total losses | | 8.19% |

These load loss factors will be used in calculating the costs per tariff cost category.

8. RINGFENCING.

Before one can calculate the revenue requirement, a ringfencing study needs to be completed to determine the true costs and revenues and specifically overheads that should be charged to Electricity by the municipality. This means that the trial balance of the municipality and the NERSA D-form figures will be different due to a proper ringfencing process being followed.

Because it is best to do cost functionalization as early as possible in the process, it is done as part of the ringfencing study. In other words, the costs within electricity are identified and then costs are allocated from the various support functions in the municipality towards each of the various functions in electricity.

1.1. Key focus areas

There are a host of practices that affect the accuracy of the cost and revenue of current LG electricity distributors. The following ones will take the key attention:

The focus will firstly be on the larger items and thus the 20% of items that have 80% of the impact.

Services being supplied by Electricity to the rest of the LG where no charge is levied to cover the cost of supplying such service. The services involved here include the following: Electrical maintenance of LG facilities such as water works, sewerage works, buildings, houses etc.

Electricity equipment and other resources being used by the rest of the LG with no charge. This typically includes the following: Heavy vehicles, large machinery, meter readers etc.

Public lighting including streetlights, high mast lights, robots, parking lot lights, etc. This service is considered a LG service and not part of electricity supply although the service is provided by Electricity.

Electricity for own use by LG. Many municipalities have a different set of tariffs for the supply of electricity for use by its own facilities, such as municipal buildings, stores, sewerage supplies, water pumping and sometimes also for staff. If these tariffs are not cost reflective it has the effect of distorting the true electricity supply cost/revenue and thus surplus. In some cases, an overcharge is made to the LG in the tariff and in other cases an undercharge.

Services provided to Electricity by the LG. Typical services include the following: Meter reading and billing, revenue collection, general accounting and administration, telephones, stores, etc. The extent to which this is done, differs significantly between various distributors. The big problem here is the extent of allocation of these costs made to the electricity department:

- Administration and overheads are allocated in terms of turnover instead of more realistic allocation factors, such as the number of staff, the own costs, area of office space etc. The problem with this is that the purchase cost of electricity is close to 70% of the revenue and the tax (surplus) being levied by the LG on electricity makes up a further approximately 20%. This method overstates the true share of the cost by the electricity department by more than 50%.
- Metering and billing costs should typically be allocated according to the share of the cost of the billing system with the number of transactions or actual processing time. Where the revenue is used as a basis, a misallocation is again made.
- A wide range of other methods are being used to allocate the other costs. There are internationally accepted methods that should be used to allocate the costs to ensure a fair burden on the electricity department.

Funding of capital expenditure. Assets in municipalities are mainly funded directly from profits / retained income and various grants received by the municipality. Some assets are still funded from external loans. The capital expenditure does not form part of the income statement, except in subsequent years when it appears as depreciation.

Government Grant funding. A large portion of LG income is from Government Grants. These are used to subsidise charges to residents but also to fund operating and capital costs. This distorts the normal profitability of departments and complicates the fair allocation of costs and revenues. Proposals will however be made in this respect.

There are a host of practices that affect the accuracy of the cost and revenue of current LG electricity distributors. The focus will firstly be on the larger items and thus the 20% of items that have 80% of the impact. It is one matter to develop a generic methodology to be applied. Things are always different because of the following:

- The way the municipality operates and is structured.
- The availability of data in the required format / level of detail.
- The need to focus on big values that have a significant impact.

1.2. Methodology applied

The process starts with an analysis of the Total Municipal Trial Balance for the completed financial year. These are the figures that are used as the basis for the compilation of the Annual Financial statements.

In analysing the George data the following key steps were followed to achieve accurate ringfencing:

- The data was ordered as follows:
 - The head office, support and administrative functions. These are not considered primary service delivery but act as support to the various line functions and as such the line departments should cover their costs.
 - Community services, the economic services trading services. These are considered the primary service delivery to the community and need to carry all costs of the overheads and service departments.
- The various sub-departments and cost categories are grouped to make viewing practical.

This process is illustrated graphically in **Figure 14** below.

Figure 14

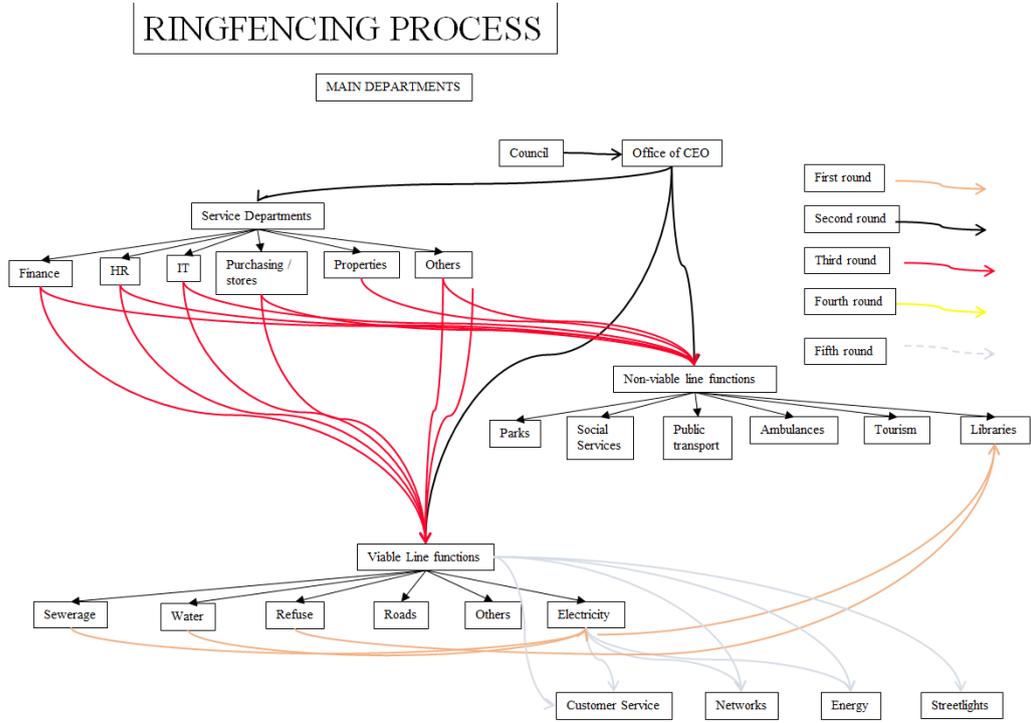


Table 23 shows the trial balance per group before any adjustments.

Final

Table 23

| Row Labels | Sum of Actual Balance Inc Orders | | | | | | | | | | CIVIL ENGINEERING SERVICES TOTAL | | | | | | | | | | ELECTROTECHNICAL SERVICES TOTAL | | | | | | | | | | Grand Total |
|--|----------------------------------|--------------------|--------------------------|---------------------|-------------------|--------------------|---------------------|-------------------------------|----------------|------------------------|----------------------------------|-----------------------|-------------------------------|-----------------|-----------------|----------------------------|---------------------------|------------------|--|--|---------------------------------|--|--|--|--|--|--|--|--|--|-------------|
| | EXECUTIVE AND COUNCIL | FINANCIAL SERVICES | PLANNING AND DEVELOPMENT | PROTECTION SERVICES | HUMAN SETTLEMENTS | COMMUNITY SERVICES | SCIENTIFIC SERVICES | SECRETARIAT CIVIL ENGINEERING | ROADS | STORM WATER AND STORES | WASTE WATER NETWORKS | WASTE WATER TREATMENT | WATER AND SANITATION PROJECTS | DISTRIBUTION | WATER TREATMENT | CIVIL ENGINEERING SERVICES | ELECTROTECHNICAL SERVICES | Grand Total | | | | | | | | | | | | | |
| Biological Assets | -17,519,335.82 | 8,400,881,883.12 | -230,862,771.42 | -112,324,646.59 | -924,392,177.89 | -80,634,429.03 | -218,109,554.75 | -14,861,415.39 | -56,261,614.19 | -22,847,130.92 | -134,027,853.39 | 85,246,510.06 | 6,781,520.30 | 67,617,083.19 | -131,256,288.40 | -189,507,176.74 | -97,536,453.58 | 6,386,263,317.30 | | | | | | | | | | | | | |
| Cash and Cash Equivalents | -31,359,514.05 | 5,016,641,599.05 | -49,747,126.62 | -15,712,323.44 | -560,700,099.22 | -41,332,296.66 | -211,885,692.65 | -7,964,862.23 | -3,576,690.39 | -27,626,139.34 | -443,636,102.14 | -200,566,375.54 | -97,538,916.27 | -199,428,271.27 | -691,566,301.22 | -1,672,130,659.00 | -1,069,388,323.62 | 1,357,016,158.79 | | | | | | | | | | | | | |
| Construction Contracts and Receivables | -79,814,139.83 | 919,319,717.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 919,319,717.00 | | | | | | | | | | | | | | |
| Construction Work-in-Progress | -432,762.87 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 919,319,717.00 | | | | | | | | | | | | | | |
| Current Portion of Non-current Receivables | 2,774,691.16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2,774,691.16 | | | | | | | | | | | | | | |
| Heritage Assets | 4,236,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 4,236,000.00 | | | | | | | | | | | | | | |
| Intangible Assets | -18,919.97 | 770,005.81 | 29,617.05 | 0.00 | 0.00 | 0.00 | 0.00 | -125,314.90 | -1,438,421.80 | -7,380,870.85 | -8,571,225.52 | -8,571,225.52 | -1,854,152.36 | -7,713,628.89 | -4,857,712.04 | -125,314.90 | 614,345.47 | | | | | | | | | | | | | | |
| Inventory | 230,032,942.06 | 144,698,132.49 | -383,611.72 | 17,714.46 | 0.00 | 0.00 | 0.00 | -405,398.36 | -1,420.80 | -6,232,186.74 | -16,371,883.73 | -1,854,152.36 | -7,713,628.89 | -4,857,712.04 | -37,536,365.92 | -53,868,159.13 | 116,770,915.54 | | | | | | | | | | | | | | |
| Investment Property | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 143,744,520.77 | | | | | | | | | | | | | | |
| Non-current Receivables from Non-exchange Transactions | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 525,338.89 | | | | | | | | | | | | | | |
| Operating Leases - Straight Lining | 2,269,779.86 | 2,562,538.69 | 5,526,046.06 | 6,635,950.99 | -53,020,868.01 | 4,333,920.00 | 53,793,213.77 | 1,698,754.44 | 2,427,376.61 | -45,921.05 | 919,405,346.82 | 141,753,924.65 | 132,344,027.30 | 109,816,923.00 | 512,801,465.17 | 1,218,548,913.74 | 266,550,844.44 | | | | | | | | | | | | | | |
| Prepaid Expenses | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 525,338.89 | | | | | | | | | | | | | | |
| Receivables from Non-exchange Transactions | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6,676,707.55 | | | | | | | | | | | | | | |
| Trade and Other Receivables from Exchange Transactions | -14,315,293.51 | 628,420,662.70 | -192,500,200.19 | -116,936,154.42 | -310,843,973.12 | -51,333,367.16 | -92,397,685.70 | -9,107,302.48 | -56,153,293.35 | -89,792,120.25 | 120,397,773.27 | -54,057,786.18 | -31,376,593.53 | -50,040,040.52 | -6,377,144.88 | -435,603,882.69 | 159,408,957.61 | | | | | | | | | | | | | | |
| Trade and Other Receivables from Non-exchange Transactions | 6,781,448.58 | 671,881,805.03 | 7,963,933.13 | 5,783,950.77 | 17,133,373.86 | 8,624,926.21 | 40,215,885.47 | 1,417,414.24 | 1,167,700.24 | 5,064,029.47 | -34,216,871.49 | 102,065,272.21 | 28,068,347.81 | 34,216,871.49 | 102,065,272.21 | 29,768,514.58 | 42,466,743.01 | | | | | | | | | | | | | | |
| VAT Receivable | 26,723,538.32 | 518,274,896.45 | -6,189,511.51 | 33,072,768.83 | 553,899,760.83 | 11,277,946.92 | 236,162,793.89 | 2,946.17 | 3,666,071.18 | 504,945.62 | 45,184,054.66 | 249,779,065.85 | 10,421,111.93 | 346,327,870.88 | 420,110,783.76 | 1,072,954,406.05 | 3,448,880,887.51 | | | | | | | | | | | | | | |
| Bank Purchases | 7,195,256.89 | 31,222,058.07 | 21,651,745.96 | 7,242,769.60 | 413,782,733.84 | 13,199,059.11 | 60,015,072.36 | 1,533,955.68 | 1,727,781.33 | 608,965.10 | 35,889,919.61 | 24,754,318.50 | 10,623,893.24 | 25,150,297.47 | 112,773,795.07 | 46,718,657.08 | 715,566,893.01 | | | | | | | | | | | | | | |
| Contracted Services | -2,464,690.00 | -15,065,803.30 | -33,963,314.94 | 7,707,117.44 | 34,609,403.27 | 7,314,976.99 | 17,135,688.03 | 2,320.00 | 5,532,626.66 | 302,150.00 | 3,749,931.36 | 19,581,797.16 | 16,167,760.40 | -7,929,223.96 | 74,419,207.89 | -85,534,665.38 | 713,910,563.98 | | | | | | | | | | | | | | |
| Debt | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | | | | | |
| Depreciation and Amortisation | 53,396,600.76 | 70,988,678.81 | 6,652,469.99 | 43,867,215.37 | 168,514,869.37 | 16,243,796.69 | 89,269,440.18 | 3,517,598.56 | 17,750,430.33 | 25,374.63 | 30,171,860.54 | 27,139,468.34 | 19,031,184.08 | 29,716,274.54 | 22,620,362.33 | 148,933,236.53 | 64,296,815.13 | | | | | | | | | | | | | | |
| Employee Related Cost | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | | | | | |
| Interest, Dividends and Rent on Land | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | | | | | |
| Inventory Consumed | 540,763.90 | 1,414,369.61 | 1,622,179.16 | 4,269,199.90 | 4,644,762.36 | 3,237,470.96 | 19,659,956.82 | 1,881,084.64 | 98,967.80 | 11,130,552.08 | 9,618,698.13 | 5,269,253.06 | 4,799,022.31 | 167,485,018.38 | 200,489,524.42 | 12,150,173.02 | 247,993,639.15 | | | | | | | | | | | | | | |
| Irrecoverable Debts Written Off | 229,133.11 | 243,894.20 | 2,086,243.48 | 335,791.28 | 1,088,657.54 | 26,541.96 | 162,538.83 | 26,206.44 | 64,312.88 | 21,450.03 | 19,654.83 | 35,126.40 | 17,956.32 | 45,929.04 | 230,644.94 | 4,471,099.93 | 1,583,783.65 | | | | | | | | | | | | | | |
| Operating Leases | 16,260,344.84 | 32,308,666.19 | 11,066,605.56 | 2,116,187.67 | 24,779,147.50 | 1,049,017.08 | 22,641,003.76 | 160,879.52 | 487,312.23 | 1,371,760.39 | 4,341,037.87 | 3,150,729.35 | 2,297,229.35 | 2,275,914.67 | 14,327,456.22 | 5,396,275.60 | 106,677,674.17 | | | | | | | | | | | | | | |
| Operational Cost | 24,563,675.11 | 392,372,165.17 | -80,397,524.17 | -36,019,014.29 | -264,593,054.14 | -35,526,650.60 | -6,207,714.06 | -7,130,065.67 | -22,811,415.16 | -231,743.51 | -100,567,080.40 | 120,659,139.20 | -1,160.00 | -63,286,469.06 | 200,469,545.88 | 206,165,836.92 | 25,365,679.11 | | | | | | | | | | | | | | |
| Remuneration of Councilors | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | | | | | |
| Repairs / Defect Transfers and Subsidies | 15,324,185.99 | 15,814.99 | 201,868.10 | 194,658.08 | 63,784,442.29 | 83,784,442.29 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 158,320.00 | | | | | | | | | | | | | | |
| IL | -22,352,881.87 | -1,271,564,364.71 | -29,584,159.30 | 2,219,716.01 | 370,955,370.85 | -30,445,181.75 | -148,741,900.47 | -2,883,260.33 | 2,231,140.91 | -11,624,074.05 | -83,468,852.42 | -50,815,586.54 | 0.00 | -112,470,865.94 | 208,757,042.38 | -80,648,452.53 | -748,383,968.50 | | | | | | | | | | | | | | |
| Consumer Deposits | 2,387,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2,387,000.00 | | | | | | | | | | | | | | |
| Defined Benefit Obligations | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | | | | | |
| Financial Liabilities | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | | | | | |
| Output Tax | 36,752,143.65 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 36,752,143.65 | | | | | | | | | | | | | | |
| Provision | -9,979,301.26 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -9,979,301.26 | | | | | | | | | | | | | | |
| Provision for Other Payable Exchange Transactions | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | | | | | |
| Trade and Other Payable Non-exchange Transactions | 21,841,940.10 | 1,789,303,185.45 | 32,466,079.96 | 7,711,146.95 | -453,642,954.46 | -30,312,658.20 | -11,279,828.16 | -2,863,260.33 | -3,993,882.17 | -13,129,019.67 | -37,055,409.95 | 87,463,043.27 | -127,267,395.29 | -61,538,179.99 | -146,638,095.93 | -773,870,047.50 | 1,779,242.16 | | | | | | | | | | | | | | |
| VAT Control (Payable) | -17.49 | 0.00 | -88.28 | 0.00 | -6,093.04 | -224.53 | -224.53 | -2,863,260.33 | 5,223,023.08 | 504,945.62 | 143,564,557.53 | 36,676,414.73 | 14,732,823.35 | 14,832,641.29 | 355,105,506.63 | 570,751,915.23 | -777,317,298.31 | | | | | | | | | | | | | | |
| IR | -23,801,119.05 | -509,814,807.94 | -4,339,437.46 | -28,034,357.46 | -447,528,923.50 | -8,685,104.06 | -268,979,154.83 | -714.60 | -2,569,259.43 | -147,227,862.98 | -237,240,848.17 | -14,881,880.12 | -14,881,880.12 | -265,741,229.28 | -269,430,706.51 | -867,229,701.09 | -1,018,102,046.23 | | | | | | | | | | | | | | |
| Agency Services | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | | | | | |
| Fines, Penalties and Forfeits | -4,825,377.81 | -103,306,556.79 | -1,887,852.24 | -1,887,852.24 | -13,882,815.83 | -38,649.02 | -38,649.02 | -5,000.00 | -56,000.00 | -56,000.00 | -5,258,604.16 | -5,258,604.16 | -437,367.31 | -9,068,829.83 | -14,355,433.99 | -1,933,904.55 | -35,343,556.12 | | | | | | | | | | | | | | |
| Interest, Dividend and Rent on Land | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | | | | | |
| Licenses or Permits | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | | | | | | |
| Rent from Fixed Assets | -5,676.60 | -8,603,769.31 | -789,326.88 | -4,624,659.38 | -1,779,414.88 | -25,637.42 | -101,929.41 | -437,367.31 | -3,002,307.64 | -8,970,530.71 | -249,156.77 | -2,491,556.77 | -2,491,556.77 | -10,918,340.47 | -23,138,336.79 | -21,913,151.73 | -2,316,112.19 | | | | | | | | | | | | | | |
| Property Rates by Usage | -28,141.10 | -563,475.22 | -664,388.55 | -2,500,577.35 | -2,296.01 | -376,377.18 | -376,377.18 | -22,912.24 | -22,912.24 | -22,912.24 | -1,263.24 | 0.00 | 0.00 | 0.00 | -29,124.24 | -17,306.85 | -442,574.50 | | | | | | | | | | | | | | |
| Rental from Fixed Assets | 0.00 | -1,197,371.31 | -34,279.16 | -14,622,656.14 | -78,136,064.99 | -14,388,676.73 | -714.60 | -14,388,676.73 | -14,388,676.73 | -176,356,218.82 | -1,263.24 | -1,263.24 | -1,263.24 | -231,538,379.78 | -299,430,706.51 | -408,884,586.60 | -1,081,631,263.07 | | | | | | | | | | | | | | |
| Sales of Goods and Rendering of Services | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | | | | | | | | | | | | | | | | | | | | | | | | | | |

All the main transactions were analysed and any area where costs / revenues were not transacted correctly were identified. These were checked with the municipality and the required adjustments were made. The trial balance was found to represent the true picture accurately. The positive amounts refer to charges to electricity and negative amounts refer to amounts charged by electricity to the various departments and detailed in the fourth column.

Some adjustments have however been made to represent the data more accurately for tariff making purposes as shown in Table 24.

Final

Table 24

| Row Labels | Sum of Actual Balance Inc Orders | | | | | | | | | | CIVIL ENGINEERING SERVICES Total | | ELECTROTECHNIC AL SERVICES Total | | Grand Total | |
|----------------------------|----------------------------------|---------------------|-------------------------------|----------------------------|--------------|------------------------|----------------------|-----------------------|-------------------------------|--------------------|----------------------------------|----------------------------|----------------------------------|-------------|-------------|--|
| | COMMUNITY SERVICES | SCIENTIFIC SERVICES | SECRETARIAT CIVIL ENGINEERING | CIVIL ENGINEERING SERVICES | ROADS | STORM WATER AND STORES | WASTE WATER NETWORKS | WASTE WATER TREATMENT | WATER AND SANITATION PROJECTS | WATER DISTRIBUTION | WATER TREATMENT | ENGINEERING SERVICES Total | ELECTROTECHNIC AL SERVICES Total | Grand Total | | |
| Total Cost | 236 162 794 | 2 948 | 3 665 607 | 504 946 | 45 164 055 | 243 737 086 | - | 10 421 112 | 349 327 871 | 420 110 764 | 1 072 954 409 | 1 002 885 282 | 3 448 980 888 | | | |
| Total Revenue | -296 979 155 | -715 | -2 593 259 | - | -147 227 963 | -237 240 848 | - | -14 981 980 | -266 761 229 | -289 430 707 | -967 226 701 | -1 018 102 046 | -3 366 711 632 | | | |
| Net income | -30 816 361 | 2 235 | 1 072 348 | 504 946 | -102 063 908 | 6 516 238 | - | -4 560 868 | 83 576 642 | 120 680 077 | 105 727 708 | -15 216 764 | 82 289 256 | | | |
| COST ADJUSTMENTS | | | | | | | | | | | | -1.5% | | | | |
| Default | -10 907 453 | 7 136 687 | 17 278 083 | 129 594 | 96 820 149 | -144 085 927 | - | 47 120 709 | -189 645 861 | -189 337 506 | -364 593 074 | -89 215 696 | -426 808 814 | | | |
| Surplus / Deficit | -17 115 168 | -2 320 | -5 532 333 | -102 150 | -3 746 931 | -19 581 797 | -1 160 | -16 167 780 | 759 224 | -30 043 960 | -74 419 208 | 88 534 065 | - | | | |
| | 6 207 715 | 7 139 007 | 22 811 415 | 231 744 | 100 567 080 | -124 504 130 | 1 160 | 63 288 489 | -200 405 085 | -159 293 546 | -280 163 886 | -157 749 762 | -426 608 814 | | | |
| REVENUE ADJUSTMENTS | | | | | | | | | | | | | | | | |
| Transfers capital | 18 994 056 | - | - | - | 12 819 130 | 17 769 281 | - | - | 23 641 771 | - | 31 575 035 | 30 138 338 | 103 376 646 | | | |
| Development charges | 18 994 056 | - | - | - | 9 837 079 | 8 798 751 | - | - | 12 939 205 | - | 31 575 035 | 8 267 847 | 58 839 937 | | | |
| | | | | | 2 892 051 | 8 970 531 | - | - | 10 702 666 | - | - | 21 870 491 | 44 539 709 | | | |
| New Total Cost | 225 255 341 | 7 139 636 | 20 944 680 | 634 539 | 141 984 204 | 99 671 158 | - | 57 541 921 | 149 662 910 | 230 773 278 | 708 371 335 | 913 669 585 | 3 022 372 074 | | | |
| New Total Revenue | -247 995 089 | -715 | -2 593 259 | - | -134 408 833 | -219 471 567 | - | -14 981 980 | -242 109 458 | -289 430 707 | -935 651 696 | -987 963 708 | -3 263 334 986 | | | |
| New net income | -22 739 758 | 7 138 921 | 18 351 430 | 634 539 | 7 575 371 | -119 800 408 | - | 42 559 940 | -92 427 448 | -68 657 429 | -227 280 331 | -74 294 123 | -240 982 912 | | | |

The adjustment done are as follows:

- Remove the capital grant income as this must cover capital costs not operating costs.
- The same in respect of Capital charges.
- Remove the allocations of Surplus and Default as these are internal allocations to meet with the MFMA but does represent a true cost of revenue.

The total sales figures are shown in Table 25.

Table 25

| Fin_Year | Item | Item Description | Percentage | Actual Balance inc Ord |
|----------|------------------------|--------------------------|------------|------------------------|
| 2023 | Non-government Housing | Revenue:Exchange Revenue | 108 | -4 693 788.75 |
| 2023 | Prepaid | Revenue:Exchange Revenue | 214 | -62 326.35 |
| 2023 | Prepaid | Revenue:Exchange Revenue | 105 | -450 287 905.79 |
| 2023 | Street Lighting | Revenue:Exchange Revenue | 65 | -661 531.14 |
| 2023 | Prepaid | Revenue:Exchange Revenue | 80 | -24 643 636.44 |
| 2023 | Conventional | Revenue:Exchange Revenue | 102 | -475 425 076.61 |
| 2023 | Conventional | Revenue:Exchange Revenue | No Budget | 45 720.38 |
| 2023 | Availability Charges | Revenue:Exchange Revenue | No Budget | -97.20 |
| 2023 | Prepaid | Revenue:Exchange Revenue | 70 | 21 575 568.43 |
| 2023 | Availability Charges | Revenue:Non-exchange Rev | 97 | -2 925 450.78 |
| | | Totals | | -937 078 524.25 |

1.3. Overhead cost allocation

The next step is to calculate the fair portion of the municipal overheads that should be covered by the electricity department. It was previously stated that no overhead costs have been allocated to Electricity. The next section does a calculation of a fair amount which should be allocated to all the line functions in the municipality by overhead and service departments. The first step is to calculate the ratios of various possible allocation factors using actual data.

Various ratios were analysed. The problem found was that in many cases the data required was inadequate in terms of not reflecting the required departments or in many cases were all grouped together. It is however believed that these ratios provide a fair means of allocating overhead costs.

The table below then shows the following:

ALLOCATER DATA.

- This refers to the various allocation bases which are to be used.
- The first line shows the data used
- The second line shows the ratio which will be applied in allocating the service department costs to that line department.
- This is calculated by dividing the line department units by the total units of all line departments.

ALLOCATION TO LINE DEPARTMENTS

- This shows the amounts allocated from each service department to the various line departments.
- The first column shows the name of the Service department.
- The second column shows the basis for allocation of the cost. Various basis were considered and inputs from staff was obtained at the workshops. Unfortunately, only those where data was provided could be used.
- The third column shows the percentage of the service department costs to be allocated on the basis.
- The cells in yellow shows the amounts allocated from the service department as a ().
- The other cells show the amounts allocated to each line department.
- The last column shows that the net amounts sum to zero.

NEW NET INCOME

- This shows the new costs / revenue per department after the cost allocations.
- The subsequent new net income.

The factors used and the % of each is shown in Table 26.

Table 26

| ALLOCATION TO LINE DEPARTMENTS | | |
|---------------------------------------|---------------------------------|------|
| EXECUTIVE AND COUNCIL Total | Total cost (exc purchases) | 100% |
| ACQUISITIONS/ DEMAND MANAGEMENT | Materials | 33% |
| ACQUISITIONS/ DEMAND MANAGEMENT | Contracts | 33% |
| ACQUISITIONS/ DEMAND MANAGEMENT | Acquisitions | 33% |
| BUDGETING | Total cost (exc purchases) | 100% |
| BILLING AND CLIENT SERVICES | Number of bills | 50% |
| BILLING AND CLIENT SERVICES | Number of meter readings | 50% |
| CREDIT CONTROL | | 50% |
| CREDITORS AND CHEQUE ADMINISTRAT | Materials | 33% |
| CREDITORS AND CHEQUE ADMINISTRAT | Contracts | 33% |
| CREDITORS AND CHEQUE ADMINISTRAT | Acquisitions | 33% |
| LOGISTICS (STORES) | Inventory Consumed | 100% |
| PAYROLL ADMINISTRATION | Employee Related Cost | 50% |
| PAYROLL ADMINISTRATION | Staff numbers | 50% |
| RATES AND TAXES | NA | 0% |
| REST OF FINANCE | Total cost (exc purchases) | 100% |
| ICT SYSTEMS | Aantal SAMRAS users per depart. | 100% |
| IT SERVICES NETWORK | Aantal IP adresse per depart. | 100% |
| HUMAN RESOURCE MANAGEMENT | Employee Related Cost | 50% |
| HUMAN RESOURCE MANAGEMENT | Staff numbers | 50% |
| REST OF CORPORATE | Total cost (exc purchases) | 100% |
| PLANNING AND DEVELOPMENT Total | Total cost (exc purchases) | 100% |
| PROTECTION SERVICES Total | Total cost (exc purchases) | 100% |
| HUMAN SETTLEMENTS Total | Total cost (exc purchases) | 100% |
| MECHANICAL ENGINEERING SERVICES | Total cost (exc purchases) | 100% |
| | | |

The actual allocations from the various head office / support departments to the line departments are shown in Table 27.

Table 27

| Row Labels | EXECUTIVE AND COUNCIL Total | FINANCIAL SERVICES/ ACQUISITIONS/ DEMAND MANAGEMENT | BILLING AND CLIENT SERVICES | BUDGETING | CREDIT CONTROL | CHEQUE ADMINISTRATION | ICT SYSTEMS | IT SERVICES NETWORK | LOGISTICS (STORES) | PAYROLL ADMINISTRATION | RATES AND TAXES | SECRETARIAT FINANCIAL SERVICES | VALUATIONS | FINANCIAL SERVICES Total | CORPORATE SERVICES Total | PLANNING AND DEVELOPMENT Total | PROTECTION SERVICES Total | HUMAN SETTLEMENTS Total | |
|--|-----------------------------|---|-----------------------------|------------|----------------|-----------------------|-------------|---------------------|--------------------|------------------------|-----------------|--------------------------------|-------------|--------------------------|--------------------------|--------------------------------|---------------------------|-------------------------|--|
| Sum of Actual Balance inc Orders | | | | | | | | | | | | | | | | | | | |
| New Total Cost | 105 995 189 | 9 428 933 | 24 159 239 | 4 968 197 | 18 171 028 | 4 839 396 | 4 430 596 | 4 430 596 | 20 356 518 | 1 924 728 | 3 824 191 | 3 824 191 | 13 323 486 | 140 888 335 | 107 170 328 | 61 304 666 | 723 438 462 | 36 489 824 | |
| New Total Revenue | 23 991 119 | 714 226 | 19 426 669 | - | 8 518 377 | 4 892 | 4 892 | - | - | - | - | - | -759 541 | 598 814 888 | 4 338 437 | 29 034 257 | 447 528 924 | 9 895 104 | |
| New net income | 81 604 070 | 8 715 727 | 4 744 341 | 4 968 197 | 9 651 051 | 4 833 904 | 4 833 904 | 4 430 596 | 20 356 518 | 1 924 728 | 3 824 191 | 3 824 191 | 12 568 945 | 458 808 553 | 102 839 891 | 32 359 409 | 275 969 538 | 26 794 519 | |
| ALLOCATION TO LINE DEPARTMENTS | | | | | | | | | | | | | | | | | | | |
| EXECUTIVE AND COUNCIL Total | -81 604 070 | -8 715 727 | -2 372 170 | -4 968 197 | -9 651 051 | -4 833 904 | -4 430 596 | -4 430 596 | -20 356 518 | -1 924 728 | -3 824 191 | -3 824 191 | -12 568 945 | -20 827 288 | -134 724 964 | -32 359 408 | -275 969 538 | -26 794 519 | |
| ACQUISITIONS/ DEMAND MANAGEMENT | 100% | 2 895 242 | | | | | | | | | | | | 2 895 242 | | | | | |
| ACQUISITIONS/ DEMAND MANAGEMENT Materials | 33% | | | | | | | | | | | | | | | | | | |
| ACQUISITIONS/ DEMAND MANAGEMENT Contracts | 33% | | | | | | | | | | | | | | | | | | |
| ACQUISITIONS/ DEMAND MANAGEMENT Acquisitions | 33% | | | | | | | | | | | | | | | | | | |
| BUDGETING | 100% | 2 895 242 | | 4 968 197 | | | | | | | | | | | | | | | |
| BILLING AND CLIENT SERVICES | 50% | | | | 4 825 026 | | | | | | | | | | | | | | |
| BILLING AND CLIENT SERVICES | 50% | | | | 4 825 026 | | | | | | | | | | | | | | |
| BILLING AND CLIENT SERVICES | 50% | | | | 4 825 026 | | | | | | | | | | | | | | |
| CREDITORS AND CHEQUE ADMINISTRATION | 33% | | | | | -1 544 835 | | | | | | | | | | | | | |
| CREDITORS AND CHEQUE ADMINISTRATION | 33% | | | | | -1 544 835 | | | | | | | | | | | | | |
| CREDITORS AND CHEQUE ADMINISTRATION | 33% | | | | | -1 544 835 | | | | | | | | | | | | | |
| LOGISTICS (STORES) | 100% | | | | | | | | | 1 924 728 | | | | | | | | | |
| LOGISTICS (STORES) | 100% | | | | | | | | | 1 924 728 | | | | | | | | | |
| PAYROLL ADMINISTRATION | 50% | | | | | | | | | | -1 912 096 | | | | | | | | |
| PAYROLL ADMINISTRATION | 50% | | | | | | | | | | -1 912 096 | | | | | | | | |
| RATES AND TAXES | 0% | | | | | | | | | | | | | | | | | | |
| RATES AND TAXES | 0% | | | | | | | | | | | | | | | | | | |
| REST OF FINANCE | 100% | | | | | | | | | | | | | | | | | | |
| REST OF FINANCE | 100% | | | | | | | | | | | | | | | | | | |
| IT SERVICES NETWORK | 100% | | | | | | | 4 430 596 | | | | | | | | | | | |
| IT SERVICES NETWORK | 100% | | | | | | | 4 430 596 | | | | | | | | | | | |
| HUMAN RESOURCE MANAGEMENT | 50% | | | | | | | | | | | | | | | | | | |
| HUMAN RESOURCE MANAGEMENT | 50% | | | | | | | | | | | | | | | | | | |
| HUMAN RESOURCE MANAGEMENT | 50% | | | | | | | | | | | | | | | | | | |
| PLANNING AND DEVELOPMENT | 100% | | | | | | | | | | | | | | | | | | |
| PLANNING AND DEVELOPMENT | 100% | | | | | | | | | | | | | | | | | | |
| PROTECTION SERVICES | 100% | | | | | | | | | | | | | | | | | | |
| PROTECTION SERVICES | 100% | | | | | | | | | | | | | | | | | | |
| HUMAN SETTLEMENTS | 100% | | | | | | | | | | | | | | | | | | |
| HUMAN SETTLEMENTS | 100% | | | | | | | | | | | | | | | | | | |
| MECHANICAL ENGINEERING SERVICES | 100% | | | | | | | | | | | | | | | | | | |
| MECHANICAL ENGINEERING SERVICES | 100% | | | | | | | | | | | | | | | | | | |
| NEW COST AFTER ALLOCATION | 23 991 120 | 714 226 | 21 178 069 | - | 8 518 377 | 4 892 | - | - | - | - | - | 3 824 191 | 759 541 | 161 515 833 | -27 545 666 | 29 034 257 | 447 528 924 | 9 895 104 | |
| NEW REVENUE | 23 991 119 | 714 226 | 19 426 669 | - | 8 518 377 | 4 892 | - | - | - | - | - | -759 541 | -3 891 | 598 814 888 | 4 338 437 | 29 034 257 | 447 528 924 | 9 895 104 | |
| NEW NET INCOME | - | - | 2 372 170 | - | - | -9 | - | - | - | - | - | 468 410 120 | 4 013 315 | -438 289 055 | -31 885 184 | - | - | - | |

The following should also be noted:

- The Interest, Dividend and Rent on Land is allocated out to line departments.
- The rates and taxes revenue and related costs are not allocated to line departments as this is not a service to the line functions. Obviously in terms of the MFMA a portion of this net revenue will be allocated to the non-viable lien departments.

Table 28 shows the following:

- Firstly the possible allocation factors per line department as calculated from available data.
- The actual allocation to each line department.
- The last line is the allocation of the mechanical services in electrotechnical to all line departments.
- Then the allocation of the technical services support functions to the line departments in technical services.

The allocation ratios and the costs being allocated to each line department is shown Table 28 below.

Table 28

Sum of Actual Balance inc Orders

| Row Labels | COMMUNITY SERVICES Total | | | CIVIL ENGINEERING SERVICES | | | | | | CIVIL ENGINEERING SERVICES Total | | ELECTROTECHNICAL SERVICES Total | Grand Total |
|--|--------------------------|-------------------------------|----------------------|----------------------------|----------------------|-----------------------|-------------------------------|----------------------|----------------------|----------------------------------|----------------------|---------------------------------|----------------------|
| | SCIENTIFIC SERVICES | SECRETARIAT CIVIL ENGINEERING | ROADS | STORM WATER AND STORES | WASTE WATER NETWORKS | WASTE WATER TREATMENT | WATER AND SANITATION PROJECTS | WATER DISTRIBUTION | WATER TREATMENT | | | | |
| New Total Cost | 225 255 341 | 7 139 636 | 20 944 690 | 634 539 | 141 984 204 | 99 671 158 | - | 57 541 821 | 149 682 010 | 230 773 278 | 708 371 335 | 913 689 585 | 3 022 372 074 |
| ALLOCATOR DATA | | | | | | | | | | | | | |
| Allocation factors to all Line departments | | | | | | | | | | | | | |
| Total cost (purchases) | 225 255 341 | 7 139 636 | 20 944 690 | 634 539 | 141 984 204 | 99 671 158 | - | 57 541 821 | 149 682 010 | 230 773 278 | 708 371 335 | 198 103 492 | 1 131 730 168 |
| Ratio | 19.90% | 0.63% | 1.85% | 0.06% | 12.55% | 8.81% | 0.00% | 5.08% | 13.23% | 20.39% | 62.59% | 17.50% | 100% |
| Interest, Dividends and Rent on Land | 9 293 647 | - | 3 942 | - | 6 144 397 | 4 271 543 | - | 9 759 696 | 5 014 473 | 2 557 590 | 27 751 641 | 10 126 084 | 47 171 372 |
| Ratio | 19.70% | 0.00% | 0.01% | 0.00% | 13.03% | 9.06% | 0.00% | 20.69% | 10.63% | 5.42% | 58.83% | 21.47% | 100% |
| Trade and Other Payable Exchange Transact | -111 697 830 | -2 983 260 | -2 983 882 | -12 129 020 | -237 050 410 | -87 492 001 | - | -127 203 786 | -61 528 180 | -146 438 467 | -577 699 007 | -773 870 047 | -1 563 266 885 |
| Ratio | -7.15% | -0.18% | -0.19% | -0.78% | -16.16% | -5.80% | 0.00% | -8.14% | -3.94% | -9.37% | -43.35% | -49.50% | -100% |
| Service charge | -154 316 401 | - | - | - | - | -175 355 219 | - | - | -231 539 380 | - | -406 894 569 | -937 078 524 | -1 496 289 524 |
| Ratio | -10.30% | 0.00% | 0.00% | 0.00% | 0.00% | -11.70% | 0.00% | 0.00% | -15.45% | 0.00% | -27.16% | -62.54% | -100% |
| Number of customers / bills / vending | | | | 60 745 | 60 745 | 60 745 | | 60 745 | 60 745 | 60 745 | 27 186 | 60 745 | 182 234 |
| Ratio | 0.00% | 0.00% | 0.00% | 33.33% | 0.00% | 33.33% | 0.00% | 33.33% | 0.00% | 33.33% | 33.33% | 33.33% | 100% |
| Number of meter readings /y | -53 622 | -53 622 | -53 622 | 7 122 | -53 622 | 7 122 | -53 622 | 7 122 | -53 622 | 7 122 | 7 122 | 7 122 | -246 745 |
| Ratio | -21.73% | -21.73% | -21.73% | 2.89% | -21.73% | 2.89% | -21.73% | 2.89% | -21.73% | 2.89% | 2.89% | 2.89% | -100% |
| Employee Related Cost | 89 759 240 | 3 517 510 | 17 758 480 | - | 30 171 161 | 27 119 498 | - | 19 031 184 | 29 719 235 | 22 620 282 | 149 837 330 | 94 296 815 | 333 993 365 |
| Ratio | 26.87% | 1.05% | 5.32% | 0.00% | 9.03% | 8.12% | 0.00% | 5.70% | 8.90% | 6.77% | 44.89% | 28.23% | 100% |
| Staff numbers | 234 | 36 | 18 | 8 | 109 | 66 | 2 | 53 | 79 | 39 | 410 | 174 | 818 |
| Ratio | 28.61% | 4.40% | 2.20% | 0.98% | 13.33% | 8.07% | 0.24% | 6.48% | 9.66% | 4.77% | 50.12% | 21.27% | 100% |
| Asset valued Property, Plant and Equipment | 53 793 214 | 1 098 734 | 2 427 371 | -85 921 | 319 406 350 | 141 725 934 | - | 132 244 027 | 108 916 924 | 512 801 495 | 1 218 534 914 | 260 550 584 | 1 532 878 712 |
| Ratio | 3.51% | 0.07% | 0.16% | -0.01% | 20.84% | 9.25% | 0.00% | 8.63% | 7.11% | 33.45% | 79.49% | 17.00% | 100% |
| Depreciation and Amortisation | 14 666 801 | - | 803 893 | 25 974 | 57 254 955 | 19 820 070 | - | 9 691 676 | 16 692 448 | 21 363 485 | 125 658 701 | 27 439 540 | 167 764 841 |
| Ratio | 8.74% | 0.00% | 0.48% | 0.02% | 34.13% | 11.82% | 0.00% | 5.78% | 10.96% | 13.95% | 74.96% | 16.36% | 100% |
| Inventory Consumed | 19 059 196 | 1 881 085 | 98 988 | - | 11 130 552 | 9 651 600 | - | 5 269 253 | 4 679 022 | 167 485 018 | 200 495 524 | 12 510 173 | 232 064 893 |
| Ratio | 8.21% | 0.81% | 0.04% | 0.00% | 4.80% | 4.16% | 0.00% | 2.27% | 2.15% | 72.17% | 86.40% | 5.39% | 100% |
| Contracted Services | 60 015 072 | 1 533 956 | 1 727 761 | 608 565 | 35 889 920 | 24 754 319 | - | 10 623 883 | 23 510 287 | 14 125 078 | 112 773 789 | 46 718 057 | 219 506 919 |
| Ratio | 27.34% | 0.70% | 0.79% | 0.28% | 16.35% | 11.28% | 0.00% | 4.84% | 10.71% | 6.43% | 51.38% | 21.28% | 100% |
| Aantal SAMRAS users per depart. | 74 | - | - | - | 5 | 2 | 13 | - | 1 | 10 | 31 | 100 | 205 |
| Ratio | 36% | 0% | 0% | 0% | 2% | 1% | 6% | 0% | 0% | 5% | 15% | 48% | 100% |
| Aantal IP address per depart. | 13 | - | - | - | 3 | 2 | 4 | - | 2 | 2 | 15 | 33 | 59 |
| Ratio | 22% | 0% | 0% | 0% | 5% | 3% | 7% | 0% | 3% | 3% | 22% | 56% | 100% |
| Aquisitions | 39 259 894 | 684 302 | 683 624 | - | 203 794 244 | 84 898 850 | 300 458 103 | 36 027 673 | 77 184 697 | - | 703 721 483 | 130 869 796 | 873 848 183 |
| Ratio | 4% | 0% | 0% | 0% | 23% | 10% | 34% | 4% | 9% | 0% | 81% | 15% | 100% |
| ALLOCATION TO LINE DEPAR | 112 802 531 | 4 916 312 | 10 473 269 | 487 222 | 66 851 380 | 44 500 975 | 4 086 258 | 27 854 550 | 61 952 887 | 99 462 306 | 317 637 799 | 98 422 306 | -7 |
| EXECUTIVE AND COUNCIL Total | 16 242 171 | 514 808 | 1 510 229 | 45 754 | 10 237 856 | 7 186 848 | - | 4 149 087 | 10 792 911 | 16 640 045 | 51 077 538 | 14 284 370 | 142 847 078 |
| ACQUISITIONS/ DEMAND MANAGEMENT | 130 526 | 2 209 | 2 306 | - | 6 775 545 | 282 259 | 998 919 | 119 780 | 256 612 | - | 2 339 630 | 435 087 | -0 |
| ACQUISITIONS/ DEMAND MANAGEMENT (SCM) | | | | | | | | | | | | | |
| ACQUISITIONS/ DEMAND MANAGEMENT (SCM) | | | | | | | | | | | | | |
| BUCKETING | 992 830 | 31 468 | 92 315 | 2 797 | 625 806 | 439 308 | - | 253 620 | 659 735 | 1 017 151 | 3 122 201 | 873 156 | -1 |
| BILLING AND CLIENT SERVICES | 515 518 | 515 518 | 515 518 | -68 473 | 515 518 | -68 473 | 515 518 | 515 518 | -68 473 | 515 518 | -68 473 | -68 473 | -0 |
| BILLING AND CLIENT SERVICES | | | | | | | | | | | | | |
| CREDIT CONTROL | 1 063 317 | - | - | - | 245 381 | 163 587 | 327 175 | - | 163 587 | 163 587 | 1 063 317 | 2 699 191 | -0 |
| CREDITORS AND CHEQUE ADMINISTRATION | 422 916 | 10 794 | 12 158 | 4 282 | 252 552 | 174 192 | - | 74 759 | 165 438 | 99 996 | 793 571 | 328 747 | -0 |
| CREDITORS AND CHEQUE ADMINISTRATION | | | | | | | | | | | | | |
| CREDITORS AND CHEQUE ADMINISTRATION | | | | | | | | | | | | | |
| LOGISTICS (STORES) | 158 075 | 15 602 | 821 | - | 92 316 | 80 050 | - | 43 703 | 41 296 | 1 389 107 | 1 662 894 | 103 758 | -1 |
| PAYROLL ADMINISTRATION | 513 867 | 20 138 | 101 666 | - | 172 728 | 155 258 | - | 108 953 | 170 141 | 129 500 | 858 384 | 539 845 | -0 |
| PAYROLL ADMINISTRATION | 546 981 | 84 151 | 42 075 | 18 700 | 254 790 | 154 277 | 4 675 | 123 889 | 184 664 | 91 163 | 956 385 | 406 729 | -0 |
| RATES AND TAXES | - | - | - | - | - | - | - | - | - | - | - | - | - |
| REST OF FINANCE | -15 265 961 | -483 866 | -1 419 459 | -43 004 | -9 622 526 | -6 754 894 | - | -3 899 713 | -10 144 220 | -15 639 921 | -48 007 603 | -13 425 831 | -1 |
| ICT SYSTEMS | 976 233 | - | - | - | 225 285 | 150 190 | 300 380 | - | 150 190 | 150 190 | 976 233 | 2 478 131 | -1 |
| IT SERVICES NETWORK | 10 596 987 | - | - | - | 716 013 | 286 405 | 1 861 633 | - | 143 203 | 1 432 025 | 4 439 278 | 14 320 252 | -1 |
| HUMAN RESOURCE MANAGEMENT | 8 569 980 | 335 804 | 1 695 336 | - | 2 880 328 | 2 588 997 | - | 1 816 836 | 2 837 185 | 2 159 472 | 14 313 958 | 9 002 165 | -0 |
| HUMAN RESOURCE MANAGEMENT | 9 121 166 | 1 403 256 | 701 628 | 311 835 | 4 248 748 | 2 572 637 | 77 959 | 2 065 905 | 3 079 368 | 1 520 194 | 15 981 531 | 6 782 406 | -0 |
| REST OF CORPORATE | 14 122 575 | 447 626 | 1 313 145 | 39 783 | 8 901 821 | 6 248 968 | - | 3 607 633 | 9 384 441 | 14 468 527 | 44 411 944 | 12 420 267 | -0 |
| PLANNING AND DEVELOPMENT Total | 1 135 271 | 23 188 | 51 228 | -1 813 | 6 740 863 | 2 991 034 | - | 2 790 924 | 2 298 621 | 10 822 342 | 25 716 386 | 5 498 751 | -0 |
| PROTECTION SERVICES Total | 54 916 003 | 1 740 604 | 5 106 199 | 154 697 | 34 614 961 | 24 299 276 | - | 14 028 377 | 36 491 644 | 56 261 245 | 172 697 002 | 48 296 533 | -1 |
| HUMAN SETTLEMENTS Total | 5 333 081 | 169 036 | 495 880 | 15 023 | 3 361 577 | 2 359 786 | - | 1 362 344 | 3 543 828 | 5 463 722 | 16 771 197 | 4 690 241 | -1 |
| MECHANICAL ENGINEERING SERVICES | 2 712 594 | 85 978 | 252 222 | 7 641 | 1 709 818 | 1 200 271 | - | 692 936 | 1 802 517 | 2 779 043 | 8 530 426 | -11 243 020 | -0 |
| NEW COST AFTER ALLOCATION | 338 057 872 | 12 055 948 | 31 417 959 | 1 121 761 | 208 835 584 | 144 181 133 | 4 086 258 | 85 396 371 | 211 634 688 | 330 235 584 | 1 028 009 134 | 1 012 991 891 | 3 022 372 067 |
| NEW REVENUE | 247 985 099 | 715 | 2 593 259 | - | 134 408 833 | 219 471 567 | - | 14 981 980 | 242 109 458 | 299 430 707 | 935 651 666 | 987 963 708 | 3 263 334 986 |
| NEW NET INCOME | 90 072 773 | 12 055 233 | 28 824 700 | 1 121 761 | 74 426 751 | -75 290 434 | 4 086 258 | 70 414 391 | -30 474 760 | 30 804 678 | 90 357 468 | 24 126 183 | -240 962 919 |
| Allocation factors of Tech Services Overheads | | | | | | | | | | | | | |
| Own cost | | 12 055 948 | 31 417 959 | 1 121 761 | 208 835 584 | 144 181 133 | 4 086 258 | 85 396 371 | 211 634 688 | 330 235 584 | 1 028 009 134 | | |
| Revenue | | -715 | -2 593 259 | - | -134 408 833 | -219 471 567 | - | -14 981 980 | -242 109 458 | -299 430 707 | -935 651 666 | | |
| Net income | | 12 055 233 | 28 824 700 | 1 121 761 | 74 426 751 | -75 290 434 | 4 086 258 | 70 414 391 | -30 474 760 | 30 804 678 | 90 357 468 | | |
| According to own cost ex Bulk | | | | 1 121 761 | 208 835 584 | 144 181 133 | 4 086 258 | 85 396 371 | 211 634 688 | 330 235 584 | 985 491 388 | | |
| Ratio | | | | 0.1% | 21.2% | 14.6% | 0.4% | 8.7% | 21.5% | 33.5% | | | |
| Actual allocation | | 12 055 232 93 | 28 824 699 71 | 46 532 65 | 8 682 870 83 | 5 980 889 41 | 189 505 22 | 3 542 393 09 | 8 778 983 03 | 13 698 758 40 | | | |
| TOTAL ALLOCATIONS | 112 802 531.29 | 7 138 921.24 | 18 351 430.28 | 533 754.83 | 75 514 251.03 | 50 490 864.14 | 4 255 762.81 | 31 396 943.22 | 70 731 670.48 | 113 161 064. | | | |

The next step is to allocate the costs to the various COS functions within electricity. The allocations factors to be used are shown in Table 29.

Table 29

| RINGFENCING IN ELECTRICITY | Energy | HV | HV/MV | MV | <V/LV | LV | Customer services | Streetlights | TOTAL |
|----------------------------|------------|-------------|-------------|-------------|-------------|-------------|-------------------|--------------|---------------|
| Network asset values | 22 050 000 | 311 430 790 | 565 930 346 | 216 252 145 | 727 938 370 | 588 751 160 | 248 430 200 | 77 213 044 | 2 757 996 054 |
| | 0.8% | 11.3% | 20.5% | 7.8% | 26.4% | 21.3% | 9.0% | 2.8% | 100.0% |
| Network depreciation' | 1 102 500 | 6 228 616 | 11 318 607 | 4 805 603 | 18 198 459 | 16 821 462 | 17 292 887 | 5 147 536 | 80 915 670 |
| | 1.4% | 7.7% | 14.0% | 5.9% | 22.5% | 20.8% | 21.4% | 6.4% | 100.0% |
| HR numbers | 3% | 7% | 9% | 12% | 12% | 23% | 20% | 14% | 100% |
| | 3.0% | 7.2% | 9.0% | 12.1% | 12.1% | 22.5% | 19.6% | 14.4% | 100.0% |
| Sub-tot excl purch | 4 092 032 | 13 177 266 | 19 457 937 | 17 385 578 | 27 270 652 | 37 320 277 | 58 694 067 | 19 146 890 | 196 544 699 |
| | 2.1% | 6.7% | 9.9% | 8.8% | 13.9% | 19.0% | 29.9% | 9.7% | 100.0% |

The actual allocations are shown in Table 30.

Table 30

| ELECTRICITY SUMMARY | Allocation | Energy | HV | HV/MV | MV | <V/LV | LV | Customer services | Streetlights | 5.7 - Electro-Technical Services Total |
|--|------------------|-----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|--|
| COSTS | | 721 739 716.60 | 19 880 461.60 | 29 356 072.19 | 26 229 516.70 | 41 143 067.86 | 56 304 875.91 | 88 551 383.59 | 28 886 796.72 | 1 012 091 891.18 |
| Bulk Purchases | Energy | 715 566 093.01 | | | | | | | | 715 566 093.01 |
| Contracted Services | CRC value | 159 095.94 | 2 247 046.42 | 4 083 320.60 | 1 560 310.10 | 5 252 246.61 | 4 247 978.13 | 1 792 482.34 | 557 110.28 | 19 899 590.42 |
| Prepaid Electricity Vendors | Customer service | | | | | | | 26 818 466.66 | | 26 818 466.66 |
| Depreciation and Amortisation | CRC depreciation | 373 871.87 | 2 112 203.37 | 3 838 284.54 | 1 629 641.59 | 6 171 330.56 | 5 704 373.06 | 5 864 239.30 | 1 745 595.46 | 27 439 539.74 |
| Employee Related Cost | Staff numbers | 2 873 643.82 | 6 752 202.60 | 8 500 479.32 | 11 418 862.50 | 11 398 213.57 | 21 220 224.89 | 18 525 538.53 | 13 607 649.89 | 94 296 815.13 |
| Interest, Dividends and Rent on Land | CRC depreciation | 137 970.89 | 779 471.81 | 1 416 451.96 | 601 390.80 | 2 277 421.90 | 2 105 099.38 | 2 164 095.22 | 644 181.56 | 10 126 083.52 |
| Inventory Consumed | Staff numbers | 381 240.67 | 895 801.44 | 1 127 741.87 | 1 514 918.03 | 1 512 178.58 | 2 815 245.51 | 2 457 746.77 | 1 805 300.15 | 12 510 173.02 |
| Operating Leases | CRC depreciation | 1 760.04 | 4 135.57 | 5 206.34 | 6 993.79 | 6 981.14 | 12 996.89 | 11 346.46 | 8 334.37 | 57 754.59 |
| Operational Cost | Staff numbers | 164 448.54 | 386 404.84 | 486 452.58 | 653 461.40 | 652 279.74 | 1 214 358.95 | 1 060 151.52 | 778 718.02 | 5 396 275.60 |
| Irrecoverable Debts Written Off | Total cost | 32 453.85 | 104 508.74 | 154 320.67 | 137 884.81 | 216 283.21 | 295 986.67 | 465 501.94 | 151 853.75 | 1 558 793.65 |
| Allocations | Total cost | 2 049 137.96 | 6 598 686.81 | 9 743 814.31 | 8 706 053.68 | 13 656 132.56 | 18 688 612.43 | 29 391 814.85 | 9 588 053.25 | 98 422 305.84 |
| INCOME | | | | | | | | | | 987 963 708.18 |
| Fines, Penalties and Forfeits | | | | | | | | | | 314 848.04 |
| Interest, Dividend and Rent on Land | | | | | | | | | | 1 933 504.55 |
| Operational Revenue | | | | | | | | | | 21 913 151.73 |
| Rental from Fixed Assets | | | | | | | | | | 17 306.85 |
| Sales of Goods and Rendering of Services | | | | | | | | | | 249 834.90 |
| Service Charges | | | | | | | | | | 937 078 524.25 |
| Transfers and Subsidies | | | | | | | | | | 56 594 875.91 |
| Adjustments | | | | | | | | | | 30 138 338.05 |
| NET INCOME | - | 721 739 716.60 | 19 880 461.60 | 29 356 072.19 | 26 229 516.70 | 41 143 067.86 | 56 304 875.91 | 88 551 383.59 | 28 886 796.72 | 24 128 183.00 |

9. REVENUE REQUIREMENT.

This section calculates the revenue requirement for George using the NERSA method. The items are then grouped as per the NERSA method. The calculation of the revenue requirement is shown in Table 31.

Table 31

| NERSA RR | Energy | HV | HV/MV | MV | <V/LV | LV | Customer services | Streetlights | GRAND TOTAL |
|--------------------------------|-------------|------------|------------|------------|------------|------------|-------------------|--------------|---------------|
| Bulk | 715 566 093 | - | - | - | - | - | - | - | 715 566 093 |
| Operating cost | 1 873 199 | 5 338 066 | 7 347 430 | 7 907 501 | 9 740 580 | 15 369 080 | 39 277 848 | 8 772 083 | 95 625 786 |
| Shared cost | 2 049 138 | 6 598 687 | 9 743 814 | 8 706 054 | 13 656 133 | 18 688 612 | 29 391 815 | 9 588 053 | 98 422 306 |
| Depreciation | 373 872 | 2 112 203 | 3 838 285 | 1 629 642 | 6 171 331 | 5 704 373 | 5 864 239 | 1 745 595 | 27 439 540 |
| Interest / ROA | 137 971 | 779 472 | 1 416 452 | 601 391 | 2 277 422 | 2 105 099 | 2 164 095 | 644 182 | 10 126 084 |
| Repairs and Maintenance actual | 1 706 990 | 4 947 525 | 6 855 771 | 7 247 045 | 9 081 319 | 14 141 724 | 11 387 884 | 7 985 030 | 63 353 289 |
| Bad debt written off | 32 454 | 104 509 | 154 321 | 137 885 | 216 283 | 295 987 | 465 502 | 151 854 | 1 558 794 |
| Sub-total cost | 721 739 717 | 19 880 462 | 29 356 072 | 26 229 517 | 41 143 068 | 56 304 876 | 88 551 384 | 28 886 797 | 1 012 091 891 |
| Current revenue | | | | | | | | | -987 963 708 |
| Shortfall | | | | | | | | | 24 128 183 |
| % Structure increase | R/kWh | R/kVA | R/kVA | R/kVA | R/kVA | Rand/light | Rand/customer | Rand/light | |

The proposed adjustments to remove non prudent items are shown in Table 32.

Table 32

| REVENUE ADJUSTMENTS | |
|----------------------------------|-------------------|
| Availability Charges | |
| Connection/Reconnection | |
| Electricity Sales | |
| Interest | |
| FBE income foregone | |
| Minus Equitable share | |
| Additional equitable share | - |
| Other income | |
| COS streetlight revenue | 23 252 411 |
| COS internal tariffs | |
| Revenue adjusted for high losses | 1 894 875 |
| TOTAL REVENUE | 25 147 286 |

| RR Adjustments | Limit | Actual | Tot | Adjust |
|--|-------|--------|-------------|------------|
| Eskom Losses exceeding | 8% | 8.2% | 715 566 093 | |
| Eskom interest | | | | - |
| Eskom excess access charges | | | 1 823 254 | -1 823 254 |
| Bad debt > 5% of rev | 5% | 0.2% | 1 558 794 | - |
| Shared cost > 30% of own cost (exc bulk) | 30% | 33% | 98 433 279 | -3 144 246 |

After doing these adjustments the revenue requirement is shown in Table 33.

Table 33

| CORRECTED NERSA RR FOR COS | Energy | HV | HV/MV | MV | <V/LV | LV | Customer services | Streetlights | GRAND TOTAL | Full Bulk, adjusted revenue, CRC depreciation | NERSA RR |
|---|-------------|------------|------------|------------|------------|------------|-------------------|--------------|---------------|---|------------------------------|
| Bulk (full cost as losses are included) | 715 566 093 | | | | | | | | 713 742 839 | 715 566 093 | Bulk |
| Operating cost | 1 865 851 | 5 234 283 | 7 158 836 | 7 835 435 | 9 497 998 | 15 172 881 | 40 114 151 | 8 746 352 | 95 625 786 | 95 625 786 | Operating cost |
| Shared cost adjusted to 30% of own cost | 2 032 241 | 6 440 302 | 9 455 747 | 8 592 277 | 13 253 489 | 18 345 186 | 30 796 280 | 9 517 757 | 95 289 034 | 95 289 034 | Shared cost adjusted |
| Depreciation | 359 630 | 2 031 741 | 3 692 069 | 1 567 562 | 5 936 241 | 5 487 071 | 6 686 126 | 1 679 099 | 27 439 540 | 84 120 132 | CRC Depreciation |
| Interest (excluding Eskom) | 132 715 | 749 779 | 1 362 494 | 578 481 | 2 190 666 | 2 024 908 | 2 467 398 | 619 642 | 10 126 084 | 10 126 084 | Interest |
| Repairs and Maintenance actual | 1 699 642 | 4 843 742 | 6 667 177 | 7 174 980 | 8 838 737 | 13 945 525 | 12 224 187 | 7 959 299 | 63 353 289 | 63 353 289 | Repairs & Maintenance actual |
| Bad debt written off | 32 183 | 101 989 | 149 742 | 136 068 | 209 883 | 290 515 | 487 691 | 150 724 | 1 558 794 | 1 558 794 | Bad debt written off |
| Sub-total cost | 721 688 355 | 19 401 835 | 28 486 065 | 25 884 804 | 39 927 013 | 55 266 087 | 92 775 834 | 28 672 872 | 1 012 102 865 | 1 065 639 211 | Sub-total cost |
| Surplus: | | | | | | | | | - | - | |
| Total Allowed revenue | | | | | | | | | 1 012 102 865 | 1 065 639 211 | Total Allowed revenue |
| Adjusted Revenue: | | | | | | | | | -987 963 708 | -1 013 110 994 | Adjusted Revenue |
| Shortfall | | | | | | | | | 24 139 156 | 52 528 217 | Shortfall |
| Surplus: | | | | | | | | Surplus | 2.4% | 5.2% | % Structure increase |

The following very important facts need to be noted:

- Currently a very small surplus is made.
- The calculated Head Office / Service department allocation (admin charge) to electricity is close to 30% own costs excluding Eskom. This can be considered to be reasonable.
- To cover the current replacement cost (CRC) annual depreciation an increase of 5.2% is required.

The Support costs (operations, maintenance and admin) and capital costs (depreciation and interest) are split by function in Table 34.

Table 34

| NERSA RR | Total Support costs | Total capital provision | Purchases | GRAND TOTAL |
|-------------------|---------------------|-------------------------|-------------|---------------|
| Energy | 5 629 917 | 492 345 | 715 566 093 | 721 688 355 |
| Customer services | 83 622 310 | 9 153 524 | - | 92 775 834 |
| HV | 16 620 315 | 2 781 520 | - | 19 401 835 |
| HV/MV | 23 431 501 | 5 054 563 | - | 28 486 065 |
| MV | 23 738 760 | 2 146 044 | - | 25 884 804 |
| MV to LV | 31 800 106 | 8 126 907 | - | 39 927 013 |
| LV | 47 754 107 | 7 511 979 | - | 55 266 087 |
| Streetlights | 26 374 131 | 2 298 741 | - | 28 672 872 |
| Electro Technical | 258 971 148 | 37 565 623 | 715 566 093 | 1 012 102 865 |

10. REPRESENTATIVE LOAD PROFILE ANALYSIS.

Extensive work is required in respect of load profiles. This refers to the way electricity is used by different customer categories and through different networks. The data used is 12 months of ½ hourly data.

The municipality provided load profiles of all consumers with TOU meters. The profiles were for a whole year and of good quality. Details of the customers and the type of profile of each type is indicated in Table 35.

Table 35

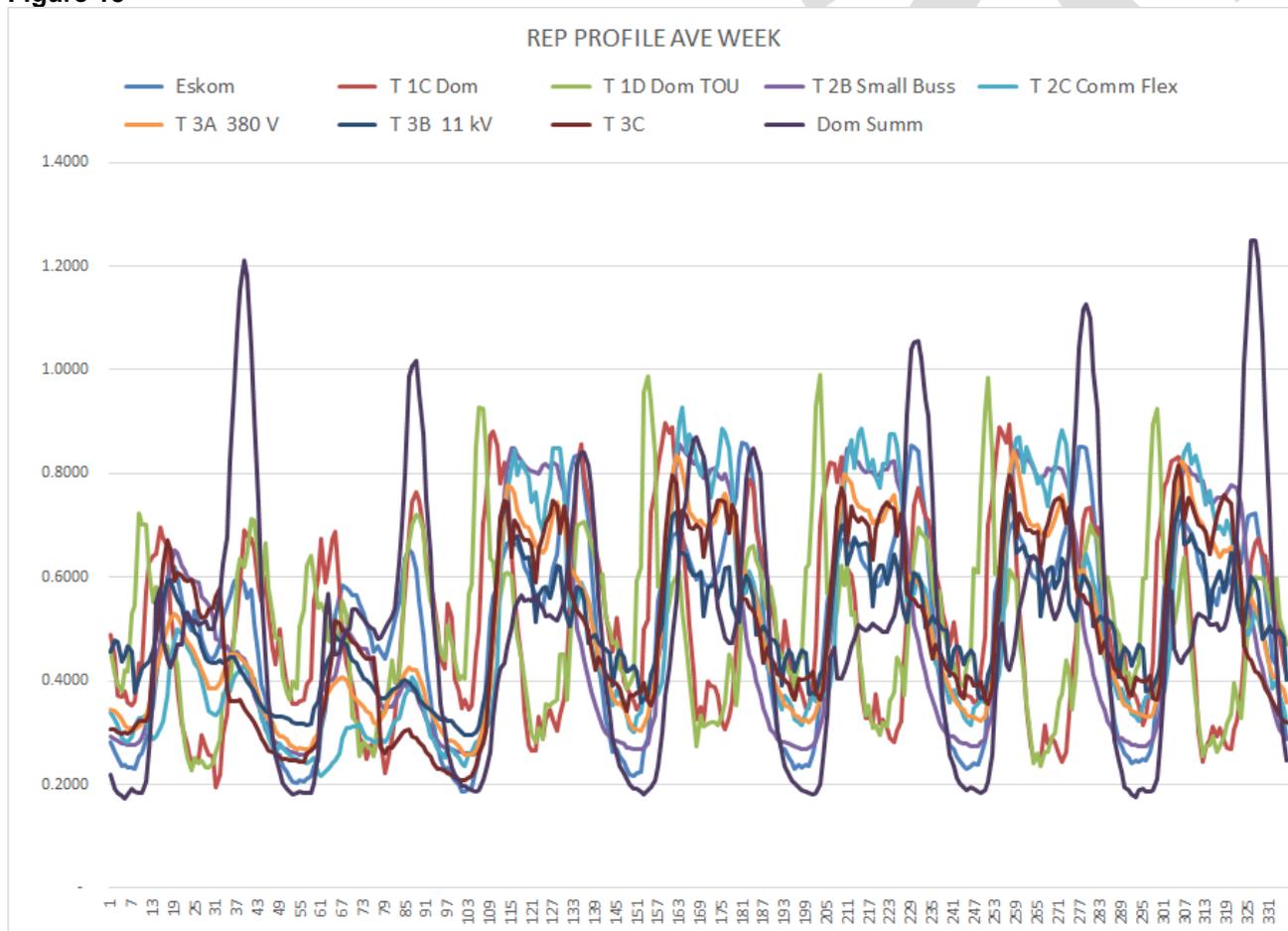
| PROFILES | TARIFF | Number |
|-------------|-----------------|--------|
| 1C | T 1C Dom | 82 |
| 1D | T 1D Dom TOU | 53 |
| 2B | T 2B Small Buss | 51 |
| 2c | T 2C Comm Flex | 83 |
| 3A | T 3A 380 V | 223 |
| 3B | T 3B 11 kV | 32 |
| 3C | T 3C | 8 |
| SPORTSFIL | SPORTSFIELDS | 3 |
| Grand Total | | 535 |

No non-TOU domestic profiles were provided. The profiles from 4 mini substations were provided and was analysed to obtain a representative domestic profile. One substation profile was not residential and was removed and some reductions were made to remove the high peaks due to load shedding.

These profiles were then analysed and the resultant representative profiles calculated.

Figure 15 shows the ½ hourly kVA values (Y-axis) for the average week (7 day ½ hours per week = x-axis) for each of the representative load profiles.

Figure 15



Domestic. Figure 16 Normal, Figure 17 TOU.

Figure 16

52 WEEK'S KVA PROFILES

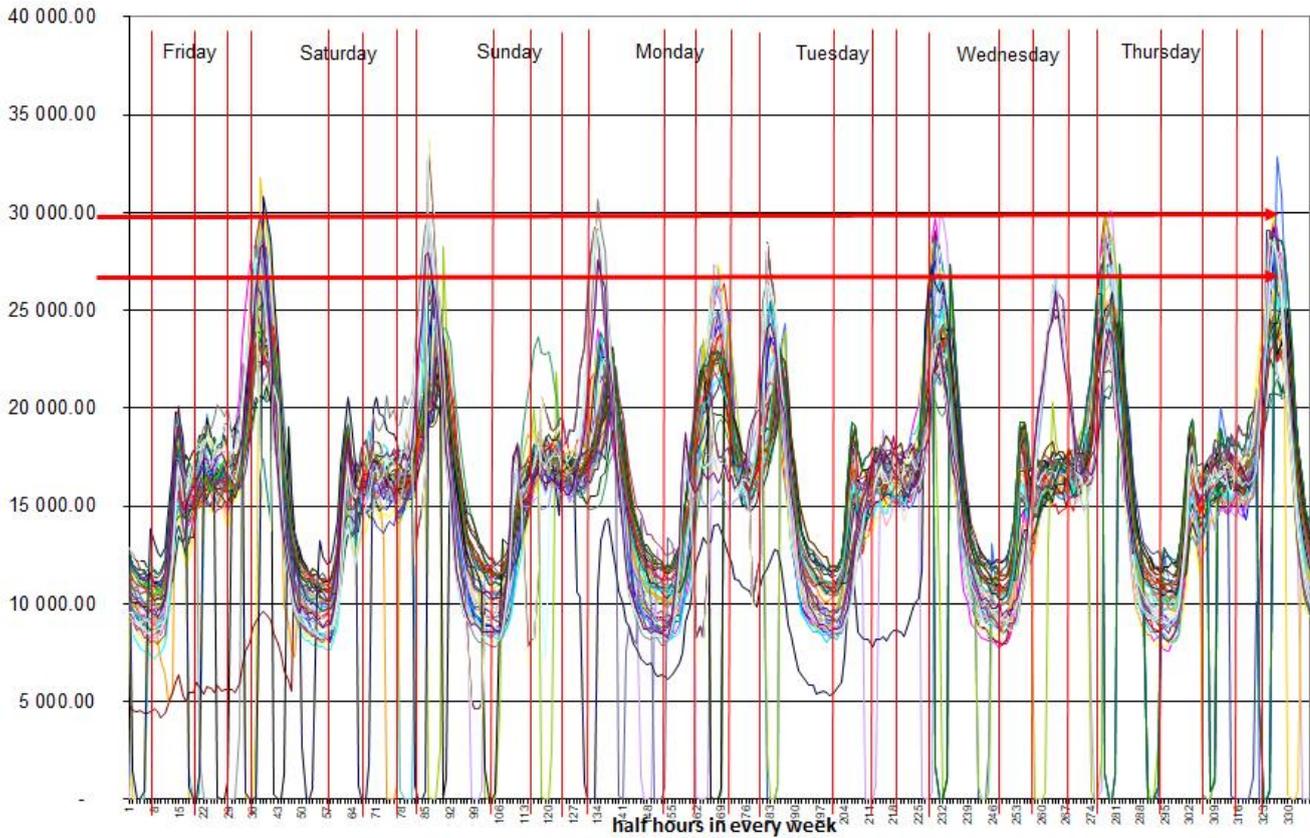
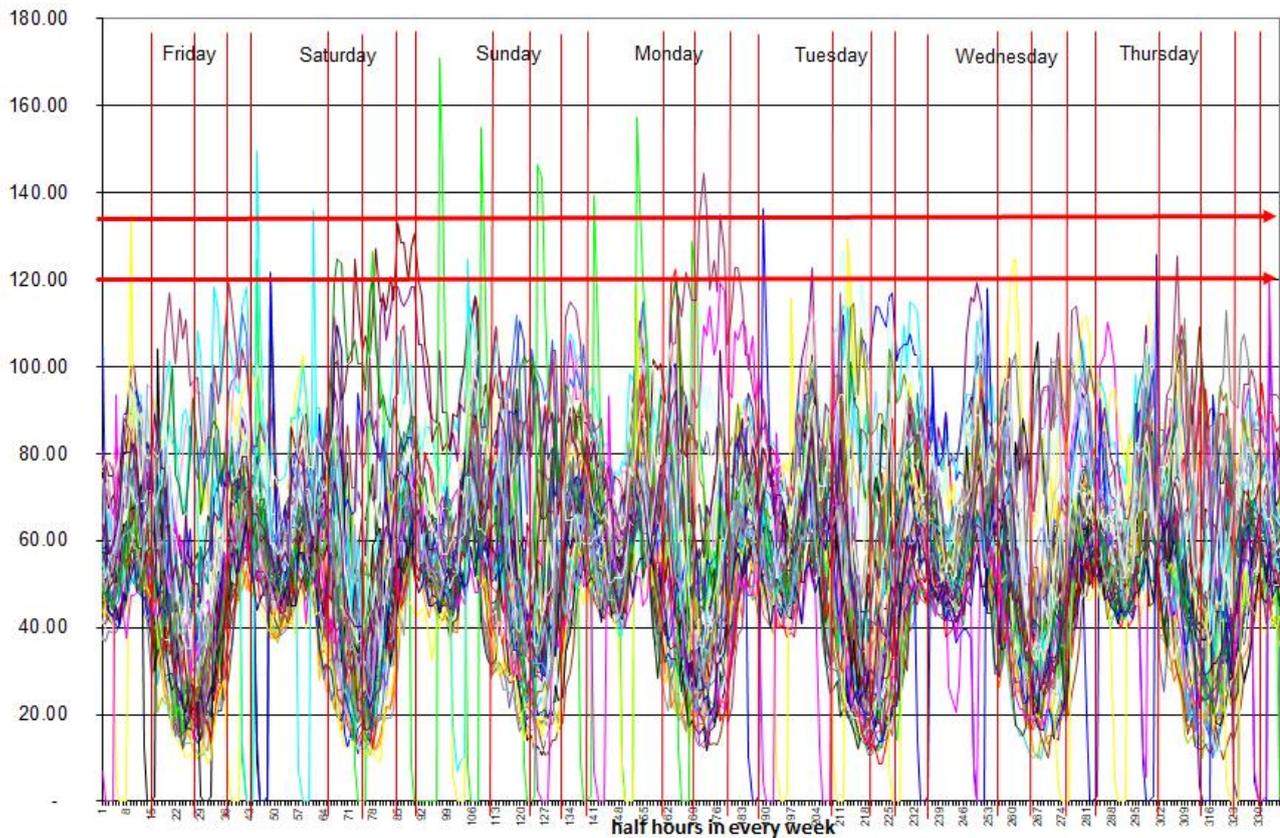
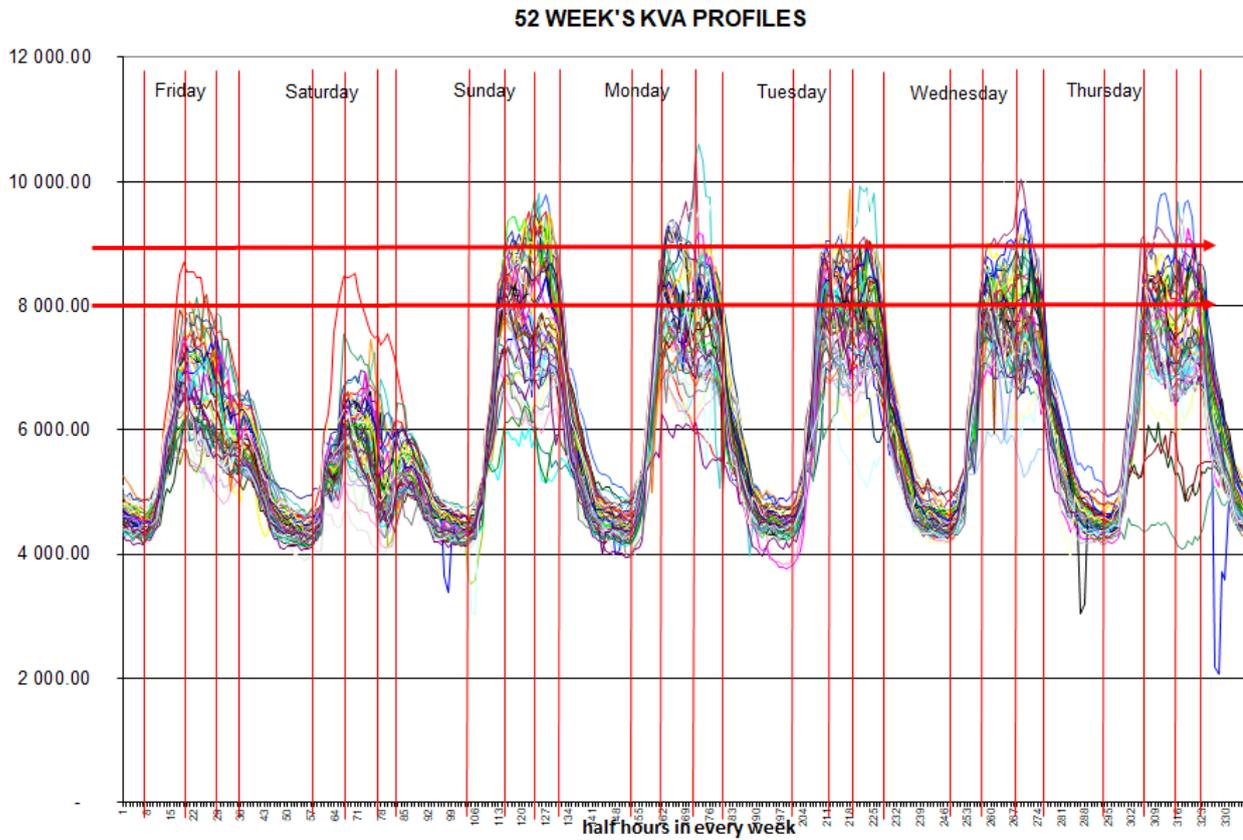


Figure 17

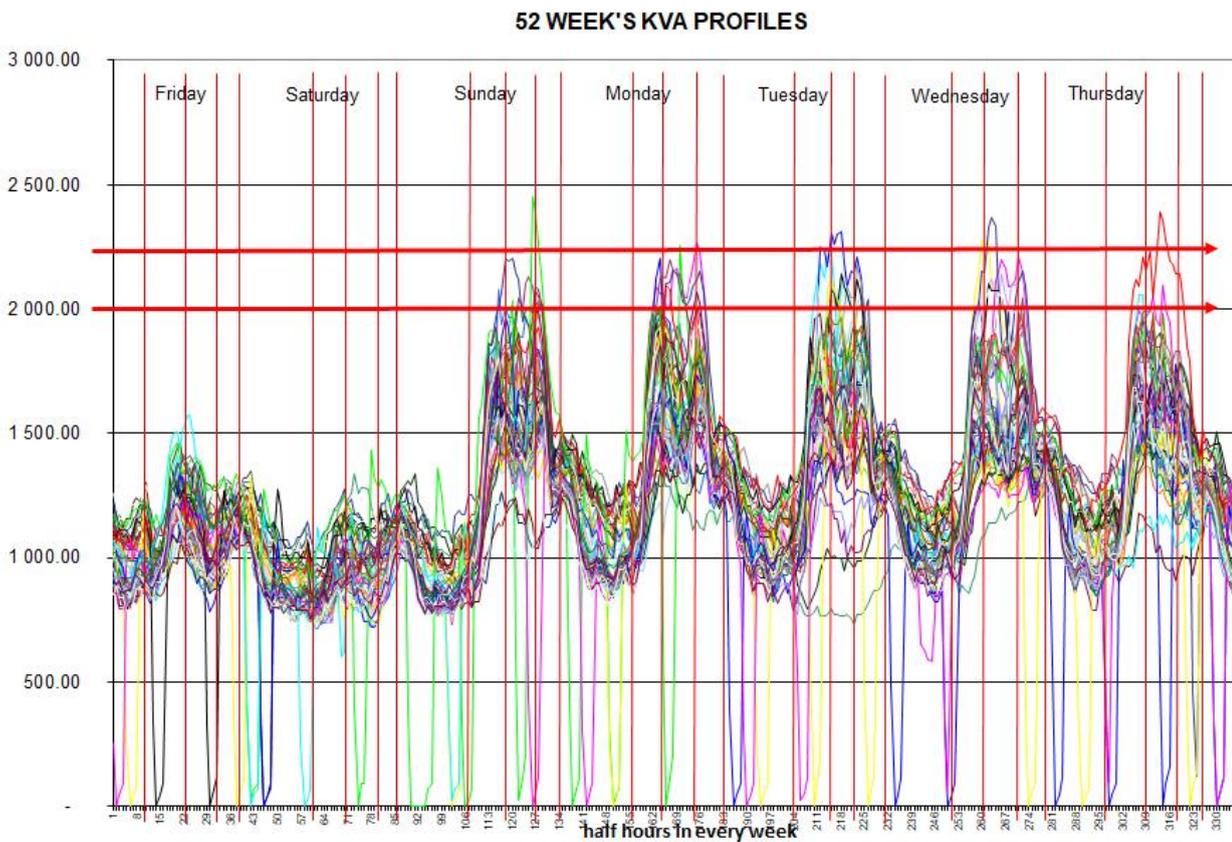
52 WEEK'S KVA PROFILES



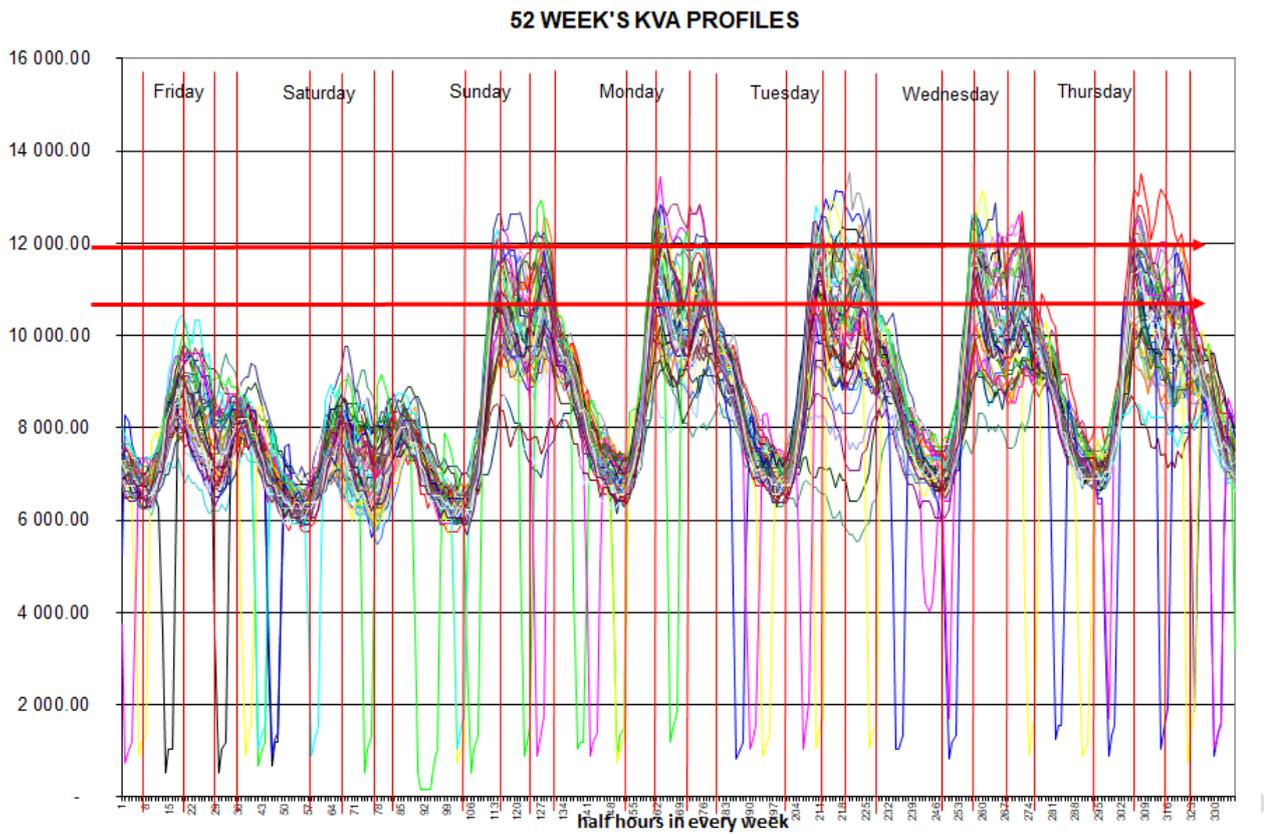
Commercial: Normal Figure 18



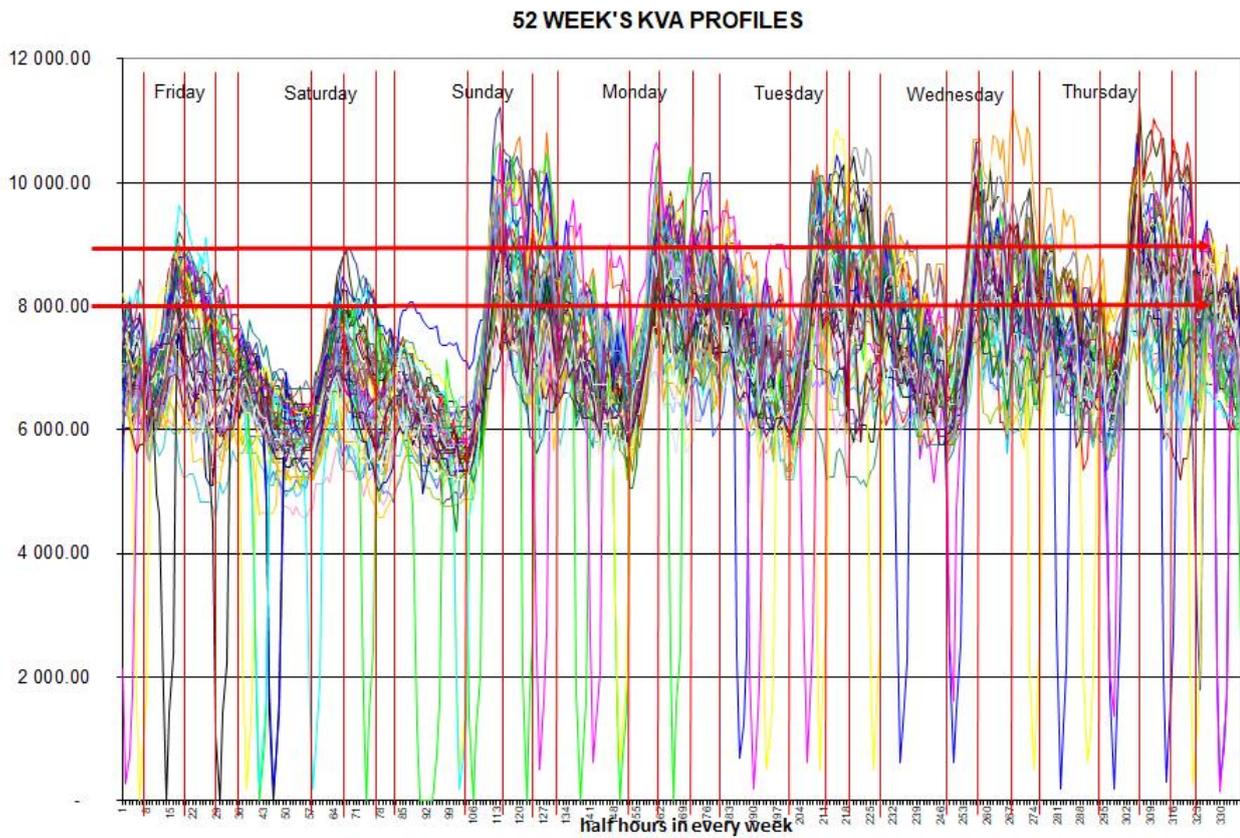
TOU. Figure 19



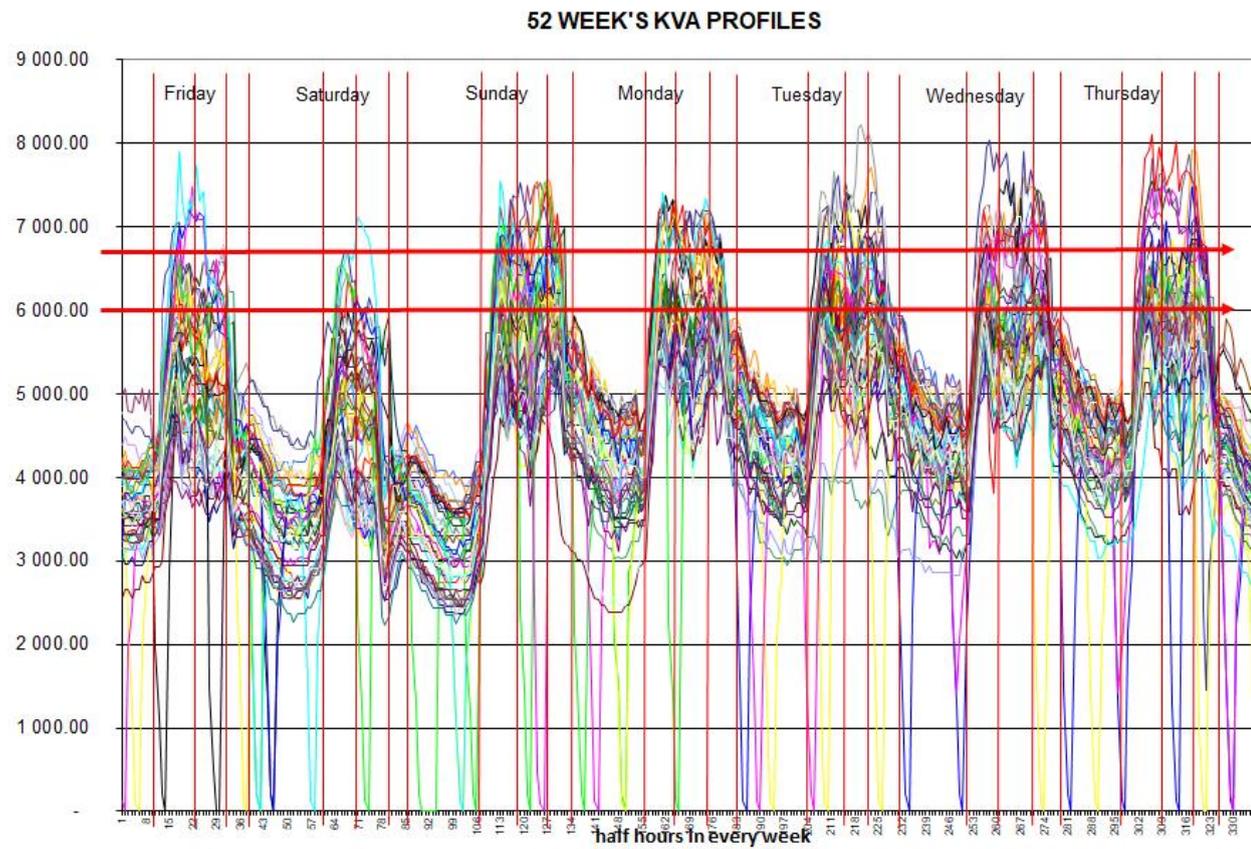
Tariff 3A 380 V: **Figure 20**



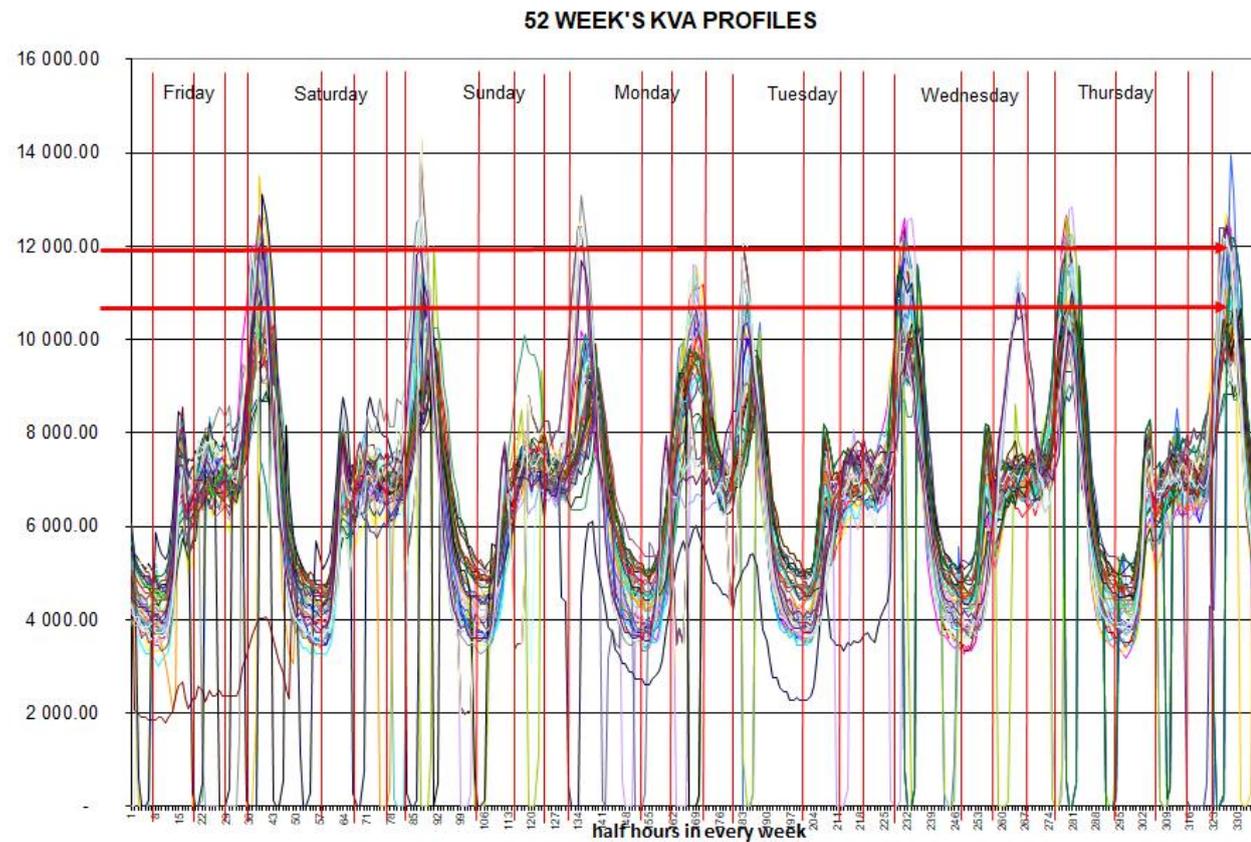
Tariff 3B 11 kV: **Figure 21**

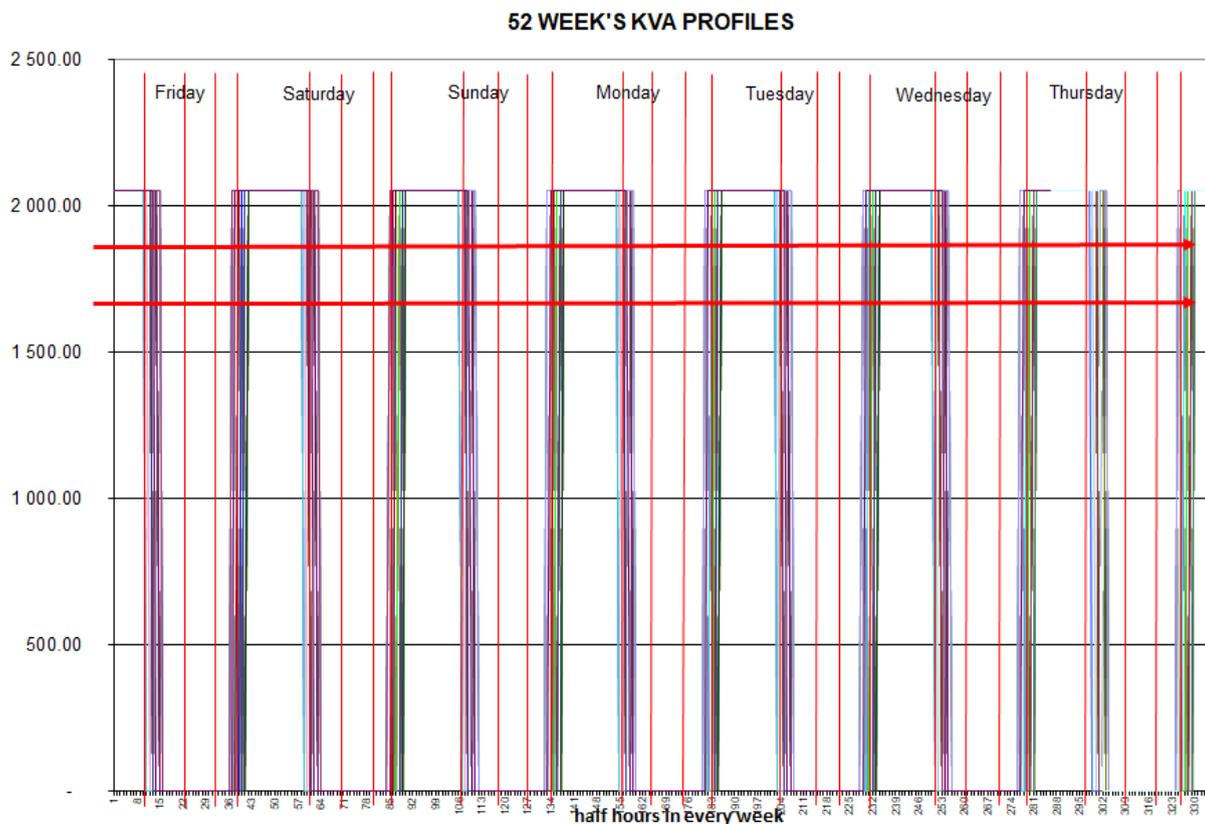


Tariff 3C 11 at Bulk substation : **Figure 22.**



Residential Poor. **Figure 23**



Streetlights: **Figure 24**

These profiles are then used to simulate the load profiles at each of the representative networks.

1.4. Network profiles.

To be able to calculate the load on a particular network one firstly has to calculate the profile at every infeed point on the network. This is calculated by:

- Multiplying the total load for every representative load profile being fed in at that point with the representative load profile ratio to establish the total load of every profile.
- The values for every representative profile are then added together.

The next step is to calculate the loads going through every network component.

- Calculate the load being taken at the infeed point of every network by adding the losses to the load being taken from the outgoing side of that network.
- Calculate the load through each individual network by adding the load infeed at the outgoing side of that network to the load going through the next network.
- This is an integrated process starting with the last points on the networks from where loads are taken and working upwards towards the main supply point to the distributor.
- This should be done for every half hour of the year, yielding an annual half hourly profile going through every network.

1.5. Profile re-reconciliation.

It is essential that an assessment be made of the accuracy of the representative load profiles used. This is done by

- calculating the annual load profile from the LV network up to HV network:
- multiplying consumption at each point on the network times the per unit representative load profile at that point.

- adding up from the LV network up to the highest voltage network including losses at each point up calculations
- and comparing that with the annual purchase load profile.

Table 36 below shows the maximum demand with date and time for the actual purchase profile and the N2 profile. The maximum demand occurs at a very different time of the year.

Table 36

| N2 Max | N2 Max date | N2 Max |
|----------------------|------------------|-----------|
| 76 250.46 | 2024/06/04 17:30 | 77 339.22 |
| Σ kVA at Peak | Σ Own Max | Max |
| 44 929.18 | 51 689.53 | |
| | | 1 |
| Purchase Max | Max date | |
| 78 685.36 | 2023/07/31 18:30 | 94198.15 |
| Σ kVA at Peak | Σ Own Max | |
| 50 845.18 | 97 813.19 | |

Figure 25 shows the Eskom and N2 profile for the Eskom peak day. One of the challenges with this analysis relate to the Eskom load shedding which disports all the profiles. This is clear from this graph.

Figure 25

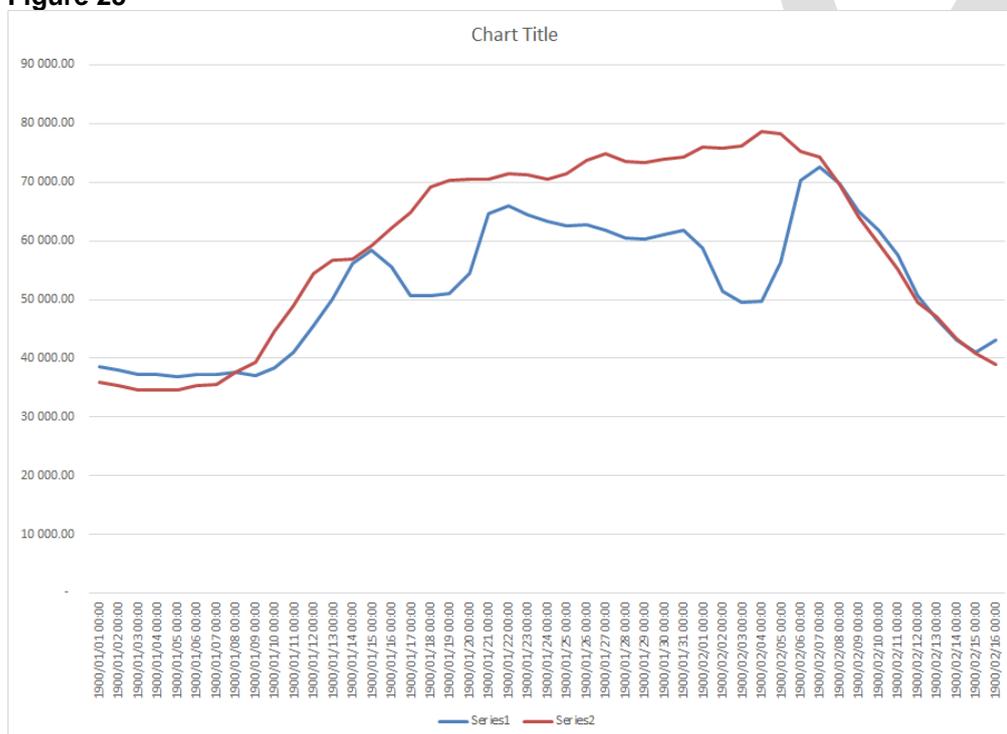


Figure 26 below shows the Eskom and N2 profile for the Eskom peak week. The same problem as for the peak day is apparent here as well.

Figure 26

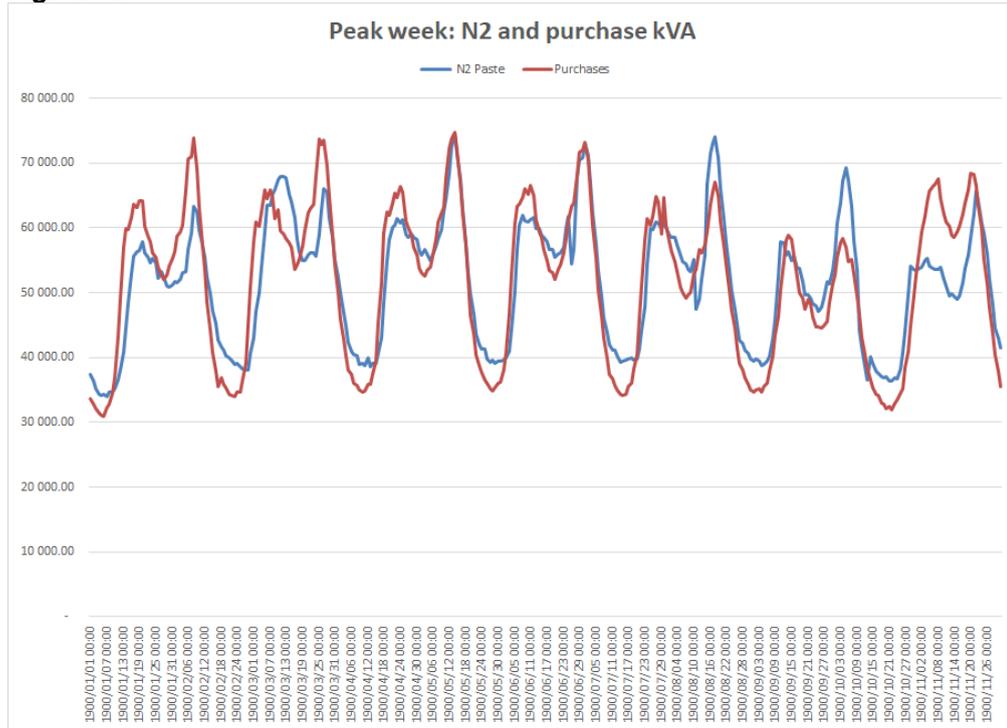


Figure 27 below shows the average week for Eskom and N2. Here it is clear that there is a very good correlation.

Figure 27

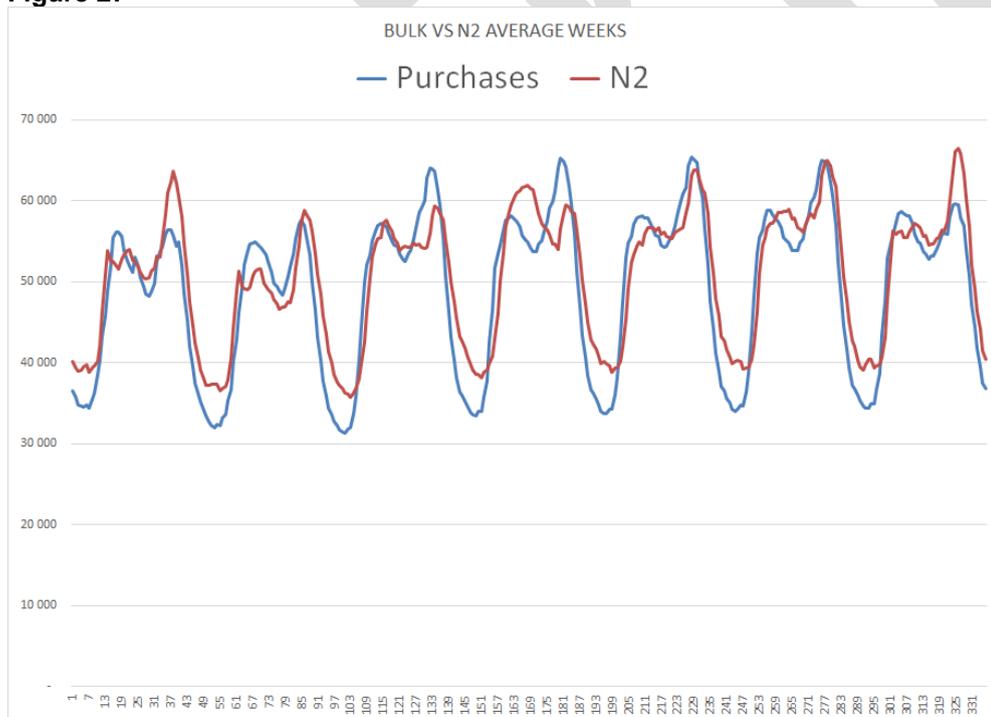
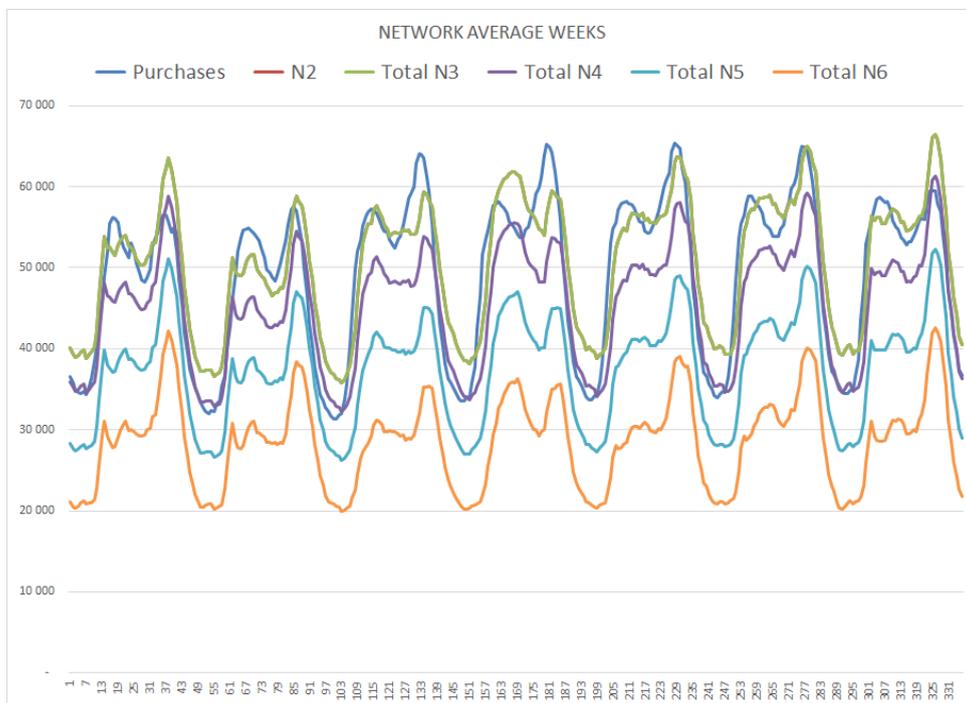


Figure 28 shows how the various loads from the LV network up to the Eskom points of supply builds up by way of average weeks.

Figure 28



This concludes the analysis of load profiles. These results will be used later on specifically as basis for the kVA units per network.

1.6. Representative Profile Quantities.

The TOU quantities for each of the representative load profiles were then calculated. The per unit representative load profile quantities for the year are then multiplied by the total kWh for each representative load profile.

The process followed in the model can be described briefly as follows:

- The ½ hourly kWh and kvarh per unit figures as calculated for each annual profile from above is used as starting point. The per unit value means that each actual half hourly value is divided by the total number of half hours in a year (365 days x 24 hours = 8760).
- In other words, if the total number of kWh used by this profile of customers are multiplied by the per unit values and then again divided by 8760, the full picture for this profile is obtained.
- For each profile the kVA values are then calculated. This is done by calculating the square root of the 1/2 hourly kWh and kvarh and multiplying by 2.
- For each half hour the excess kvarh are then calculated by obtaining the amount of kvarh exceeding the kvarh associated with the kW peak for than ½ hour with a power factor of 0.85.
- The ½ hourly kWh, kvarh and kVA figures are then sorted and summed by:
 - For each month.
 - Season: High and Low.
 - TOU period: Peak, Standard and Off-peak.
 - Excess kvarh during peak and standard periods only.
- The sum of the maximum demands incurred during each month is then calculated as well as the highest maximum demand during the whole year.
- From these the Annual Load Factor (LF) and Excess kvarh % of total kWh are calculated.
- These values are then calculated for each profile.

The results are shown in Table 37

Table 37

Table 37

| REP PROFILE QUANTITIES | TOTAL | | | | HIGH SEASON | | | LOW SEASON | | | | Annual | |
|------------------------|-------------|------------|------------|----------------|-------------------------|-----------|-----------|------------|-----------|-----------|-----------|---------|-----------------|
| YEAR | ENERGY | MAX DEMAND | MAX DEMAND | MAX DEMAND P&S | Monthly KVA LOAD FACTOR | P | S | O | P | S | O | Max | kVA Load factor |
| PROFILE | kWh (FOR) | kW | kVA | kVA | % | kWh (FOR) | kWh (FOR) | kWh (FOR) | kWh (FOR) | kWh (FOR) | kWh (FOR) | kVA | LF |
| 1 T 1D Dom TOU | 487 047 | 1 499.83 | 1 511.07 | 1 450.60 | 50.38% | 4.8% | 10.7% | 14.9% | 11.3% | 23.2% | 35.2% | 171 | 32.55% |
| 2 T 2B Small Buss | 49 563 082 | 131 950.19 | 141 305.69 | 141 305.69 | 57.75% | 3.9% | 11.1% | 10.9% | 11.5% | 30.8% | 31.8% | 13 791 | 41.02% |
| 3 T 2C Comm Flex | 9 957 482 | 25 126.20 | 26 117.64 | 26 117.64 | 49.60% | 3.8% | 11.6% | 9.3% | 12.1% | 32.8% | 30.4% | 2 453 | 46.33% |
| 4 T 3A 380 V | 71 355 303 | 150 372.07 | 154 713.96 | 154 713.96 | 62.71% | 4.0% | 11.1% | 10.2% | 12.2% | 31.6% | 30.9% | 13 547 | 60.13% |
| 5 T 3B 11 kV | 60 261 692 | 121 634.78 | 127 113.72 | 127 113.72 | 65.80% | 3.8% | 10.2% | 10.9% | 12.1% | 30.1% | 32.9% | 11 255 | 61.12% |
| 6 T 3C | 40 490 099 | 85 770.67 | 87 505.39 | 87 505.39 | 64.53% | 3.8% | 10.0% | 9.8% | 12.2% | 32.5% | 31.6% | 8 229 | 56.17% |
| 7 SPORTSFIELDS | - | - | - | - | #DIV/0! | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | #DIV/0! | #DIV/0! |
| 8 Dom Summ | 126 246 092 | 351 307.96 | 361 057.55 | 361 057.55 | 47.22% | 4.7% | 11.2% | 9.6% | 13.6% | 31.3% | 29.6% | 34 012 | 42.37% |
| 9 Export | - | - | - | - | #DIV/0! | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | #DIV/0! | #DIV/0! |
| A Res Poor | 53 574 468 | 149 105.75 | 153 238.23 | 151 410.81 | 49.55% | 4.4% | 11.2% | 9.8% | 13.4% | 30.9% | 30.2% | 14 398 | 42.48% |
| B Lights | 6 768 582 | 20 212 | 24 640 | 24 640 | 39.97% | 2.6% | 3.2% | 20.7% | 7.3% | 7.9% | 58.3% | 2 053 | 37.63% |
| C | | | | | | | | | | | | | |

The following should be noted in this respect:

- The average Load factor refers to the total kWh per year divided by the sum of the monthly maximum demand in the year times the total hours in the year. (Total kWh for year) ÷ (Sum 12 kVA maximum demands x hours in year).
- The Annual LF refers to the total kWh per year divided by the highest maximum demand in the year times 12 times the total hours in the year. (Total kWh for year) ÷ (Highest maximum demand in year x 12 x hours in year).
- The % values in each of the TOU periods refer to the % of consumption relative to the total consumption.
- The reactive energy refers to the kvarh as calculated in the Eskom Megaflex tariff. (Sum of: kvarh – 30% of kWh for each ½ hour in peak and standard periods).
- The annual and monthly load factors were modified for the commercial and domestic profiles as these are distorted due to the small sample and load shedding.

This data will be used to calculate the load demands of each profile and the kWh's used in the different time periods.

1.7. Network Profile Quantities.

The network profiles calculated above are now further processed. The maximum demand and TOU ratios are required for further analyses and the results obtained are shown in Table 38. Once again it is clear that there is a good correlation.

Table 38

| NETWORK QUANTITIES | YEAR TOTAL | | | | | Monthly KVA LOAD FACTOR | HIGH SEASON | | | LOW SEASON | | | YEAR TOTAL | |
|--------------------|------------|-------------|------------|------------|----------------|-------------------------|-------------|-----------|-----------|------------|-----------|-----------|------------|-----------------|
| | P&S | ENERGY | MAX DEMAND | MAX DEMAND | MAX DEMAND P&S | | P | S | O | P | S | O | Max | kVA Load factor |
| Year | kvarh | kWh (FOR) | kW | kVA | kVA | % | kWh (FOR) | kWh (FOR) | kWh (FOR) | kWh (FOR) | kWh (FOR) | kWh (FOR) | kVA | LF |
| 1Purchases | 1 470 134 | 418 225 921 | 839 373.10 | 862 110.40 | 860 156.85 | 64.31% | 4.6% | 11.1% | 10.2% | 12.8% | 30.9% | 30.3% | 78 685 | 60.68% |
| 2N2 | 8 037 257 | 418 703 846 | 856 869.79 | 888 709.73 | 888 709.73 | 64.69% | 4.2% | 10.8% | 10.3% | 12.6% | 30.8% | 31.3% | 76 250 | 62.68% |
| 3Total N3 | 8 037 257 | 418 703 846 | 856 869.79 | 888 709.73 | 888 709.73 | 64.69% | 4.2% | 10.8% | 10.3% | 12.6% | 30.8% | 31.3% | 76 250 | 62.68% |
| 4Total N4 | 9 135 693 | 373 256 527 | 785 106.17 | 814 622.51 | 814 622.51 | 62.70% | 4.2% | 10.9% | 10.3% | 12.7% | 30.7% | 31.3% | 69 918 | 60.94% |
| 5Total N5 | 8 491 849 | 306 989 469 | 680 091.22 | 704 227.39 | 702 252.36 | 60.39% | 4.3% | 11.0% | 10.2% | 12.8% | 30.8% | 31.0% | 61 304 | 57.17% |
| 6Total N6 | 8 678 680 | 231 933 782 | 567 732.55 | 588 507.68 | 584 861.08 | 54.90% | 4.4% | 11.0% | 10.2% | 12.9% | 30.5% | 31.0% | 52 158 | 50.76% |

These values will be used to calculate the peak demands at every point on the network and thus to calculate the per unit R/kVA for each network.

11. COST OF SUPPLY

The next step is to allocate the electricity costs between the various cost functions. The table below firstly shows the cost adjustments and then the method used and the actual allocation of cost per function.

The next step is to functionalise the various costs between the various cost drivers. The 4 types of functions in electricity namely:

- Purchases

- Networks and
- Customer services.
- Streetlights.

The steps to be followed to do this are as follows:

- The costs, as per the trial balance, are firstly allocated directly to the relevant function as prescribed by the particular activity.
- The common costs are then allocated based on various relevant ratio's such as number of staff or asset values.

These calculations were already done in the Ringfencing part of the study.

1.8. Cost Classification

The next step is to classify these costs into the different cost types / drivers. The electricity costs, from a tariff point of view are classified as one of the types below:

- R/kWh in terms of the different TOU periods namely, peak, standard and off-Peak.
- R/kVA costs also separated by dedicated and shared per network.
- R/customer as per customer category.
- Rand / light in the case of streetlight maintenance costs.

The way in which these costs are functionalised / classified is shown in Table 39.

Table 39

| COST FUNCTIONALISATION | | | | |
|--------------------------|---------------------------|------------------------------------|---|------------|
| | | R/kWh | R/kVA | R/Customer |
| Purchase | | All Energy charges levied to munic | All demand and access charges levied to munic | None |
| Network costs | Capital provision | None | All | None |
| | Operating and maintenacne | None | All | None |
| Customer Services | | None | None | All |

The following points are of note:

- There is a small portion of customer services costs which can be classified in R/kWh. The problem is that the true cost really depends on the number of customers and not the amount of kWh purchased. All customer services costs are therefore classified as R/Customer.
- A portion of the Eskom costs relate to the demand or maximum capacity taken from the network. This will be classified as such later on in the process of detailed cost calculations.

These costs will now be used as a basis for the detailed cost calculations to follow.

1.9. Cost allocation: phase 1

The next step is to allocate the various costs per the different cost categories. This is shown in Table 40 in respect of the capital portion of the network and customer connections.

Table 40

GEORGE**TOTAL NETWORK CAPITAL CAPITAL REVENUE REQUIREMENT**

| Total Network Levelised costs | | Adjustment to reflect cash payments | | Adjustment: difference: revenue requirement - capital provision in budget | | Reconciled |
|-------------------------------|----------|-------------------------------------|----|---|--------------------------|-------------------|
| | R/year | % | % | | | R/year |
| A Energy | Energy | 359 630 | 0% | 359 630 | LEVELISATION ADJUSTMENT | 226 028 |
| B N2 | HV | 2 031 741 | 0% | 2 031 741 | | 1 276 954 |
| C N3 | HV/MV | 3 692 069 | 0% | 3 692 069 | Total levelised costs | 2 320 475 |
| D N4 | MV | 1 567 562 | 0% | 1 567 562 | Current capital provisio | 985 217 |
| E N5 | MV to LV | 5 936 241 | 0% | 5 936 241 | Difference | 3 730 942 |
| F N6 | LV | 5 487 071 | 0% | 5 487 071 | % Adjustment | 3 448 638 |
| G N7 | | | 0% | 0 | | 0 |
| H N8 | | | 0% | 0 | | 0 |
| I Streetlights | | 1 679 099 | 0% | 1 679 099 | | 1 055 318 |
| Totals | | 20 753 414 | | 20 753 414 | | 13 043 571 |
| METERING | | | | | | |
| 1 PH kWh Pre-paid | | 32 173 400 | 0% | 32 173 400 | | 20 221 060 |
| 3 PH kWh Pre-paid | | 740 | 0% | 740 | | 465 |
| 1 PH kWh | | 1 729 471 | 0% | 1 729 471 | | 1 086 977 |
| 3 Ph kWh | | 1 074 034 | 0% | 1 074 034 | | 675 033 |
| 3 TOU | | 126 787 | 0% | 126 787 | | 79 686 |
| 3 PH TOU & ct's | | 872 059 | 0% | 872 059 | | 548 091 |
| TOU RMU & CT/MT's | | 2 121 750 | 0% | 2 121 750 | | 1 333 525 |
| TOU at HV sub With CB | | 918 400 | 0% | 918 400 | | 577 217 |
| | | | 0% | - | | 0 |
| | | | | | | 0 |
| | | | | | | 0 |
| SUB-TOTAL | | 39 016 640 | | 39 016 640 | | 24 522 053 |
| GRAND TOTAL | | 59 770 054 | | 59 770 054 | | 37 565 623 |

Table 41 shows the operating costs per customer category and allows for adjustment to reflect the pricing policy of the municipality. In other words, where customers pay outside of the tariff (by way of connection fees, capital contributions, subdivision fees or developer contributions), the full capital provision must not come from the tariff. In this respect staff indicated that all capital costs for new customers / capacity are covered outside of the tariff and thus no adjustment is made.

Final

- This is one of the most difficult assumptions because records are not kept of customer service costs per size of customer.
 - This has been done based on experiences elsewhere and inputs from staff.
 - An example is that a customer > 50 kVA is a 3 phase customer which means there is a more sophisticated meter or 3 single phase meters that need to read and thus 3 readings to be entered into the billing system compared with only one for a customer < 50 kVA which are mostly 1 phase customers.
 - Staff also indicated that bigger customers have more queries on their electricity bills and they thus spend more time on them.
 - These assumptions are subjective but the best available considering the staff inputs.
- The effective cost per size of customer is then calculated.

1.10. Cost allocation: phase 2

George purchases all its energy from Eskom on TOU at Megaflex. NERSA is however busy approving Municflex as the main tariff for municipalities.

The summary of Megaflex LG and Municflex rates in 2024/2025 Rands are shown in Table 42.

Table 42

| BULK TARIFF | | | Municflex | | Megaflex | | 2024/2025 ch |
|----------------------------------|----------------------------------|---------|-----------|-----------|-----------|-----------|--------------|
| | | | 2024/2025 | 2025/2026 | 2024/2025 | 2024/2025 | |
| > 900km | | | 11.32% | | 0.00% | | |
| ≥ 66kV & ≤ 132kV | Generation Capacity charge | R/kVA/m | R5.80 | R6.46 | | | New |
| | Transmission network access | R/kVA/m | R8.79 | R9.79 | R 16.05 | R 16.05 | -83% |
| | Network access charge: | R/kVA/m | R14.59 | R16.24 | R 11.55 | R 11.55 | 21% |
| | Network demand Charge | R/kVA/m | R8.62 | R9.60 | R 21.37 | R 21.37 | -148% |
| | Urban low voltage subsidy charge | R/kVA/m | R2.00 | R2.23 | R 28.29 | R 28.29 | -1312% |
| TOU: High Demand Se | Peak | c/kWh | 581.59 | 647.43 | 622.70 | 622.70 | -7% |
| (June -Aug) | Standard | c/kWh | 145.40 | 161.86 | 188.65 | 188.65 | -30% |
| | Off-peak | c/kWh | 96.93 | 107.90 | 102.44 | 102.44 | -6% |
| TOU: Low Demand Se | Peak | c/kWh | 241.36 | 268.68 | 203.12 | 203.12 | 16% |
| (Sept-May) | Standard | c/kWh | 135.71 | 151.07 | 139.77 | 139.77 | -3% |
| | Off-peak | c/kWh | 96.93 | 107.90 | 88.67 | 88.67 | 9% |
| Electrification and rural | | c/kWh | 4.51 | 5.02 | 15.67 | 15.67 | -247% |
| Legacy | | c/kWh | 18.80 | 20.93 | - | | 100% |
| Reliability service | | c/kWh | 0.33 | 0.37 | 0.73 | R 0.73 | -120% |
| REACTIVE ENERGY (c | High Demand | c/kvarh | 28.93 | 32.20 | 28.30 | 28.30 | 2% |
| | Low demand | c/kvarh | - | | - | | |

The Municflex values will be used as the initial per unit energy and Demand / Access charges.

1.11. Cost allocation: phase 3

The next step is to add the capital cost to the operating costs and then allocating it to the various cost drivers as is shown in Table 43. The cost of the actual streetlights plus overheads is allocated on a per light basis.

Table 44

| GEORGE | | | | | | |
|-------------------------------|----------|--------|---------|----------------|-------------|--------|
| TOTAL ALLOCATION UNITS | | | | | | |
| NETWORK | | | | | | |
| (System peak week | | | Max kVA | Σ kVA y | kWh | PODs |
| | | | kVA | kVA | kWh | PODs |
| | | N0 | 78685 | 888 710 | 418 703 846 | |
| Energy | Energy | N1 | 78685 | 888 710 | 418 703 846 | |
| HV | HV | N2 | 76250 | 888 710 | 418 703 846 | |
| HV/MV | HV/MV | N3 | 76250 | 888 710 | 418 703 846 | |
| MV | MV | N4 | 69918 | 814 623 | 373 256 527 | |
| MV to LV | MV to LV | N5 | 61304 | 704 227 | 306 989 469 | |
| LV | LV | N6 | 52158 | 588 508 | 231 933 782 | |
| Lights | LV | N6 | | | | 10 043 |
| | | N5/6 | | | | |
| GRAND TOTAL | | | | | | 10 043 |
| Metering | | | | | | |
| Metering | | | | | | |
| 1 PH kWh Pre-paid | | 53 622 | | | | |
| 3 PH kWh Pre-paid | | 1 | | | | |
| 1 PH kWh | | 3 164 | | | | |
| 3 Ph kWh | | 1 604 | | | | |
| 3 TOU | | 152 | | | | |
| 3 PH TOU & ct's | | 580 | | | | |
| TOU RMU & CT/VT's | | 68 | | | | |
| TOU at HV sub With CB | | 14 | | | | |
| | | 0 | | | | |
| SUB-TOTAL | | 59 205 | | | | |
| Billing/ cust.service | | 0 | | | | |
| A Small <50 kVa | | 58 391 | | | | |
| B Medium <500 kVa | | 732 | | | | |
| C Large <2000 kVa | | 68 | | | | |
| D Very large >2000kVa | | 14 | | | | |
| Total | | 59 205 | | | | |

The next step is to calculate the unit costs. This is done by dividing the total cost per category by the relevant units. The results are shown in Table 45.

Table 45

| GEORGE | | | | | | |
|------------------------------|----------|--------------|--|---------|----------------|--------|
| COST PER UNIT | | | | | | |
| NETWORK | | | | | | |
| (System peak week demand) | | | | Max kVA | Σ kVA y | PODs |
| | | | | All | All | R/PODs |
| | | N0 | | 0.00 | 0.00 | 0.00 |
| Energy | Energy | N1 | | 0.12 | 0.13 | 0.00 |
| HV | HV | N2 | | 9.21 | 9.49 | 0.00 |
| HV/MV | HV/MV | N3 | | 13.27 | 13.66 | 0.00 |
| MV | MV | N4 | | 14.63 | 15.06 | 0.00 |
| MV to LV | MV to LV | N5 | | 25.95 | 27.10 | 0.00 |
| LV | LV | N6 | | 48.87 | 51.97 | 0.00 |
| Lights | LV | N6 | | 48.87 | 51.97 | 234.91 |
| | | | | | | |
| | | | | | | |
| GRAND TOTAL | | | | | | |
| | | | | | | |
| Metering | | R/C/m | | | | |
| 1 PH kWh Pre-paid | | 58 | | | | |
| 3 PH kWh Pre-paid | | 107 | | | | |
| 1 PH kWh | | 56 | | | | |
| 3 Ph kWh | | 105 | | | | |
| 3 TOU | | 249 | | | | |
| 3 PH TOU & ct's | | 730 | | | | |
| TOU RMU & CT/VT's | | 2891 | | | | |
| TOU at HV sub With CB | | 5830 | | | | |
| NA | | 0 | | | | |
| | | | | | | |
| AVERAGE | | 71 | | | | |
| | | | | | | |
| Billing/ cust.service | | R/C/m | | | | |
| A Small <50 kVa | | 49 | | | | |
| B Medium <500 kVa | | 494 | | | | |
| C Large <2000 kVa | | 2472 | | | | |
| D Very large >2000kVa | | 4943 | | | | |
| NA | | 0 | | | | |
| AVERAGE | | 59 | | | | |

The costs obtained up to now reflect the cost of every separate network segment. To have a more practical set of charges these must be set for every network supply position stating the total charges at each point. This involves the network cost closest to the supply position plus all the networks up to that point plus the losses incurred in the networks up to that point. The values stated therefore reflect the total per unit cost of supply at that network supply point. The resultant costs are shown in Table 46.

Table 46

| GEORGE | | 2024/2025 | | | | | Eskom adjust | 0.00% |
|--|---------------------------|------------------|---------------|---------------|-------------|-----------------|----------------------|--------------|
| COSTS PER TARIFF COST CATEGORY | | | | | | | Cost increase | 6.0% |
| | | | | | | | Surplus | 2.50% |
| FOR ALL LOAD FACTORS | | | | | | | | |
| | | | Access | Demand | Peak | Standard | Off-peak | |
| HIGH SEASON | Access / Demand | R/kVA/m | 31.97 | 8.84 | | | | |
| | Energy | c/kWh | | | 5.9613 | 1.4904 | 0.9935 | |
| LOW SEASON | Access / Demand | R/kVA/m | 31.97 | 8.84 | | | | |
| | Energy | c/kWh | | | 2.4739 | 1.3910 | 0.9935 | |
| | Electrification and rural | c/kWh | 0.0462 | | | - | | |
| | Legacy | c/kWh | 0.1927 | | | | | |
| | Reliability service | c/kWh | 0.0034 | | | | | |
| | Reactive energy charge | c/kvarh | 0.2965 | | | | | |
| TOTAL COSTS PER SUPPLY POSITION | | | Acc % | Acc | DM | | | |
| Total Network Charges (including losses) | | | | R/KVA/m | R/KVA/m | c/kWh | R/pod/m | |
| | | | Total losses | All | All | All | | |
| S0 | | | 0.00% | | | 0 | 0.00 | |
| S1 | Non-Tech | | 0.00% | 0.13 | 0.14 | 0 | 0.00 | |
| S2 | | | 0.00% | 10.13 | 10.43 | 0 | 0.00 | |
| S3 | | | 1.33% | 24.53 | 25.26 | 0 | 0.00 | |
| S4 | | | 3.57% | 40.61 | 41.82 | 0 | 0.00 | |
| S5 | | | 6.32% | 69.38 | 71.88 | 0 | 0.00 | |
| S6 | | | 11.97% | 123.81 | 129.77 | 0 | 0.00 | |
| S7 Lights | | | 12.0% | 123.81 | 129.77 | 0 | 234.91 | |
| Metering | | | | | | | | |
| | R/C/m | | | | | | | |
| 1;1 PH kWh Pre-paid | 62.78 | | | | | | | |
| 2;3 PH kWh Pre-paid | 116.51 | | | | | | | |
| 3;1 PH kWh | 61.20 | | | | | | | |
| 4;3 Ph kWh | 114.44 | | | | | | | |
| 5;3 TOU | 270.30 | | | | | | | |
| 6;3 PH TOU & ct's | 792.16 | | | | | | | |
| 7;TOU RMU & CT/VT's | 3137.18 | | | | | | | |
| 8;TOU at HV sub With CB | 6325.73 | | | | | | | |
| 9;NA | 0.00 | | | | | | | |
| 10;0 | 0.00 | | | | | | | |
| AVERAGE | 76.76 | | | | | | | |
| Billing/ cust.service | | | | | | | | |
| | R/C/m | | | | | | | |
| 1;A Small <50 kVa | 54 | | | | | | | |
| 2;B Medium <500 kVa | 536 | | | | | | | |
| 3;C Large <2000 kVa | 2682 | | | | | | | |
| 4;D Very large >2000kVa | 5363 | | | | | | | |
| 5;NA | | | | | | | | |
| | 64 | | | | | | | |

The following should be noted in this respect:

- Own costs increase by CPI.
- The surplus is the actual surplus.
- The surplus reflects the current surplus which NERSA would allow under normal circumstances.
- The R/kVA costs are split here between the dedicated and shared portion as follows:
 - Dedicated refers to networks which cannot really be shared with other customers. For example, if a development is done based on a particular after diversity maximum demand (ADMD) and supplies to various small and large customers are installed, if customers change their loads the

costs do not change, and these networks cannot be used to supply other customers and thus are considered dedicated.

- Assumptions about this is subjective but also reflects the realities in each municipality. Where there is ongoing growth and customers continue to use the power installed this is not a problem.
- In areas where economic growth is bad and customers reduce their demands, the risk of revenue loss is higher to municipalities as there are less customers to share the unused capacity with.
- These values show the total network costs at each position on the network including the costs and losses of all higher voltage networks up to that point. In other words when a demand of say 10 kVA is incurred at a LV point of supply, the demand at the point of purchase which is increased by the total losses up to that point. Losses thus effect the network and energy costs.
- It is important to note that these are per unit values. For example, the energy costs for each profile will be calculated by using the Eskom energy rates, plus the losses up to each relevant network multiplied by the % of kWh in each TOU period multiplied by the total number of kWh for that profile.
- The Eskom and own network costs are calculated by:
 - Multiplying the sum of the monthly maximum demands by that profile by the Eskom maximum demand and own maximum demand per unit costs.
 - Multiplying the highest annual maximum demand by the Eskom access charge plus losses and the own Access costs.

Before one can go from the costs per tariff cost category to costs per tariff, we need to know the statistics of the loads associated with the various tariffs. Representative load profiles were calculated from available data. These were then analysed and the necessary details calculated under the load profile section.

The following comments in this respect:

- The quantities shown represents the quantities associated with each representative load profile at the relevant network where it is supplied from.
- For example, the kWh represents the kWh used by streetlights supplied from the LV network. The Sum of maximum demands represents the sum of the sum of the 12 highest maximum demands incurred on the network, the Annual maximum demands is the highest maximum demand that Streetlight supplies placed on the network in the year.
- Because the individual maximum demand method is used, the maximum demand values of each profile are used irrespective of when it was incurred.
- These quantities will be used to calculate the per unit charges.

The next step is to now calculate the various per unit charges which should apply in respect of the different customer, network and energy charges relevant to the various periods. This makes use of:

- The position at which the customer is supplied to determine:
 - the R/kVA network costs plus R/kVA Eskom costs.
 - the losses % to be added to Energy and Eskom Demand/Access.
- The type of metering and size of supply to determine the metering and billing / customer service costs.

This is shown in Table 47.

Table 47

| GEORGE | | | | | | | |
|--|---------|---------|----------|-------------------|---------------------|------------------------|-----------------|
| year | ## | 1 | | | | | |
| TARIFF CHARGES | TAR RIF | | Netw ork | Profile | Meter | Size | Capacity (Amps) |
| Domestic Indigent PP | 0 | 162 | S6 | A Res Poor | 1;1 PH kWh Pre-paid | 1;A Small <50 kVA | 20 |
| Domestic Indigent Conv | 0 | - | S6 | A Res Poor | 3;1 PH kWh | 1;A Small <50 kVA | 20 |
| Domestic 20 Amp PP | 0 | 141 | S6 | A Res Poor | 1;1 PH kWh Pre-paid | 1;A Small <50 kVA | 20 |
| Domestic 20 Amp Conv | 0 | 161 | S6 | A Res Poor | 3;1 PH kWh | 1;A Small <50 kVA | 20 |
| Domestic > 20 Amp PP | 0 | 343 | S6 | 8 Dom Summ | 1;1 PH kWh Pre-paid | 1;A Small <50 kVA | 35 |
| Domestic > 20 Amp Conv | 0 | 167 | S6 | 8 Dom Summ | 3;1 PH kWh | 1;A Small <50 kVA | 36 |
| Domestic > 20 Amp 3 ph Conv | 0 | 366 | S6 | 8 Dom Summ | 4;3 Ph kWh | 1;A Small <50 kVA | 77 |
| Commercial PP = 20 Amps 1 ph | 0 | 247 | S6 | 2 T 2B Small Buss | 1;1 PH kWh Pre-paid | 1;A Small <50 kVA | 20 |
| Commercial Credit = 20 Amps 1 ph | 0 | 716 | S6 | 2 T 2B Small Buss | 3;1 PH kWh | 1;A Small <50 kVA | 20 |
| Commercial PP > 20 Amps 1 ph | 0 | 1 160 | S6 | 2 T 2B Small Buss | 1;1 PH kWh Pre-paid | 1;A Small <50 kVA | 33 |
| Commercial Credit > 20 Amps 1 ph | 0 | 4 240 | S6 | 2 T 2B Small Buss | 3;1 PH kWh | 1;A Small <50 kVA | 239 |
| Commercial Credit > 20 Amps 3 ph | 0 | 407 | S6 | 2 T 2B Small Buss | 4;3 Ph kWh | 1;A Small <50 kVA | 121 |
| 5.1. Agric 10 kVA to 16 kVA | 0 | 761 | S6 | 2 T 2B Small Buss | 4;3 Ph kWh | 1;A Small <50 kVA | 16 |
| 5.2 Agric above 16 kVA. up to 25 kVA | 0 | 661 | S6 | 2 T 2B Small Buss | 4;3 Ph kWh | 1;A Small <50 kVA | 25 |
| 5.3 Agric above 25 kVA. up to 50 kVA | 0 | 746 | S6 | 2 T 2B Small Buss | 4;3 Ph kWh | 1;A Small <50 kVA | 50 |
| 5.4 Agric above 50 kVA. up to 100 kVA. | 0 | 1 258 | S6 | 2 T 2B Small Buss | 4;3 Ph kWh | 2;B Medium <500 kVA | 100 |
| 1.D.Domestic Flex (TOUP. TOUS. TOU) < 10 | 0 | 399 | S6 | 3 T 2C Comm Flex | 5;3 TOU | 1;A Small <50 kVA | 35 |
| 2.C.Commercial Flex (TOUP. TOUS. TOU) | 0 | 6 712 | S6 | 1 T 1D Dom TOU | 5;3 TOU | 1;A Small <50 kVA | 180 |
| 3.A. GEORGE TIME OF USE: LV > 100 kVA | 0 | 11 519 | S5 | 4 T 3A 380 V | 5;3 TOU | 2;B Medium <500 kVA | - |
| 3.B. GEORGE TIME OF USE: MV | 0 | 71 971 | S4 | 5 T 3B 11 kV | 6;3 PH TOU & ct's | 3;C Large <2000 kVA | - |
| 3.C. GEORGE TIME OF USE: MV at HV sub | 0 | 238 299 | S3 | 6 T 3C | 7;TOU RMU & CT/VT's | 4;D Very large >2000kV | - |
| 3.D Embedded Generation Tariff (Tariff Cod | 0 | - | S6 | 9 Export | 5;3 TOU | 2;B Medium <500 kVA | - |
| 6.1. STREET LIGHTING (Tariff code : 1530. | 0 | 49 | S6 | B Lights | NA | NA | 0 |
| 6.2. NON MUNICIPAL STREETLIGHTS. SE | 0 | 231 | S6 | B Lights | NA | NA | 0 |
| Wheeling | 0 | 0 | S6 | NA | NA | NA | - |
| Availability | 0 | 0 | S6 | NA | NA | NA | 40 |

The resultant costs per tariff broken up in all the different components are shown in Table 48.

Table 48

| GEORGE | CHARGES APPLICABLE FOR ALL MONTHS OF THE YEAR | | | | | | HIGH SEASON CHARGES | | | | LOW SEASON CHARGES | | |
|--|---|-----------|---------------------|---------------|----------------|------------------------|---------------------|-------------------|-----------------------|-----------------------|-------------------------|-------------------|-----------------------|
| | year | 2023/2024 | | details | | Months in year. | | | | Months in year. | | | |
| | TARIFF CHARGES | ## | Cust omer R/cu st/m | Basic R/POS/m | Access R/kVA/m | MD (aLL hours) R/kVA/m | ALL Energy R/ kWh | Energy Peak c/kWh | Energy Standard c/kWh | Energy Off-Peak c/kWh | Reactive energy c/kvarh | Energy Peak c/kWh | Energy Standard c/kWh |
| Domestic Indigent PP | 0 | | 116.408 | 205.824 | 183.130 | 0.271 | 6.675 | 1.669 | 1.112 | 0.2965 | 2.770 | 1.558 | 1.112 |
| Domestic Indigent Conv | 0 | | 114.835 | 205.824 | 183.130 | 0.271 | 6.675 | 1.669 | 1.112 | 0.2965 | 2.770 | 1.558 | 1.112 |
| Domestic 20 Amp PP | 0 | | 116.408 | 205.824 | 183.130 | 0.271 | 6.675 | 1.669 | 1.112 | 0.2965 | 2.770 | 1.558 | 1.112 |
| Domestic 20 Amp Conv | 0 | | 114.835 | 205.824 | 183.130 | 0.271 | 6.675 | 1.669 | 1.112 | 0.2965 | 2.770 | 1.558 | 1.112 |
| Domestic > 20 Amp PP | 0 | | 116.408 | 205.824 | 183.130 | 0.271 | 6.675 | 1.669 | 1.112 | 0.2965 | 2.770 | 1.558 | 1.112 |
| Domestic > 20 Amp Conv | 0 | | 114.835 | 205.824 | 183.130 | 0.271 | 6.675 | 1.669 | 1.112 | 0.2965 | 2.770 | 1.558 | 1.112 |
| Domestic > 20 Amp 3 ph Conv | 0 | | 168.074 | 205.824 | 183.130 | 0.271 | 6.675 | 1.669 | 1.112 | 0.2965 | 2.770 | 1.558 | 1.112 |
| Commercial PP = 20 Amps 1 ph | 0 | | 116.408 | 205.824 | 183.130 | 0.271 | 6.675 | 1.669 | 1.112 | 0.2965 | 2.770 | 1.558 | 1.112 |
| Commercial Credit = 20 Amps 1 ph | 0 | | 114.835 | 205.824 | 183.130 | 0.271 | 6.675 | 1.669 | 1.112 | 0.2965 | 2.770 | 1.558 | 1.112 |
| Commercial PP > 20 Amps 1 ph | 0 | | 116.408 | 205.824 | 183.130 | 0.271 | 6.675 | 1.669 | 1.112 | 0.2965 | 2.770 | 1.558 | 1.112 |
| Commercial Credit > 20 Amps 1 ph | 0 | | 114.835 | 205.824 | 183.130 | 0.271 | 6.675 | 1.669 | 1.112 | 0.2965 | 2.770 | 1.558 | 1.112 |
| Commercial Credit > 20 Amps 3 ph | 0 | | 168.074 | 205.824 | 183.130 | 0.271 | 6.675 | 1.669 | 1.112 | 0.2965 | 2.770 | 1.558 | 1.112 |
| 5.1. Agric 10 kVA to 16 kVA | 0 | | 168.074 | 205.824 | 183.130 | 0.271 | 6.675 | 1.669 | 1.112 | 0.2965 | 2.770 | 1.558 | 1.112 |
| 5.2 Agric above 16 kVA. up to 25 kVA | 0 | | 168.074 | 205.824 | 183.130 | 0.271 | 6.675 | 1.669 | 1.112 | 0.2965 | 2.770 | 1.558 | 1.112 |
| 5.3 Agric above 25 kVA. up to 50 kVA | 0 | | 168.074 | 205.824 | 183.130 | 0.271 | 6.675 | 1.669 | 1.112 | 0.2965 | 2.770 | 1.558 | 1.112 |
| 5.4 Agric above 50 kVA. up to 100 kVA. | 0 | | 650.767 | 205.824 | 183.130 | 0.271 | 6.675 | 1.669 | 1.112 | 0.2965 | 2.770 | 1.558 | 1.112 |
| 1.D.Domestic Flex (TOUP. TOUS. TOU) < 10 | 0 | | 323.937 | 205.824 | 183.130 | 0.271 | 6.675 | 1.669 | 1.112 | 0.2965 | 2.770 | 1.558 | 1.112 |
| 2.C.Commercial Flex (TOUP. TOUS. TOU) | 0 | | 323.937 | 205.824 | 183.130 | 0.271 | 6.675 | 1.669 | 1.112 | 0.2965 | 2.770 | 1.558 | 1.112 |
| 3.A. GEORGE TIME OF USE: LV > 100 kVA | 0 | | 806.630 | 127.152 | 101.265 | 0.258 | 6.338 | 1.585 | 1.056 | 0.2965 | 2.630 | 1.479 | 1.056 |
| 3.B. GEORGE TIME OF USE: MV | 0 | | 3 473.789 | 88.695 | 61.909 | 0.251 | 6.174 | 1.544 | 1.029 | 0.2965 | 2.562 | 1.441 | 1.029 |
| 3.C. GEORGE TIME OF USE: MV at HV sub | 0 | | 8 500.435 | 67.548 | 40.766 | 0.246 | 6.041 | 1.510 | 1.007 | 0.2965 | 2.507 | 1.409 | 1.007 |
| 3.D Embedded Generation Tariff (Tariff Cod | 0 | | 806.630 | 205.824 | 183.130 | 0.271 | 6.675 | 1.669 | 1.112 | 0.2965 | 2.770 | 1.558 | 1.112 |
| 6.1. STREET LIGHTING (Tariff code : 1530. | 0 | | 234.907 | 205.824 | 183.130 | 0.271 | 6.675 | 1.669 | 1.112 | 0.2965 | 2.770 | 1.558 | 1.112 |
| 6.2. NON MUNICIPAL STREETLIGHTS. SE | 0 | | 234.907 | 205.824 | 183.130 | 0.271 | 6.675 | 1.669 | 1.112 | 0.2965 | 2.770 | 1.558 | 1.112 |
| Wheeling | 0 | | - | 205.824 | 183.130 | 0.271 | 6.675 | 1.669 | 1.112 | 0.2965 | 2.770 | 1.558 | 1.112 |
| Availability | 0 | | - | 163.586 | | 0.271 | 6.675 | 1.669 | 1.112 | 0.2965 | 2.770 | 1.558 | 1.112 |

The consumption values of the various customer categories were previously calculated. These quantities are broken up into the detailed cost categories and not billing quantities. This is done by using the representative load profile, load factor and consumption per TOU period.

- The ratio of consumption Peak, Standard, Off-peak
- and the load factors of the different representative load profiles
- are obtained from the representative load profile quantities.

The consumption quantities per TOU period are shown in

Table 49.

Final

Table 49

| GEORGE | | UNITS CHARGED | QUANTITIES CHARGEABLE FOR ALL MONTHS OF THE YEAR | | | | HIGH SEASON QUANTITIES | | | | LOW SEASON QUANTITIES | | | |
|---|-------|-----------------|--|--------------------|----------------------|------------|------------------------|-----------------|-----------------|-----------------|-----------------------|-----------------|-----------------|-----------------|
| CONSUMPTION | | Number of POD's | Number of POD's | Highest MD in year | Σ MDs all hours / 12 | ALL Energy | Energy Peak | Energy Standard | Energy Off-Peak | Reactive energy | Energy Peak | Energy Standard | Energy Off-Peak | Reactive energy |
| TARIFF NAME | TARIF | POD's | kVA | | kWh | kWh | kWh | kWh | kvarh | kWh | kWh | kWh | kWh | kvarh |
| Domestic Indigent PP | 0 | 18 848 | 9 868 | 101 511 | 36 718 497 | 1 624 736 | 4 115 639 | 3 610 919 | 105 530 | 4 932 429 | 11 352 359 | 11 082 415 | 1 866 274 | 1 866 274 |
| Domestic Indigent Conv | 0 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Domestic 20 Amp PP | 0 | 5 129 | 2 334 | 24 007 | 8 683 888 | 384 248 | 973 345 | 853 979 | 17 105 | 1 166 515 | 2 684 822 | 2 620 980 | 302 505 | 302 505 |
| Domestic 20 Amp Conv | 0 | 1 338 | 695 | 7 150 | 2 586 324 | 114 441 | 289 891 | 254 341 | 5 094 | 347 423 | 799 621 | 780 607 | 90 095 | 90 095 |
| Domestic > 20 Amp PP | 0 | 26 975 | 29 888 | 321 866 | 110 938 747 | 5 206 927 | 12 405 557 | 10 639 784 | 191 585 | 15 111 892 | 34 740 349 | 32 834 237 | 3 775 952 | 3 775 952 |
| Domestic > 20 Amp Conv | 0 | 681 | 368 | 3 967 | 1 367 443 | 64 181 | 152 912 | 131 147 | 2 361 | 186 271 | 428 213 | 404 718 | 46 543 | 46 543 |
| Domestic > 20 Amp 3 ph Conv | 0 | 151 | 178 | 1 920 | 681 777 | 31 061 | 74 002 | 63 469 | 1 143 | 90 146 | 207 235 | 195 884 | 22 524 | 22 524 |
| Commercial PP = 20 Amps 1 ph | 0 | 1 620 | 1 337 | 11 398 | 4 805 275 | 198 490 | 533 700 | 521 388 | 30 732 | 553 623 | 1 481 999 | 1 526 074 | 264 318 | 264 318 |
| Commercial Credit = 20 Amps 1 ph | 0 | 948 | 2 268 | 19 332 | 8 150 329 | 319 703 | 905 221 | 864 337 | 52 126 | 939 012 | 2 513 650 | 2 588 406 | 448 316 | 448 316 |
| Commercial PP > 20 Amps 1 ph | 0 | 1 051 | 4 068 | 34 680 | 14 620 820 | 573 513 | 1 623 869 | 1 586 407 | 93 508 | 1 684 488 | 4 509 219 | 4 643 325 | 804 231 | 804 231 |
| Commercial Credit > 20 Amps 1 ph | 0 | 197 | 2 786 | 23 745 | 10 010 553 | 392 671 | 1 111 827 | 1 086 178 | 64 023 | 1 153 332 | 3 087 363 | 3 179 182 | 550 639 | 550 639 |
| Commercial PP > 20 Amps 3 ph | 0 | 1 385 | 1 882 | 16 043 | 6 763 693 | 265 311 | 751 213 | 733 883 | 43 257 | 779 256 | 2 085 996 | 2 148 034 | 372 043 | 372 043 |
| 5.1. Agric 10 kVA to 16 kVA | 0 | 35 | 90 | 767 | 323 258 | 12 680 | 35 903 | 35 075 | 2 067 | 37 243 | 99 696 | 102 661 | 17 781 | 17 781 |
| 5.2. Agric above 16 kVA, up to 25 kVA | 0 | 33 | 72 | 618 | 260 466 | 10 217 | 28 929 | 28 261 | 1 666 | 30 009 | 80 331 | 82 720 | 14 327 | 14 327 |
| 5.3. Agric above 25 kVA, up to 50 kVA | 0 | 10 | 24 | 205 | 86 578 | 3 396 | 9 616 | 9 394 | 554 | 9 975 | 26 702 | 27 496 | 4 762 | 4 762 |
| 5.4. Agric above 50 kVA, up to 100 kVA | 0 | 51 | 215 | 1 836 | 773 898 | 30 357 | 85 953 | 83 970 | 4 949 | 89 162 | 238 679 | 245 777 | 42 569 | 42 569 |
| 1.D. Domestic Flex (TOUP, TOUS, TOU) < 10 | 0 | 91 | 107 | 1 204 | 435 987 | 16 474 | 50 501 | 40 584 | 2 543 | 52 900 | 142 857 | 132 671 | 13 856 | 13 856 |
| 2.C. Commercial Flex (TOUP, TOUS, TOU) | 0 | 93 | 2 620 | 20 314 | 7 470 216 | 360 844 | 795 815 | 1 112 705 | 1 981 | 841 875 | 1 732 655 | 2 626 323 | 39 872 | 39 872 |
| 3.A. GEORGE TIME OF USE: LV > 100 kVA | 0 | 487 | 27 092 | 258 438 | 67 360 493 | 2 690 335 | 7 506 274 | 6 852 995 | 2 065 | 8 244 248 | 21 270 757 | 20 795 883 | 194 165 | 194 165 |
| 3.B. GEORGE TIME OF USE: MV | 0 | 68 | 17 611 | 172 710 | 58 296 888 | 2 232 841 | 5 927 006 | 6 359 593 | 60 422 | 7 028 384 | 17 556 753 | 19 192 311 | 592 220 | 592 220 |
| 3.C. GEORGE TIME OF USE: MV at HV sub | 0 | 14 | 12 563 | 117 450 | 40 034 278 | 1 522 279 | 4 008 506 | 3 922 098 | 531 | 4 900 562 | 13 011 034 | 12 669 799 | 34 119 | 34 119 |
| 3.D. Embedded Generation Tariff (Tariff Cod | 0 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 6.1. STREET LIGHTING (Tariff code: 1530) | 0 | 10 043 | 1 803 | 20 372 | 5 943 416 | 155 296 | 193 011 | 1 229 800 | 136 364 | 436 309 | 466 629 | 3 462 371 | 356 690 | 356 690 |
| 6.2. NON MUNICIPAL STREETLIGHTS. SE | 0 | 43 | 36 | 410 | 119 614 | 3 125 | 3 884 | 24 750 | 2 785 | 8 781 | 9 391 | 69 682 | 7 219 | 7 219 |
| Wheeling | 0 | 2 | 279 | 3 708 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Availability | 0 | 432 | 1 325 | 14 266 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 1. Totals | 1 | 69 724 | 119 511 | 1 177 918 | 396 412 442 | 16 203 127 | 41 582 576 | 40 066 059 | 824 392 | 48 623 834 | 118 526 307 | 121 411 538 | 11 729 295 | 11 729 295 |
| Losses | | | | 8.2% | 420 890 968 | | | | | | | | | |

The following should be noted in this respect:

- The kVA for small customers represents the total maximum kVA placed on the network and not the actual installed capacity of customers. The peak values are calculated from the representative load profile quantities. This corresponds to using the individual maximum demand method for allocating network costs. If the average and access method was used, these values would be slightly different.
- The subsidised quantities: Basic and Free Basic Electricity (FBE) quantities are removed as we calculate costs.
- These quantities have been adjusted so that the same revenue as before is generated.

Table 50 shows the calculation of the total cost per tariff. It multiplies the per unit costs by the number of units to obtain total revenue.

Table 50

| GEORGE | | REVENUES FROM CHARGES APPLICABLE FOR ALL MONTHS OF THE YEAR | HIGH SEASON REVENUES | | | | LOW SEASON REVENUES | | | | | |
|---|-------|---|----------------------|----------------|-------------|--------------|---------------------|-----------------|-----------------|--------------|-----------------|-----------------|
| TOTAL COSTS | | Basic | Access | MD (aLL hours) | ALL Energy | Energy Peak | Energy Standard | Energy Off-Peak | Reactive energy | Energy Peak | Energy Standard | Energy Off-Peak |
| TARIFF NAME | TARIF | R/year | R/year | R/year | R/year | Rand /season | Rand /season | Rand /season | Rand /season | Rand /season | Rand /season | Rand /season |
| Domestic Indigent PP | 0 | 26 328 423 | 24 373 267 | 18 589 724 | 9 963 784 | 10 844 987 | 6 868 001 | 4 016 916 | 31 288 | 13 663 115 | 17 681 449 | 12 328 475 |
| Domestic Indigent Conv | 0 | - | - | - | - | - | - | - | - | - | - | - |
| Domestic 20 Amp PP | 0 | 7 164 087 | 5 764 254 | 4 396 451 | 2 356 425 | 2 564 829 | 1 624 275 | 949 997 | 5 072 | 3 231 313 | 4 181 645 | 2 915 672 |
| Domestic 20 Amp Conv | 0 | 1 843 099 | 1 716 769 | 1 309 396 | 701 814 | 763 883 | 483 578 | 282 938 | 1 510 | 962 383 | 1 245 420 | 868 375 |
| Domestic > 20 Amp PP | 0 | 37 681 096 | 73 819 034 | 58 943 263 | 30 103 893 | 34 755 841 | 20 701 859 | 11 836 077 | 56 803 | 41 860 817 | 54 108 555 | 36 525 982 |
| Domestic > 20 Amp Conv | 0 | 938 680 | 909 901 | 726 541 | 371 064 | 428 404 | 255 173 | 145 893 | 700 | 515 981 | 666 948 | 450 223 |
| Domestic > 20 Amp 3 ph Conv | 0 | 304 045 | 440 349 | 351 611 | 179 577 | 207 327 | 123 492 | 70 605 | 339 | 249 710 | 322 771 | 217 886 |
| Commercial PP = 20 Amps 1 ph | 0 | 2 263 434 | 3 302 500 | 2 087 324 | 1 303 940 | 1 258 160 | 890 616 | 580 011 | 9 112 | 1 533 569 | 2 308 233 | 1 697 659 |
| Commercial Credit = 20 Amps 1 ph | 0 | 1 306 706 | 5 601 440 | 3 540 355 | 2 211 641 | 2 133 992 | 1 510 593 | 983 769 | 15 455 | 2 601 118 | 3 915 043 | 2 879 436 |
| Commercial PP > 20 Amps 1 ph | 0 | 1 467 670 | 10 048 386 | 6 351 018 | 3 967 447 | 3 828 153 | 2 709 843 | 1 764 776 | 27 724 | 4 666 129 | 7 023 169 | 5 165 401 |
| Commercial Credit > 20 Amps 1 ph | 0 | 2 171 125 | 6 879 908 | 4 348 402 | 2 716 423 | 2 621 052 | 1 855 369 | 1 208 303 | 18 982 | 3 194 795 | 4 808 609 | 3 536 636 |
| Commercial Credit > 20 Amps 3 ph | 0 | 2 793 049 | 4 648 453 | 2 938 025 | 1 835 369 | 1 770 930 | 1 253 592 | 816 398 | 12 825 | 2 158 584 | 3 248 967 | 2 389 550 |
| 5.1. Agric 10 kVA to 16 kVA | 0 | 71 431 | 222 164 | 140 417 | 87 718 | 84 638 | 59 913 | 39 018 | 613 | 103 165 | 155 278 | 114 204 |
| 5.2. Agric above 16 kVA, up to 25 kVA | 0 | 66 221 | 179 009 | 113 142 | 70 679 | 68 198 | 48 275 | 31 439 | 494 | 83 126 | 125 116 | 92 200 |
| 5.3. Agric above 25 kVA, up to 50 kVA | 0 | 19 497 | 59 502 | 37 608 | 23 493 | 22 669 | 16 046 | 10 450 | 164 | 27 631 | 41 588 | 30 587 |
| 5.4. Agric above 50 kVA, up to 100 kVA | 0 | 400 222 | 531 873 | 336 167 | 210 002 | 202 629 | 143 435 | 93 412 | 1 467 | 246 984 | 371 745 | 273 411 |
| 1.D. Domestic Flex (TOUP, TOUS, TOU) < 10 | 0 | 354 387 | 265 327 | 220 528 | 118 308 | 109 965 | 84 274 | 45 147 | 754 | 146 536 | 222 501 | 147 588 |
| 2.C. Commercial Flex (TOUP, TOUS, TOU) | 0 | 360 542 | 6 471 476 | 3 720 069 | 2 027 088 | 2 408 606 | 1 328 022 | 1 237 813 | 587 | 2 332 042 | 2 698 632 | 2 921 616 |
| 3.A. GEORGE TIME OF USE: LV > 100 kVA | 0 | 4 717 173 | 41 338 172 | 26 170 755 | 17 356 620 | 17 051 918 | 11 894 275 | 7 238 955 | 612 | 21 685 048 | 31 458 296 | 21 967 105 |
| 3.B. GEORGE TIME OF USE: MV | 0 | 2 813 769 | 18 744 470 | 10 692 284 | 14 632 552 | 13 786 040 | 9 148 791 | 6 543 944 | 17 914 | 18 008 588 | 25 293 635 | 19 748 656 |
| 3.C. GEORGE TIME OF USE: MV at HV sub | 0 | 1 428 073 | 10 182 892 | 4 787 913 | 9 831 017 | 9 195 336 | 6 053 446 | 3 948 394 | 157 | 12 284 622 | 18 338 787 | 12 754 743 |
| 3.D. Embedded Generation Tariff (Tariff Cod | 0 | - | - | - | - | - | - | - | - | - | - | - |
| 6.1. STREET LIGHTING (Tariff code: 1530) | 0 | 28 310 534 | 4 453 292 | 3 730 645 | 1 612 782 | 1 036 592 | 322 089 | 1 368 073 | 41 023 | 1 208 601 | 726 781 | 3 851 665 |
| 6.2. NON MUNICIPAL STREETLIGHTS. SE | 0 | 121 682 | 89 625 | 75 081 | 32 458 | 20 862 | 6 482 | 27 533 | 826 | 24 324 | 14 627 | 77 517 |
| Wheeling | 0 | - | 690 084 | 679 086 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Availability | 0 | - | 3 250 333 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1. Totals | 1 | 121 024 925 | 223 982 481 | 154 285 808 | 101 714 095 | 105 165 011 | 67 381 620 | 43 239 861 | 244 422 | 130 788 181 | 178 957 792 | 130 954 411 |

The following very important point must be noted:

- In the sales analysis it was shown that the calculated revenue using the sales data and tariff data does not exactly achieve the revenue as indicated in the trial balance.
- This is because of inaccurate data provided because of various reasons including journals made in Rand values but not in sales volumes.
- The target sales revenue will thus not be that in the trial balance but that calculated from current tariffs plus adjustments.
- The adjustments are to add back the income foregone from FBE if not included in “n-1” calculations.

The target revenue from the new cost reflective tariffs is shown in Table 51.

Table 51

| | | |
|-------------------------------------|--|----------------------|
| TARGET REVENUE | | 2024/2025 |
| Previously calculated revenue | | 1 215 899 732 |
| Plus Income foregone 2022/2023 | | 29 630 565 |
| Plus add internal sales | | |
| Plus additional streetlight revenue | | 10 839 139 |
| Total | | 1 256 369 436 |

The adjustments that were made to the per unit costs are shown in Table 52.

Table 52

| | | |
|---------------------|---------------------|-------------------|
| Basic adjust | Cap/MD djust | kWh adjust |
| | 18.00% | 0.00% |

The expanded summary data is shown in Table 53.

Table 53

| GEORGE | | | | | |
|---|----------------|----------------------|-----------------------|--------------------|---------------------|
| TOTAL COSTS | | TOTAL | REFERENCE | OVERCHARGE | % Overcharge |
| TARIFF NAME | TARIF F | COST | TARIFF REVENUE | RAND | +% of Tariff |
| Domestic Indigent PP | 0 | 144 689 430 | 61 780 560 | -82 908 870 | -134.2% |
| Domestic Indigent Conv | 0 | - | - | - | 0.0% |
| Domestic 20 Amp PP | 0 | 35 154 020 | 26 936 553 | -8 217 467 | -30.5% |
| Domestic 20 Amp Conv | 0 | 10 179 346 | 8 022 518 | -2 156 828 | -26.9% |
| Domestic > 20 Amp PP | 0 | 400 393 220 | 396 995 947 | -3 397 273 | -0.9% |
| Domestic > 20 Amp Conv | 0 | 5 409 489 | 6 173 110 | 763 621 | 12.4% |
| Domestic > 20 Amp 3 ph Conv | 0 | 2 467 713 | 2 774 960 | 307 248 | 11.1% |
| Commercial PP = 20 Amps 1 ph | 0 | 17 234 556 | 14 905 482 | -2 329 075 | -15.6% |
| Commercial Credit = 20 Amps 1 ph | 0 | 26 699 546 | 25 281 506 | -1 418 040 | -5.6% |
| Commercial PP > 20 Amps 1 ph | 0 | 47 019 715 | 49 464 743 | 2 445 027 | 4.9% |
| Commercial Credit > 20 Amps 1 ph | 0 | 31 459 605 | 36 034 334 | 4 574 729 | 12.7% |
| Commercial Credit > 20 Amps 3 ph | 0 | 23 865 742 | 41 534 895 | 17 669 153 | 42.5% |
| 5.1. Agric 10 kVA to 16 kVA | 0 | 1 078 561 | 1 123 943 | 45 382 | 4.0% |
| 5.2 Agric above 16 kVA. up to 25 kVA | 0 | 877 719 | 1 036 551 | 158 832 | 15.3% |
| 5.3 Agric above 25 kVA. up to 50 kVA | 0 | 289 236 | 413 593 | 124 358 | 30.1% |
| 5.4 Agric above 50 kVA. up to 100 kVA. | 0 | 2 811 347 | 3 211 520 | 400 173 | 12.5% |
| 1.D.Domestic Flex (TOUP. TOUS . TOU) < 1 | 0 | 1 715 314 | 1 480 687 | -234 627 | -15.8% |
| 2.C.Commercial Flex (TOUP. TOUS . TOU) | 0 | 25 506 494 | 17 636 722 | -7 869 772 | -44.6% |
| 3.A. GEORGE TIME OF USE: LV > 100 kVA | 0 | 200 878 929 | 225 121 595 | 24 242 666 | 10.8% |
| 3.B. GEORGE TIME OF USE: MV | 0 | 139 430 645 | 158 414 145 | 18 983 500 | 12.0% |
| 3.C. GEORGE TIME OF USE: MV at HV sub | 0 | 88 805 381 | 98 862 916 | 10 057 535 | 10.2% |
| 3.D. Embedded Generation Tariff (Tariff Cod | 0 | - | - | - | 0.0% |
| 6.1. STREET LIGHTING (Tariff code : 1530. | 0 | 46 662 077 | 35 768 001 | -10 894 076 | -30.5% |
| 6.2. NON MUNICIPAL STREETLIGHTS. SE | 0 | 491 015 | - | -491 015 | 0.0% |
| Wheeling | 0 | - | - | - | 0.0% |
| Availability | 0 | 3 250 335 | 2 925 451 | -324 884 | -11.1% |
| 1. Total | | 1 256 369 436 | 1 215 899 732 | -40 469 702 | |

The results are illustrated below in **Figure 29** in % of cost and in **Figure 30** in Rand difference between cost and current revenue. The vertical axis refers to % over or under recovery and the horizontal axis refer to the tariff.

Figure 29

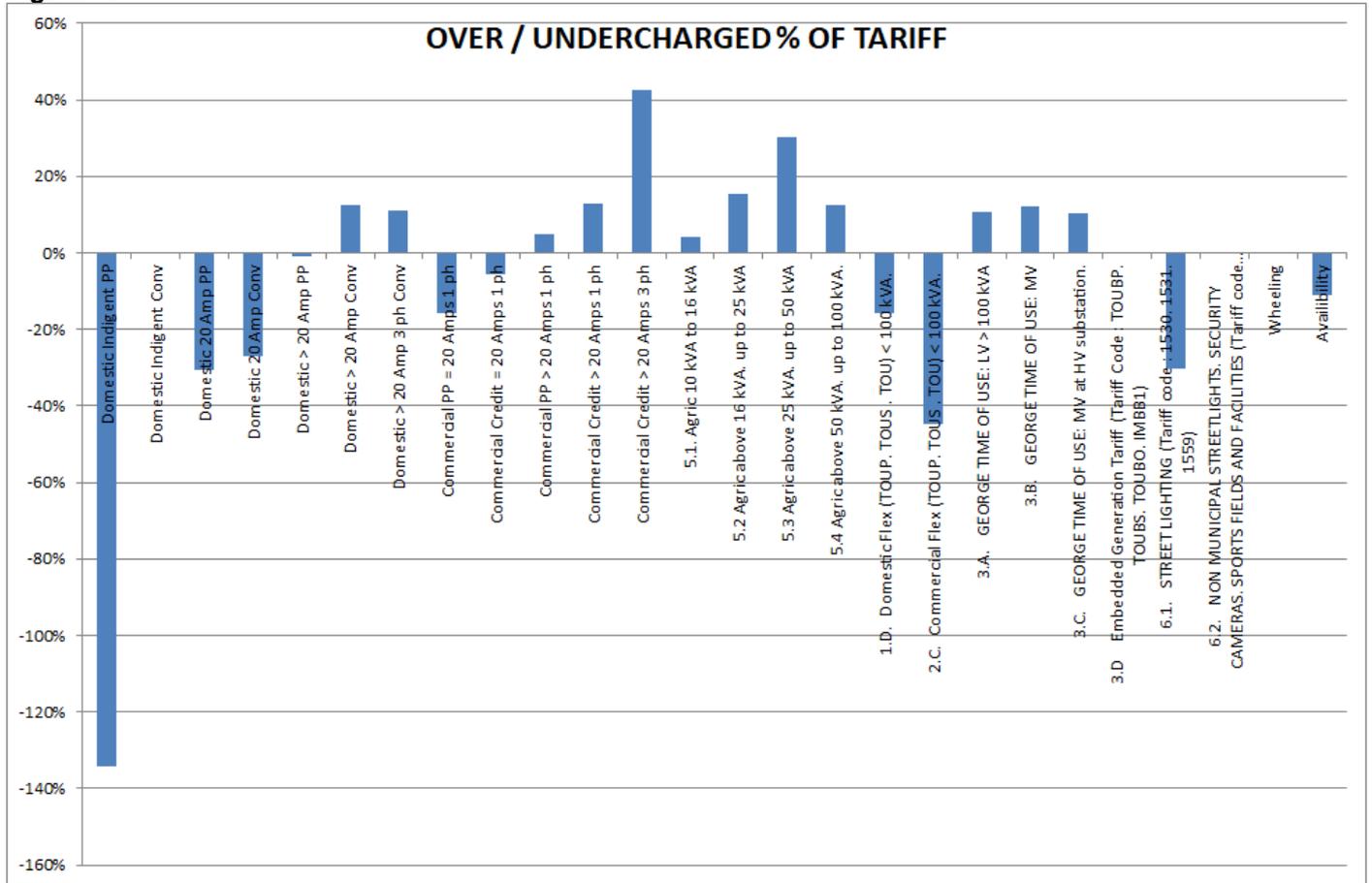
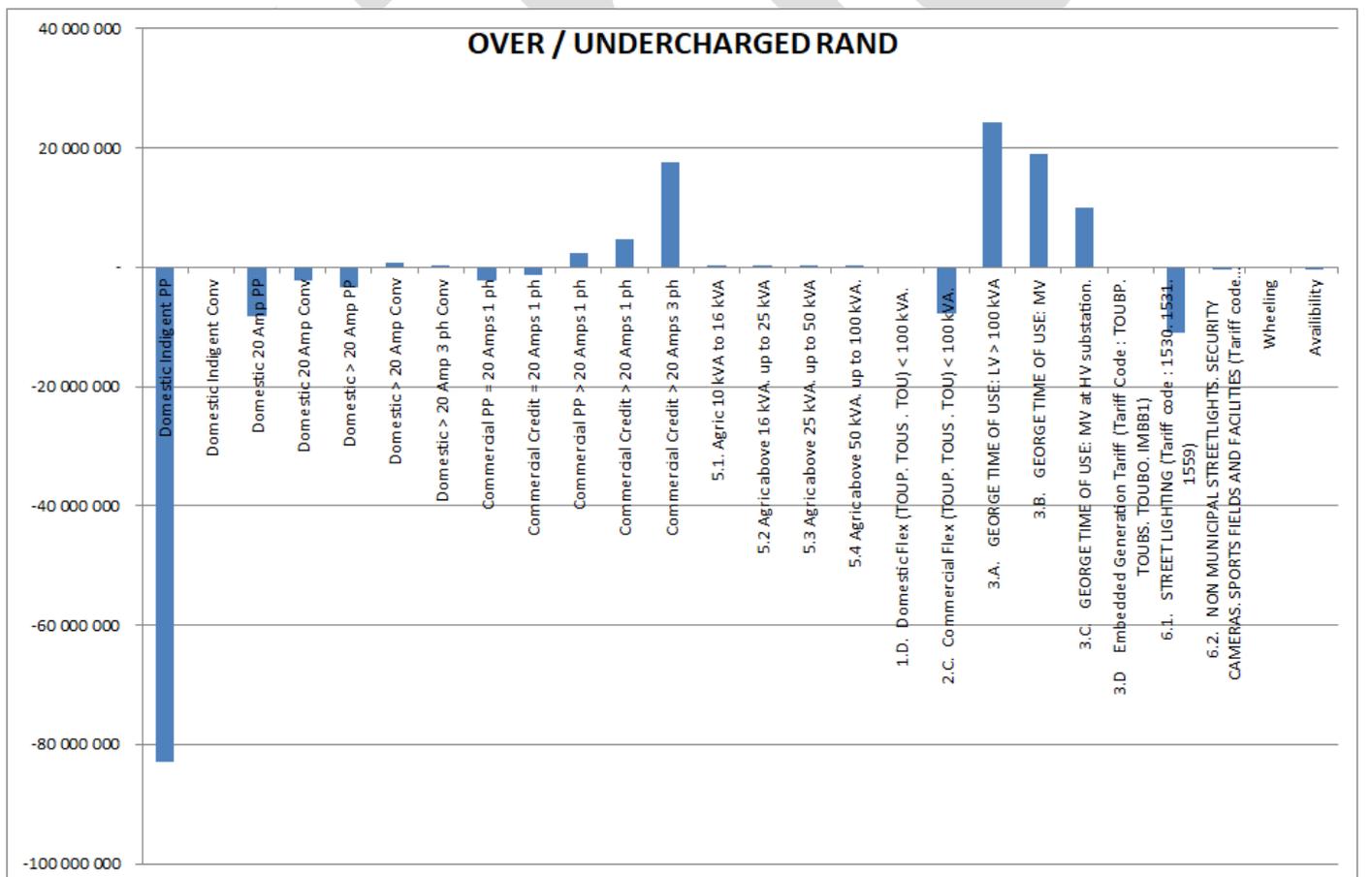


Figure 30



1.12. Key findings

The following key findings can be made in terms of the tariff levels and structures:

- Indigent customers are seriously. This is due the lack of fixed charges, the low first 2 blocks energy rates and FBE.
- Households alternative are also seriously subsidised due to the same issues as for Indigent consumers.
- Other domestic consumers are close to cost or slightly overcharged.
- Commercial customers without basic charges are overcharged when average consumption is high and undercharged when low.
- All other commercial tariffs are extensively overcharged.
- Bulk consumers at LV and LV undercharged but municipal supplies overcharged due to bad load factors.
- TOU at MV and LV customers are slightly overcharged.
- Streetlight tariffs are too low and do not cover the fixed maintenance costs.

12. PRICING STUDY

Now that the costs are known and how it differs from revenue, new tariffs can be developed. The first step in this process is to develop a new pricing policy.

1.13. Pricing Policy Drivers

It is now clear that the tariffs fall short in being cost reflective tariffs. The challenge is to determine what must guide the changes to be made to become more cost reflective. This section proposes the pricing principles and policies to be followed in making tariff changes.

The key sources used for purpose of formulating these policies are:

- The South African Constitution.
- The South African Electricity Pricing Policy (EPP).
- Municipal Finance Management Act (MFMA).
- Municipal Systems Act (MSA).

NERSA regulates the electricity tariffs in South Africa. The NERSA policies and guidelines thus have to be followed. There are however various NERSA guidelines in conflict with some of the legislation and regulations. The results of the cost of supply study must thus be used to move NERSA in accepting the municipal proposals.

2.1 General Tariff Principles

Section 16 of the Electricity Regulation Act of 2006 states that the setting of prices, charges, tariffs and the regulation of revenues:

- a. must enable an efficient licensee to recover the full cost of its licensed activities, including a reasonable margin or return;
- b. must provide for or prescribe incentives for continued improvement of the technical and economic efficiency with which services are to be provided;
- c. must give end users proper information regarding the costs that their consumption imposes on the licensee's business;
- d. must avoid undue discrimination between customer categories; and
- e. may permit the cross-subsidy of tariffs to certain categories of customers.

Principles obtained from the Municipal Systems Act are as follows:

- a. Users of municipal services should be treated equitably in the application of tariffs.
- b. The amount individual users pay for services should generally be in proportion to their use of that service.
- c. Low income households must have access to at least basic services through:
 - tariffs that cover only operating and maintenance costs;
 - special tariffs or life line tariffs for low levels of use or consumption of services or for basic levels of service; or
 - any other direct or indirect method of subsidisation of tariffs for low income households.
- d. Tariffs must reasonable reflect the costs associated with rendering the service, including capital, operating, maintenance, administration and replacement costs, and interest charges.
- e. Tariffs must be set at levels that facilitate the financial sustainability of the service, taking into account subsidisation from sources other than the service concerned.
- f. Provision may be made for the promotion of local economic development through special tariffs for categories of commercial and industrial users.
- g. The economical, efficient and effective use of resources, the recycling of waste and other appropriate environmental objectives must be encouraged.
- h. The extent of subsidisation of tariffs for low income households and other categories of users should be fully disclosed.
- i. A tariff policy may differentiate between different categories of users, debtors, service providers, services, service standards, geographical areas and other matters as long as such differentiation does not amount to unfair discrimination.

1.14. Pricing policy.

In view of the findings to date, the summarised pricing policy is provided below:

- It should be in line with the National Electricity Pricing Policy.
- All tariffs should be set as close as possible to the cost of supply.
- Indigent customers as registered in terms of indigent policy.
 - These customers limited to 20 Amps with no fixed charges.
 - The current IBT energy rates be retailed.
 - Free Basic Electricity (FBE) of 70 kWh/m off-set by equitable share.
 - Indigent consumers with 1 backyard shack receive double the FBE and can apply for a 30 Amp supply.
 - Indigent consumers with two backyard shacks receive three times the FBE and can apply for a 40 Amp supply.
- Cross subsidisation of low usage domestic customers (poor but not indigent) customers should be done as follows:
 - Customers limited to 20 Amps with no fixed charges.
 - A single energy rate is applied.
 - No FBE is granted.
- All small customers (domestic / business) > 20 Amp should have a fully cost reflective tariff:
 - A basic charge to reflect the fixed metering, billing, revenue collection and customer services costs.
 - A capacity charge based on the installed / limited capacity of the customer. In other words, the total network costs as calculated for that tariff before (using the relevant demand allocation method), is now divided by the customers' actual capacity.
 - An energy charge that covers the full energy cost, losses and surplus mark-up.
- All large customers should be charged on a TOU tariff with structure and TOU slots as per the Eskom Megaflex tariff applicable to George including changes over time:
 - Basic charge.
 - Capacity charge based on the highest of the following:
 - Notified demand or highest **annual** maximum demand to cover Eskom Access charge plus dedicated municipal network costs.
 - Maximum demand charge based on **monthly** highest maximum during Peak and Standard Periods only.

- Energy charges for:
 - High Demand (June, July and August) and Low demand (all other months)
 - Peak, Standard and Off-peak (See diagram below)
 These are all set with a fixed c/kWh on the Eskom tariff rather than a fixed % to avoid the net revenue loss impact when customers shift load.
- Reactive energy charge based on kvarh in excess of 30% of kWh during all peak and Standard period for both seasons.
- Public holidays treated as the day they fall on.
- The tariffs should be different small consumers (<100 kVA), LV and MV.

This means that each customer will pay an average price depending on its own TOU ratio's and load factor. This is the same as applied by Eskom on its TOU tariffs.

TOU periods are as per Municflex.

- Co-generation charges. (SSEG-tariff)
 - The standard Access / Capacity charges remain.
 - Energy purchased by the customer be charged at the relevant standard tariff charges.
 - An additional basic charge be levied to cover the additional metering / billing costs.
 - The energy purchased from the customer be credited on TOU period based on 80% of Eskom energy rates.

1.15. Cross subsidies to the poor.

In view of the proposed pricing policy, it is further proposed that the tariffs for Indigents and 20 Amp customers are not increased structurally. The extent of the cross subsidy in this case is then calculated.

The results of these calculations are shown in Table 54 existing and it will remain the same.

Table 54

| SUBSIDY ANALYSIS | | | | | | | |
|---|-----------|--------------------|-------------------|-------------------|-------------------|-------------------|------------|
| Tariffs to be subsidised | Customers | Tot Cost | Current revenue | Shortfall | Equitable share | Subsidy | % subsidy |
| Domestic Indigent PP | 18 848 | 144 689 430 | 61 780 560 | 82 908 870 | 34 997 488 | 47 911 383 | 33% |
| Domestic Indigent Conv | - | - | - | - | - | - | - |
| Domestic 20 Amp PP | 5 129 | 35 154 020 | 26 936 553 | 8 217 467 | - | 8 217 467 | 23% |
| Domestic 20 Amp Conv | 1 338 | 10 179 346 | 8 022 518 | 2 156 828 | - | 2 156 828 | 21% |
| TOTAL | | 190 022 796 | 96 739 631 | 93 283 165 | 34 997 488 | 58 285 677 | 31% |
| Total revenue excluding subsidy customers | | 1 119 160 101 | | | | | |
| Total subsidy as % of Base revenue | | | | | | 5.21% | |

This subsidy % is of non-subsidised revenue. The question thus is what the charge for the indigent customers should be.

Table 55 shows the calculation of the marginal Eskom purchase costs. The marginal costs do not refer to the average Eskom purchase price but the price of the domestic customers on its own. In other words, the impact that domestic customers have on increasing the access charge, maximum demand charge, energy charges during the various periods and the reactive energy charges.

Table 55

| DOMESTIC ENERGY /MARGINAL ESKOM COST ANALYSIS | | | | | | |
|---|---------|--------|---|--------|---------------------|-----------|
| Eskom | | | | | | 2024/2025 |
| Generation Capacity charge | R/kVA/m | | | | | R0.00 |
| Transmission network access | R/kVA/m | | | | | R16.05 |
| Network access charge: High | R/kVA/m | | | | | R11.55 |
| Network demand Charge Low | R/kVA/m | | | | | R21.37 |
| Urban low voltage subsidy charge | R/kVA/m | | | | | R28.29 |
| Energy charges | | | Electricificati on and rural network subsidy charge [c/kWh] | Legacy | Reliability service | Total |
| 'High demand season [Jun - Peak | R/kWh | 581.59 | 4.62 | 19.27 | 0.34 | 605.83 |
| Standard | R/kWh | 145.40 | 4.62 | 19.27 | 0.34 | 169.64 |
| Off Peak | R/kWh | 96.93 | 4.62 | 19.27 | 0.34 | 121.16 |
| 'Low demand season [Sep - May] | | | | | | |
| Peak | R/kWh | 241.36 | 4.62 | 19.27 | 0.34 | 265.59 |
| Standard | R/kWh | 135.71 | 4.62 | 19.27 | 0.34 | 159.94 |
| Off Peak | R/kWh | 96.93 | 4.62 | 19.27 | 0.34 | 121.16 |

| Domestic characteristics | | | | | | | | | | |
|--------------------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------------|--------|
| DATA PER | | | | | | | | | | |
| BILLING CYCLE | | | | | | | | | | |
| MONTH | | | | | | | | | | |
| Domestic | | | | | | | | | | |
| Dom Poor | | | | | | | | | | |
| | P | S | O | P | S | O | Monthly LF | Annual LF | Reactive Energy | Losses |
| | kWh (FOR) | % | % | % of kWh | |
| | 4.7% | 11.2% | 9.6% | 13.6% | 31.3% | 29.6% | 49.6% | 42.5% | | 11.97% |
| | 4.4% | 11.2% | 9.8% | 13.4% | 30.9% | 30.2% | 49.6% | 42.5% | | 11.97% |

| | |
|--------------------|-----------|
| Vending of PP cust | R/cust/m |
| 26818467 | 53 622.33 |
| | 41.67801 |

| EFFECTIVE R/KWH | Transmission network charges [R/kVA/m] | Distribution network charges | Energy charges High demand season [Jun - Aug] | | | Energy charges Low demand season [Sep - May] | | | Eskom Increase | Vending | GRAND TOTAL |
|-----------------|--|------------------------------|---|-----------------------|--|--|----------|----------|----------------|---------|-------------|
| | | | Network capacity charge | Network demand charge | Urban low voltage subsidy charge [R/kVA/m] | Peak | Standard | Off Peak | | | |
| c/KWH | R/kVA/m | R/kVA/m | R/kVA/m | R/kVA/m | c/kWh | c/kWh | c/kWh | c/kWh | c/kWh | c/kWh | R 42 |
| Eskom charges | 0 | 16.05 | 21.37 | 28.29 | 605.83 | 169.64 | 121.16 | 265.59 | 159.94 | 121.16 | 28.30 |
| Domestic | - | 4.968 | 6.615 | 8.757 | 31.84 | 21.24 | 13.01 | 40.51 | 56.08 | 40.15 | - |
| Dom Poor | - | 4.968 | 6.615 | 8.757 | 30.02 | 21.29 | 13.34 | 39.95 | 55.37 | 40.95 | - |
| | | | | | | | | | | | 0.26 |
| | | | | | | | | | | | 0.12 |

The following in this respect:

- The Municflex charges are those applicable to George municipality.
- The TOU consumption ratios and load factors were calculated from the representative load profiles.
- The monthly vending costs is the total vending cost divided by the number of customers divided by 12. This is then converted to a c/kWh for each domestic tariff category.
- This shows that the marginal cost of Eskom purchases for indigent customers is 217 c/kWh in 2024/2025 values.
- In time this can be reviewed depending on the subsidy on non-subsidised customers.

The equitable share is calculated as shown in Table 56 and compared with the actual amount applied. It shows that the current equitable share covers more than the revenue foregone. The second part of the table shows the situation of the equitable share covered 70 kWh/m at the energy costs as well as the fixed costs, basic and capacity at cost.

Table 56

| EQUITABLE SHARE VALUE CALCULATION | | | | | | | |
|-----------------------------------|------------------|----------------------|-------------|----------------------|----------------------|---------------------|-----------------------|
| TARIFF | CUSTOMERS | FBE KWH | Fixed costs | ENERGY CHARGE / COST | TOTAL BASIC SUBSIY | TOTAL UNITS SUBSIDY | TOTAL FBE SUBSIDY |
| Domestic Indigent PP | 18 847.83 | 12 627 020.00 | | 2.35 | - | 29 630 565 | 29 630 565.13 |
| Domestic Indigent Conv | - | - | | 2.35 | - | - | - |
| GRAND TOTAL | 18 847.83 | 12 627 020.00 | - | 4.69 | - | 29 630 565 | 29 630 565.13 |
| PROPOSED | | | | | | | |
| Domestic Indigent PP | 18 847.83 | 12 627 020.00 | 382.33 | 2.18 | 86 474 189.62 | 27 547 129 | 114 021 318.45 |
| Domestic Indigent Conv | - | - | | | - | - | - |
| GRAND TOTAL | 56 543.50 | 37 881 060.00 | | | 86 474 189.62 | 86 808 259 | 114 021 318.45 |
| | | | | | | Trail Balance | 34 997 487.66 |

If this is done almost the total subsidy in George will be overcome.

13. PROPOSED TARIFFS

In view of the proposed pricing policy the following tariffs are proposed for George as shown below:

Table 58

| GEORGE | | 2023/2024 cost escalated to 2024/2025 | | | | | | | | | | |
|------------------|--|---------------------------------------|------------------|-------------|--------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 1 | | Escalation | Already done | | 0.00% | Hi Demand | | 3 | Low demand | | 9 | |
| 1 | | | | | | Energy Peak | Energy Standard | Energy Off-Peak | Energy Peak | Energy Standard | Energy Off-Peak | Reactive energy |
| PROPOSED TARIFFS | | Basic charge | Access / kVA | MD / kVA | Energy | Block 1 energy | Block 2 energy | BBlock 3 energy | BBlock 4 energy | BBlock 5 energy | | |
| Nr | TARIFF NAME | Rand/ month | Rand/ Amp /kVA/m | Rand/ kVA/m | R/kWh | R/kWh | R/kWh | R/kWh | R/kWh | R/kWh | R/kWh | R/kWh |
| 1.00 | Domestic Indigent PP | | | | 3.9405 | | | | | | | |
| 1.00 | Domestic Indigent Conv | | | | 3.9405 | | | | | | | |
| 1.00 | Domestic 20 Amp PP | | | | 6.2384 | | | | | | | |
| 1.00 | Domestic 20 Amp Conv | | | | 6.2384 | | | | | | | |
| 1.00 | Domestic > 20 Amp PP | 116 | 11.52 | | 2.0728 | | | | | | | |
| 1.00 | Domestic > 20 Amp Conv | 116 | 11.52 | | 2.0728 | | | | | | | |
| 1.00 | Domestic > 20 Amp 3 ph Conv | 168 | 11.52 | | 2.0728 | | | | | | | |
| 1.00 | Commercial PP = 20 Amps 1 ph | | | | 2.6606 | | | | | | | |
| 1.00 | Commercial Credit = 20 Amps 1 ph | | | | 2.6606 | | | | | | | |
| 1.00 | Commercial PP > 20 Amps 1 ph | 116 | 11.52 | | 1.9939 | | | | | | | |
| 1.00 | Commercial Credit > 20 Amps 1 ph | 116 | 11.52 | | 1.9939 | | | | | | | |
| 1.00 | Commercial Credit > 20 Amps 3 ph | 168 | 11.52 | | 1.9939 | | | | | | | |
| 1.00 | 5.1. Agric 10 kVA to 16 kVA | 168 | 19.30 | | 1.9939 | | | | | | | |
| 1.00 | 5.2 Agric above 16 kVA. up to 25 kVA | 168 | 19.30 | | 1.9939 | | | | | | | |
| 1.00 | 5.3 Agric above 25 kVA. up to 50 kVA | 168 | 19.30 | | 1.9939 | | | | | | | |
| 1.00 | 5.4 Agric above 50 kVA. up to 100 kVA | 651 | 19.30 | | 1.9939 | | | | | | | |
| 1.00 | 1.D.Domestic Flex (TOUP. TOUS . TOU) < 100 kVA | 324 | 11.52 | | | 6.6749 | 1.6688 | 1.1124 | 2.7701 | 1.5575 | 1.1124 | 0.2965 |
| 1.00 | 2.C.Commercial Flex (TOUP. TOUS . TOU) < 100 kVA | 324 | 11.52 | | | 6.6749 | 1.6688 | 1.1124 | 2.7701 | 1.5575 | 1.1124 | 0.2965 |
| 1.00 | 3.A. GEORGE TIME OF USE: LV > 100 kVA | 807 | 127.15 | 101.27 | | 6.3382 | 1.5846 | 1.0563 | 2.6303 | 1.4789 | 1.0563 | 0.2965 |
| 1.00 | 3.B. GEORGE TIME OF USE: MV | 3 474 | 88.70 | 61.91 | | 6.1742 | 1.5436 | 1.0290 | 2.5623 | 1.4407 | 1.0290 | 0.2965 |
| 1.00 | 3.C. GEORGE TIME OF USE: MV at HV sub | 8 500 | 67.55 | 40.77 | | 6.0405 | 1.5102 | 1.0067 | 2.5068 | 1.4095 | 1.0067 | 0.2965 |
| 1.00 | 3.D. Embedded Generation Tariff (Tariff Code : TOUBP. TOUBS. TOUBO. IMBB1) | | | | | | | | | | | |
| 1.00 | 6.1. STREET LIGHTING (Tariff code : 1530. 1530) | 235 | | | 3.0877 | | | | | | | |
| 1.00 | 6.2. NON MUNICIPAL STREETLIGHTS. SEC | 235 | | | 3.0877 | | | | | | | |
| 1.00 | Wheeling | - | | | | | | | | | | |
| 1.00 | Availability | 627 | | | | | | | | | | |

Table 59

| GEORGE | | 2024/2025 Proposed before phase in and increase | | | | | | | | | | |
|------------------|--|---|------------------------|----------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 1 | | Basic adjust. | Access /Demand adjust. | Energy adjust. | Subsidy adjust. | Hi Demand | | 3 | Low demand | | 9 | |
| 1 | | | 7.32% | | 5.21% | Energy Peak | Energy Standard | Energy Off-Peak | Energy Peak | Energy Standard | Energy Off-Peak | Reactive energy |
| PROPOSED TARIFFS | | Basic charge | Access / kVA | MD / kVA | Energy | Block 1 energy | Block 2 energy | BBlock 3 energy | BBlock 4 energy | BBlock 5 energy | | |
| Nr | TARIFF NAME | Rand/ month | Rand/ kVA/m | Rand/ kVA/m | R/kWh | R/kWh | R/kWh | R/kWh | R/kWh | R/kWh | R/kWh | R/kWh |
| 1.00 | Domestic Indigent PP | | | | | | 2.347 | 3.396 | | | | |
| 1.00 | Domestic Indigent Conv | | | | | | 2.347 | 3.396 | | | | |
| 1.00 | Domestic 20 Amp PP | | | | 3.1019 | | | | | | | |
| 1.00 | Domestic 20 Amp Conv | | | | 3.1019 | | | | | | | |
| 1.00 | Domestic > 20 Amp PP | 122.43 | 13.00 | | 2.1807 | | | | | | | |
| 1.00 | Domestic > 20 Amp Conv | 122.43 | 13.00 | | 2.1807 | | | | | | | |
| 1.00 | Domestic > 20 Amp 3 ph Conv | 176.83 | 13.00 | | 2.1807 | | | | | | | |
| 1.00 | Commercial PP = 20 Amps 1 ph | | | | 3.1019 | | | | | | | |
| 1.00 | Commercial Credit = 20 Amps 1 ph | | | | 3.1019 | | | | | | | |
| 1.00 | Commercial PP > 20 Amps 1 ph | 122.21 | 13.00 | | 2.0978 | | | | | | | |
| 1.00 | Commercial Credit > 20 Amps 1 ph | 122.21 | 13.00 | | 2.0978 | | | | | | | |
| 1.00 | Commercial Credit > 20 Amps 3 ph | 176.83 | 13.00 | | 2.0978 | | | | | | | |
| 1.00 | 5.1. Agric 10 kVA to 16 kVA | 403.90 | | | 2.9459 | | | | | | | |
| 1.00 | 5.2 Agric above 16 kVA. up to 25 kVA | 683.36 | | | 2.9459 | | | | | | | |
| 1.00 | 5.3 Agric above 25 kVA. up to 50 kVA | 1 366.75 | | | 2.9459 | | | | | | | |
| 1.00 | 5.4 Agric above 50 kVA. up to 100 kVA | 1 514.95 | | | 2.9459 | | | | | | | |
| 1.00 | 1.D.Domestic Flex (TOUP. TOUS . TOU) < 100 kVA | 340.81 | 13.00 | | | 6.4149 | 2.0530 | 1.5683 | 3.0126 | 1.9561 | 1.5683 | |
| 1.00 | 2.C.Commercial Flex (TOUP. TOUS . TOU) < 100 kVA | 340.81 | 13.00 | | | 6.4142 | 2.0523 | 1.5676 | 3.0119 | 1.9554 | 1.5676 | |
| 1.00 | 3.A. GEORGE TIME OF USE: LV > 100 kVA | 848.64 | 143.56 | 114.34 | | 6.3092 | 1.9473 | 1.4626 | 2.9069 | 1.8504 | 1.4626 | 0.2893 |
| 1.00 | 3.B. GEORGE TIME OF USE: MV | 3 654.70 | 100.14 | 69.90 | | 6.2548 | 1.8929 | 1.4081 | 2.8524 | 1.7959 | 1.4081 | 0.2893 |
| 1.00 | 3.C. GEORGE TIME OF USE: MV at HV sub | 8 943.14 | 76.27 | 46.03 | | 6.2138 | 1.8519 | 1.3671 | 2.8114 | 1.7549 | 1.3671 | 0.2893 |
| 1.00 | 3.D. Embedded Generation Tariff (Tariff Code : TOUBP. TOUBS. TOUBO. IMBB1) | | | | | | | | | | | |
| 1.00 | 6.1. STREET LIGHTING (Tariff code : 1530. 1530) | 247.14 | | | 3.2485 | | | | | | | |
| 1.00 | 6.2. NON MUNICIPAL STREETLIGHTS. SEC | 247.14 | | | 3.2485 | | | | | | | |
| 1.00 | Wheeling | - | | | | | | | | | | |
| 1.00 | Availability | 627.08 | | | | | | | | | | |

A slight adjustment is made to achieve the revenue target as shown in green in Table 60.

Table 60

| Basic adjust. | Access /Demand adjust. | Energy adjust. | Subsidy adjust. |
|---------------|------------------------|----------------|-----------------|
| | 7.32% | | 5.21% |

The following should be noted:

- The basic. Capacity and energy charges will be the same for all domestic consumers as proposed by the municipality. Although the cost of supply study indicates differences between indigent, low usage and high consumers.
- The basic charges for single and three phase consumers will not differ.

14. FINANCIAL IMPACT

The tariffs have been developed in a way that will ensure revenue neutrality from a tariff structure point of view:

- Provision has been made for customers to reduce their circuit breaker capacity thereby building in a small safety margin.
- With the application of cost reflective basic and amp charges, the net revenue loss when customers install renewable energy will be minimised.
- Some savings opportunity is opened by buying surplus renewable energy from customers at a price below that of Eskom power.
- With the more aggressive capacity charges, customers will be more inclined to reduce their peak capacity rather than energy thereby reducing George's Eskom and own network costs without sacrificing much municipal revenue thereby increasing profitability.

The proposed tariffs thus hold very little risk but real opportunities.

15. TARIFF IMPACT

Table 61 below show the overall impact on customers on each tariff on average. This is for the tariffs before phase in (in other words the whole impact). The impact of each would be about a third of this if phased in over 3 years.

- All Indigents get Basic and capacity charge and 50 kWh/m for free.
- All other poor consumers willing to accept 20 Amps get the Basic for free.
- These discounts are to be recovered via the equitable share. The impact is similar to the current equitable share amount.

Table 61

| GEORGE | | | | | | |
|--------------------|---|----------------------|----------------------|-------------------|------------------|-----------------------------|
| CALCULATED REVENUE | | 2022/2023 Proposed | 2022/2023 Reference | Difference | Structure change | Initial cost reflectiveness |
| Nr | TARIFF NAME | R/year | 0.00% | Rand | % | |
| 1 | Domestic Indigent PP | 61 780 560 | 61 780 560 | - | 0.00% | -134.2% |
| 1 | Domestic Indigent Conv | - | - | - | 0.00% | 0.0% |
| 1 | Domestic 20 Amp PP | 26 936 553 | 26 936 553 | - | 0.00% | -30.5% |
| 1 | Domestic 20 Amp Conv | 8 022 518 | 8 022 518 | - | 0.00% | -26.9% |
| 1 | Domestic > 20 Amp PP | 429 444 329 | 396 995 947 | 32 448 383 | 8.17% | -0.9% |
| 1 | Domestic > 20 Amp Conv | 7 758 138 | 6 173 110 | 1 585 028 | 25.68% | 12.4% |
| 1 | Domestic > 20 Amp 3 ph Conv | 3 578 708 | 2 774 960 | 803 748 | 28.96% | 11.1% |
| 1 | Commercial PP = 20 Amps 1 ph | 14 905 482 | 14 905 482 | - | 0.00% | -15.6% |
| 1 | Commercial Credit = 20 Amps 1 ph | 25 281 506 | 25 281 506 | - | 0.00% | -5.6% |
| 1 | Commercial PP > 20 Amps 1 ph | 37 589 798 | 49 464 743 | -11 874 945 | -24.01% | 4.9% |
| 1 | Commercial Credit > 20 Amps 1 ph | 28 618 479 | 36 034 334 | -7 415 855 | -20.58% | 12.7% |
| 1 | Commercial Credit > 20 Amps 3 ph | 43 338 634 | 41 534 895 | 1 803 739 | 4.34% | 42.5% |
| 1 | 5.1. Agric 10 kVA to 16 kVA | 1 123 943 | 1 123 943 | - | 0.00% | 4.0% |
| 1 | 5.2 Agric above 16 kVA. up to 25 kVA | 1 036 551 | 1 036 551 | - | 0.00% | 15.3% |
| 1 | 5.3 Agric above 25 kVA. up to 50 kVA | 413 593 | 413 593 | - | 0.00% | 30.1% |
| 1 | 5.4 Agric above 50 kVA. up to 100 kVA | 3 211 520 | 3 211 520 | - | 0.00% | 12.5% |
| 1 | 1.D.Domestic Flex (TOUP, TOUS, TOU) < 100 kVA | 2 365 748 | 1 480 687 | 885 061 | 59.77% | -15.8% |
| 1 | 2.C.Commercial Flex (TOUP, TOUS, TOU) < 100 kVA | 18 394 755 | 17 636 722 | 758 033 | 4.30% | -44.6% |
| 1 | 3.A. GEORGE TIME OF USE: LV > 100 kVA | 216 538 293 | 225 121 595 | -8 583 302 | -3.81% | 10.8% |
| 1 | 3.B. GEORGE TIME OF USE: MV | 148 957 635 | 158 414 145 | -9 456 510 | -5.97% | 12.0% |
| 1 | 3.C. GEORGE TIME OF USE: MV at HV substation. | 94 582 976 | 98 862 916 | -4 279 940 | -4.33% | 10.2% |
| 1 | 3.D. Embedded Generation Tariff (Tariff Code : TOUBP, TOUBS, TOU) | - | - | - | 0.00% | 0.0% |
| 1 | 6.1. STREET LIGHTING (Tariff code : 1530, 1531, 1559) | 49 092 231 | 35 768 001 | 13 324 229 | 37.25% | -30.5% |
| 1 | 6.2. NON MUNICIPAL STREETLIGHTS, SECURITY CAMERAS, SPO | 516 587 | - | 516 587 | 0.00% | 0.0% |
| 1 | Wheeling | - | - | - | 0.00% | 0.0% |
| 1 | Availability | 3 250 333 | 2 925 451 | 324 882 | 11.11% | -11.1% |
| 1 | | 0 | - | - | 0.00% | 0.0% |
| 1 | Total. | 1 226 738 871 | 1 215 899 732 | 10 839 139 | 0.89% | |

The income foregone is deducted as the full cost calculations include such amount as shown in Table 62.

Table 62

| TARGET REVENUE | 2024/2025 |
|---|---------------|
| Previously calculated revenue: not adjusted | 1 256 369 436 |
| FBE | (29 630 565) |
| Additional internal | |
| Additional Streetlight | |
| Total | 1 226 738 871 |

The following impacts will be experienced over the phase in period using the second option.

- Indigent customers will be limited to 20 Amp only.
- Domestic 20 Amp lifeline consumers will pay more for the first block.
- The general trend for other tariffs is as follows:
 - The category will move closer to cost reflective but still retaining the cross subsidy.

The impact for each customer will however be different. It will depend on the utilisation of the capacity provided to customers and the extent to which electricity is used in the peak times:

- The following customers will generally see increased bills:
 - Those that are not utilising their capacity and are not willing to reduce / manage their capacity, due to the Capacity/Access charges.
 - Customers who need large capacity only for a few months in the year.
 - TOU customers who use a lot of electricity during the expensive Winter Peak times and are not willing / able to shift load out of these periods.

If these tariffs are phased in over 2 years, customers will have time to adapt to the new rates and thus manage their bills. The impacts shown in the table above will thus be 1/2 for each of the 2 years.

16. CUSTOMER IMPACT

The detailed impact on domestic customers have been further analysed and is illustrated. Table 63 shows the revenue on existing and proposed tariffs, then the Rand impact of the % change. Important to note: This shows the full restructuring impact but before annual price increases.

Table 63

| DOMESTIC TARIFF IMPACT: | | | | | | | | | | | | |
|--|---|--------------|---|------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------|
| RESTRUCTURED WITHOUT PRICE INCREASE AND PHASE | | | | | | | | | | | | |
| Existing Tariff | Capacity | Per month | Capacit y Per A (installe d) R/A/m | Energy Block 1 rate c/kWh | Block 1 size kWh/m | Block 2 rate c/kWh | Block 2 size kWh/m | Block 3 rate c/kWh | Block 3 size kWh/m | Block 4 rate c/kWh | Block 4 size kWh/m | Rest rate c/kWh |
| 2024/202 | Amps | R/m | R/A/m | c/kWh | kWh/m | c/kWh | kWh/m | c/kWh | kWh/m | c/kWh | kWh/m | c/kWh |
| 20 | Domestic Indigent | 0.000 | 0.000 | 0.000 | 50.00 | 2.347 | 400.00 | 3.396 | 100000 | | | |
| 20 | Domestic 20 Amp PP: don't pay basics | 0.000 | 0.000 | 3.102 | 100 000 | | | | | | | |
| 20 | Domestic > 20 Amp | 96.610 | 5.830 | 2.699 | 100 000 | | | | | | | |
| | Proposed | | | | | | | | | | | |
| 20 | Domestic Indigent | | | 0.000 | 50.00 | 2.347 | 400.000 | 3.396 | 100000 | | | |
| 20 | Res 1 ph = 20 Amps | | | 3.102 | 100000.00 | | | | | | | |
| 30 | Res 1 ph > 20 Amps | 122.43 | 13.00 | 2.181 | 100000.00 | | | | | | | |
| | | | | | | | | | | | | new |
| IMPACT: TOTAL IMPACT EXCLUDING PRICE INCREASE | | kWh/m | 100 | | | | | | | | | |
| Amps | Exis | 0 | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 |
| | Exis-Domestic Indigent | 0 | 117 | 352 | 587 | 821 | 1 161 | 1 501 | 1 840 | 2 180 | 2 519 | 2 859 |
| | Exis-Domestic 20 Amp PP: don't pay basics | 0 | 310 | 620 | 931 | 1 241 | 1 551 | 1 861 | 2 171 | 2 482 | 2 792 | 3 102 |
| 30 | Exis-Domestic > 20 Amp | 272 | 541 | 811 | 1 081 | 1 351 | 1 621 | 1 891 | 2 161 | 2 431 | 2 701 | 2 970 |
| 40 | Exis-Domestic > 20 Amp | 330 | 600 | 870 | 1 139 | 1 409 | 1 679 | 1 949 | 2 219 | 2 489 | 2 759 | 3 029 |
| 50 | Exis-Domestic > 20 Amp | 388 | 658 | 928 | 1 198 | 1 468 | 1 738 | 2 007 | 2 277 | 2 547 | 2 817 | 3 087 |
| 60 | Exis-Domestic > 20 Amp | 446 | 716 | 986 | 1 256 | 1 526 | 1 796 | 2 066 | 2 336 | 2 606 | 2 875 | 3 145 |
| 120 | Exis-Domestic > 20 Amp | 796 | 1 066 | 1 336 | 1 606 | 1 876 | 2 146 | 2 416 | 2 685 | 2 955 | 3 225 | 3 495 |
| | to | | | | | | | | | | | |
| Amps | Prop | 0 | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1 000 |
| 20 | Prop-Domestic Indigent20 | 0 | 117 | 352 | 587 | 821 | 1 161 | 1 501 | 1 840 | 2 180 | 2 519 | 2 859 |
| 20 | Prop-Res 1 ph = 20 Amps20 | 0 | 310 | 620 | 931 | 1 241 | 1 551 | 1 861 | 2 171 | 2 482 | 2 792 | 3 102 |
| 30 | Prop-Res 1 ph > 20 Amps30 | 512 | 731 | 949 | 1 167 | 1 385 | 1 603 | 1 821 | 2 039 | 2 257 | 2 475 | 2 693 |
| 40 | Prop-Res 1 ph > 20 Amps40 | 643 | 861 | 1 079 | 1 297 | 1 515 | 1 733 | 1 951 | 2 169 | 2 387 | 2 605 | 2 823 |
| 50 | Prop-Res 1 ph > 20 Amps50 | 773 | 991 | 1 209 | 1 427 | 1 645 | 1 863 | 2 081 | 2 299 | 2 517 | 2 735 | 2 953 |
| 60 | Prop-Res 1 ph > 20 Amps60 | 903 | 1 121 | 1 339 | 1 557 | 1 775 | 1 993 | 2 211 | 2 429 | 2 647 | 2 865 | 3 083 |
| 120 | Prop-Res 1 ph > 20 Amps120 | 1 683 | 1 901 | 2 119 | 2 337 | 2 555 | 2 773 | 2 991 | 3 209 | 3 427 | 3 645 | 3 863 |
| | | | | | | | | | | | | |
| Amps | CHANGE IN REVENUE | 0 | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1 000 |
| 20.00 | Prop-Domestic Indigent20 to Prop-Domestic Indigent2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20.00 | Domestic 20 Amp PP: don't pay basics to Prop-Res 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40.00 | Domestic > 20 Amp to Prop-Res 1 ph > 20 Amps40 | 371 | 319 | 267 | 216 | 164 | 112 | 60 | 8 | -44 | -95 | -147 |
| 50.00 | Domestic > 20 Amp to Prop-Res 1 ph > 20 Amps50 | 443 | 391 | 339 | 287 | 235 | 184 | 132 | 80 | 28 | -24 | -75 |
| 60.00 | Domestic > 20 Amp to Prop-Res 1 ph > 20 Amps60 | 514 | 463 | 411 | 359 | 307 | 255 | 204 | 152 | 100 | 48 | -4 |
| 120.00 | Domestic > 20 Amp to Prop-Res 1 ph > 20 Amps120 | 1 236 | 1 184 | 1 133 | 1 081 | 1 029 | 977 | 925 | 874 | 822 | 770 | 718 |
| | | | | | | | | | | | | |
| Amps | CHANGE % | 0 | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1 000 |
| 20.00 | Prop-Domestic Indigent20 to Prop-Domestic Indigent2 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 20.00 | Domestic 20 Amp PP: don't pay basics to Prop-Res 1 | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| 40.00 | Domestic > 20 Amp to Prop-Res 1 ph > 20 Amps40 | 136.6% | 59.0% | 33.0% | 19.9% | 12.1% | 6.9% | 3.2% | 0.4% | -1.8% | -3.5% | -5.0% |
| 50.00 | Domestic > 20 Amp to Prop-Res 1 ph > 20 Amps50 | 134.2% | 65.2% | 39.0% | 25.2% | 16.7% | 10.9% | 6.8% | 3.6% | 1.1% | -0.9% | -2.5% |
| 60.00 | Domestic > 20 Amp to Prop-Res 1 ph > 20 Amps60 | 132.6% | 70.3% | 44.3% | 30.0% | 20.9% | 14.7% | 10.1% | 6.7% | 3.9% | 1.7% | -0.1% |
| 120.00 | Domestic > 20 Amp to Prop-Res 1 ph > 20 Amps120 | 276.9% | 165.4% | 114.9% | 86.0% | 67.4% | 54.4% | 44.8% | 37.4% | 31.5% | 26.8% | 22.8% |

The average percentages only represent the average. The case will be different for each customer. It will depend largely on how effective customers utilise their capacity. In other words, customers with large capacity and low consumption will see higher increases and those with low capacity and high consumption will see lower increases. This clearly shows that only customers that are not willing to reduce / manage their capacity or have irregular usage over the months in the year will pay significantly more. If these tariffs are phased in over 3 years customers will have time to adapt to the new rates and thus manage their bills.

The impact on Business consumers is illustrated here. Table 64 below show the existing and proposed tariffs.

Table 64

| Commercial | | | | | | | | | |
|--|---|-----------|-------------------|--------|--------------|--------|--------|--------|--------|
| RESTRUCTURED WITHOUT PRICE INCREASE AND PHASE IN | | | | | | | | | |
| Existing Tariff | Capacity | Basic | Capacity | Energy | | | | | |
| 2024/2025 | Amps | Per month | Per A (installed) | R/kWh | Block 1 size | | | | |
| | | R/m | R/A/m | c/kWh | kWh/m | | | | |
| | 2.A.. Small General (\1507,1582) :20 Amps 1 ph | 0.000 | 0.000 | 3.740 | 100000.00 | | | | |
| | 2.B.. Small General (1507,1582) : >20 Amps | 88.430 | 9.700 | 3.033 | 100000.00 | | | | |
| Proposed | | | | | | | | | |
| 20 | 2.A.. Small General (\1507,1582) :20 Amps 1 ph | 0.00 | 0.00 | 3.102 | 100000.00 | | | | |
| 30 | 2.B.. Small General (1507,1582) : >20 Amps | 122.21 | 13.00 | 2.098 | 100000.00 | | | | |
| IMPACT: TOTAL IMPACT EXCLUDING PRICE INCREASE | | kWh/m | 200 | | | | | | |
| Amps | EXISTING REVENUE | 0 | 200 | 400 | 600 | 800 | 1000 | 1200 | 1400 |
| 20 | 2.A.. Small General (\1507,1582) :20 Amps 1 ph | 0 | 748 | 1 496 | 2 244 | 2 992 | 3 740 | 4 488 | 5 236 |
| 30 | 2.B.. Small General (1507,1582) : >20 Amps30 | 379 | 986 | 1 592 | 2 199 | 2 805 | 3 412 | 4 018 | 4 625 |
| 40 | 2.B.. Small General (1507,1582) : >20 Amps40 | 476 | 1 083 | 1 689 | 2 296 | 2 902 | 3 509 | 4 115 | 4 722 |
| 50 | 2.B.. Small General (1507,1582) : >20 Amps50 | 573 | 1 180 | 1 786 | 2 393 | 2 999 | 3 606 | 4 212 | 4 819 |
| 60 | 2.B.. Small General (1507,1582) : >20 Amps60 | 670 | 1 277 | 1 883 | 2 490 | 3 096 | 3 703 | 4 309 | 4 916 |
| 90 | 2.B.. Small General (1507,1582) : >20 Amps90 | 961 | 1 568 | 2 174 | 2 781 | 3 387 | 3 994 | 4 600 | 5 207 |
| 120 | 2.B.. Small General (1507,1582) : >20 Amps120 | 1 252 | 1 859 | 2 465 | 3 072 | 3 678 | 4 285 | 4 891 | 5 498 |
| 180 | 2.B.. Small General (1507,1582) : >20 Amps180 | 1 834 | 2 441 | 3 047 | 3 654 | 4 260 | 4 867 | 5 473 | 6 080 |
| | to | | | | | | | | |
| Amps | PROPOSED REVENUE | | | | | | | | |
| 20 | 2.A.. Small General (\1507,1582) :20 Amps 1 ph | 0 | 620 | 1 241 | 1 861 | 2 482 | 3 102 | 3 722 | 4 343 |
| 30 | 2.B.. Small General (1507,1582) : >20 Amps30 | 512 | 932 | 1 351 | 1 771 | 2 190 | 2 610 | 3 030 | 3 449 |
| 40 | 2.B.. Small General (1507,1582) : >20 Amps40 | 642 | 1 062 | 1 481 | 1 901 | 2 321 | 2 740 | 3 160 | 3 579 |
| 50 | 2.B.. Small General (1507,1582) : >20 Amps50 | 772 | 1 192 | 1 611 | 2 031 | 2 451 | 2 870 | 3 290 | 3 709 |
| 60 | 2.B.. Small General (1507,1582) : >20 Amps60 | 902 | 1 322 | 1 741 | 2 161 | 2 581 | 3 000 | 3 420 | 3 839 |
| 90 | 2.B.. Small General (1507,1582) : >20 Amps90 | 1 292 | 1 712 | 2 132 | 2 551 | 2 971 | 3 390 | 3 810 | 4 229 |
| 120 | 2.B.. Small General (1507,1582) : >20 Amps120 | 1 682 | 2 102 | 2 522 | 2 941 | 3 361 | 3 780 | 4 200 | 4 619 |
| 180 | 2.B.. Small General (1507,1582) : >20 Amps180 | 2 463 | 2 882 | 3 302 | 3 721 | 4 141 | 4 560 | 4 980 | 5 399 |
| | // | | | | | | | | |
| Amps | CHANGE IN REVENUE | | | | | | | | |
| 20.00 | 2.A.. Small General (\1507,1582) :20 Amps 1 ph to 2.A.. \$ | 0 | -128 | -255 | -383 | -511 | -638 | -766 | -894 |
| 30.00 | 2.A.. Small General (\1507,1582) :20 Amps 1 ph to 2.B.. \$ | 133 | -54 | -241 | -428 | -615 | -802 | -989 | -1 176 |
| 40.00 | 2.A.. Small General (\1507,1582) :20 Amps 1 ph to 2.B.. \$ | 166 | -21 | -208 | -395 | -582 | -769 | -956 | -1 143 |
| 50.00 | 2.A.. Small General (\1507,1582) :20 Amps 1 ph to 2.B.. \$ | 199 | 12 | -175 | -362 | -549 | -736 | -923 | -1 110 |
| 60.00 | 2.A.. Small General (\1507,1582) :20 Amps 1 ph to 2.B.. \$ | 232 | 45 | -142 | -329 | -516 | -703 | -890 | -1 077 |
| 90.00 | 2.A.. Small General (\1507,1582) :20 Amps 1 ph to 2.B.. \$ | 331 | 144 | -43 | -230 | -417 | -604 | -791 | -978 |
| 120.00 | 2.A.. Small General (\1507,1582) :20 Amps 1 ph to 2.B.. \$ | 430 | 243 | 56 | -131 | -318 | -505 | -692 | -879 |
| 180.00 | 2.A.. Small General (\1507,1582) :20 Amps 1 ph to 2.B.. \$ | 628 | 441 | 254 | 67 | -120 | -307 | -494 | -680 |
| Amps | CHANGE % | | | | | | | | |
| 20.00 | 2.A.. Small General (\1507,1582) :20 Amps 1 ph to 2.A.. Small General | | -17.1% | -17.1% | -17.1% | -17.1% | -17.1% | -17.1% | -17.1% |
| 30.00 | 2.A.. Small General (\1507,1582) :20 Amps 1 ph to 2.B.. \$ | 35.0% | -5.5% | -15.1% | -19.5% | -21.9% | -23.5% | -24.6% | -25.4% |
| 40.00 | 2.A.. Small General (\1507,1582) :20 Amps 1 ph to 2.B.. \$ | 34.8% | -1.9% | -12.3% | -17.2% | -20.0% | -21.9% | -23.2% | -24.2% |
| 50.00 | 2.A.. Small General (\1507,1582) :20 Amps 1 ph to 2.B.. \$ | 34.7% | 1.0% | -9.8% | -15.1% | -18.3% | -20.4% | -21.9% | -23.0% |
| 60.00 | 2.A.. Small General (\1507,1582) :20 Amps 1 ph to 2.B.. \$ | 34.6% | 3.5% | -7.5% | -13.2% | -16.7% | -19.0% | -20.6% | -21.9% |
| 90.00 | 2.A.. Small General (\1507,1582) :20 Amps 1 ph to 2.B.. \$ | 34.4% | 9.2% | -2.0% | -8.3% | -12.3% | -15.1% | -17.2% | -18.8% |
| 120.00 | 2.A.. Small General (\1507,1582) :20 Amps 1 ph to 2.B.. \$ | 34.3% | 13.1% | 2.3% | -4.3% | -8.6% | -11.8% | -14.1% | -16.0% |
| 180.00 | 2.A.. Small General (\1507,1582) :20 Amps 1 ph to 2.B.. \$ | 34.2% | 18.1% | 8.3% | 1.8% | -2.8% | -6.3% | -9.0% | -11.2% |

It is believed that if phased in over 3 years this impact should be acceptable, and the results should be very good for the municipality.

17. BULK TOU TARIFFS

TOU tariffs must continue to be applied to Bulk consumers and even be applied to small customers. This is because:

- It offers opportunities for customers to shift load thereby reducing their own costs without any detrimental financial impact on the municipality.
- It offers savings to the municipality when the system peaks are reduced due to customer load shifting.
- Municipal own purchase costs can be reduced when the tariff is applied to internal consumption points such as sewerage works.
- This is a requirement in terms of the EPP.

The Cost of Supply study follows an approach of applying % surcharges to achieve the required revenue. When this is applied to the TOU energy rates, the tariffs are seriously distorted. This is because the same

% surcharge on the more expensive Peak energy charges cause a very high c/kWh mark-up compared with that on the cheaper off-peak period. This means that when customers shift load from the Peak to Standard or Off-peak, the loss in revenue far exceeds the savings in Eskom purchase costs.

The tariffs are then redesigned by applying the same c/kWh on all energy rates but to still achieve the same revenue as shown in

Final

Table 65. It also shows the load shifting impact of the initial tariffs. Under the proposed tariffs the load shift impact is zero as the mark-up in the different periods are the same and thus no net revenue (change in revenue minus change in purchase cost) is lost.

Final

Table 65

| TOU TARIFF REDESIGN | | | | HIGH SEASON CHARGES | | | LOW SEASON CHARGES | | | Reactive energy | Total |
|---|--------------|----------------------|-----------------|---------------------|---------------------|-----------------|---------------------|---------------------|-----------------------|-----------------|-------|
| | Access R/kVA | MD (all hours) R/kVA | Energy Peak kWh | Energy Standard kWh | Energy Off-Peak kWh | Energy Peak kWh | Energy Standard kWh | Energy Off-Peak kWh | Reactive energy kvarh | Total | |
| ESKOM MUNICFLEX | | | | | | | | | | | |
| Municflex at MV | 2024/2025 | 55.89 | 21.37 | 6.052 | 1.690 | 1.206 | 2.650 | 1.594 | 1.206 | 0.2892562 | |
| With escalation | 2024/2025 | 55.89 | 21.37 | 6.052 | 1.690 | 1.206 | 2.650 | 1.594 | 1.206 | 0.289 | |
| 1.D.Domestic Flex (TOUP. TOUS . TOU) < 100 kVA. | | | | | | | | | | | |
| Customer service Customers | Access kVA | MD (all hours) kVA | Energy Peak kWh | Energy Standard kWh | Energy Off-Peak kWh | Energy Peak kWh | Energy Standard kWh | Energy Off-Peak kWh | Reactive energy kvarh | Total Rand | |
| Markup | 0.3626 | | | | | | | | | | |
| Consumption | 91 | 107 | 1 204 | 16 474 | 50 501 | 40 584 | 52 900 | 142 857 | 132 671 | 2 543 | |
| Initial tariff | 341 | 13 | - | 7.308 | 2.041 | 1.456 | 3.200 | 1.924 | 1.456 | 0.296 | |
| R/kWh markup | | | | 1.2557 | 0.3507 | 0.2501 | 0.5498 | 0.3306 | 0.2501 | 0.0072 | |
| % Markup | | | | 20.7% | 20.7% | 20.7% | 20.7% | 20.7% | 20.7% | 2.5% | |
| Revenue: Initial Tariff | 372 844 | 16 761 | - | 120 395 | 103 080 | 59 085 | 169 269 | 274 873 | 193 150 | 754 | |
| New tariff | 340.81 | 13.00 | - | 6.415 | 2.053 | 1.568 | 3.013 | 1.956 | 1.568 | 0.289 | |
| Revenue: New tariff | 372 844 | 16 761 | - | 105 681 | 103 678 | 63 647 | 159 364 | 279 437 | 208 063 | 735 | |
| R/kWh markup | | | | 0.363 | 0.363 | 0.363 | 0.363 | 0.363 | 0.363 | - | |
| % Markup | | | | 5.99% | 21.45% | 30.07% | 13.68% | 22.75% | 30.07% | 0.00% | |
| Load shift impact initial tariff: | | | | | | | | | | | |
| | | Peak to Standard | | 4.36 | 5.27 | 0.90 | 1.06 | 1.28 | 0.22 | | |
| | | Peak to Off-Peak | | 4.85 | 5.85 | 1.01 | 1.44 | 1.74 | 0.30 | | |
| | | Standard to Off-peak | | 0.48 | 0.59 | 0.10 | 0.39 | 0.47 | 0.08 | | |
| 2.C.Commercial Flex (TOUP. TOUS . TOU) < 100 kVA. | | | | | | | | | | | |
| Customer service Customers | Access kVA | MD (all hours) kVA | Energy Peak kWh | Energy Standard kWh | Energy Off-Peak kWh | Energy Peak kWh | Energy Standard kWh | Energy Off-Peak kWh | Reactive energy kvarh | Total Rand | |
| Markup | 0.3619 | | | | | | | | | 129.6890872 | |
| Consumption | 93 | 2 620 | 20 314 | 360 844 | 795 815 | 1 112 705 | 841 875 | 1 732 655 | 2 626 323 | 1 981 | |
| Initial tariff | 340.81 | 13.00 | - | 7.31 | 2.04 | 1.46 | 3.20 | 1.924 | 1.46 | 0.30 | |
| R/kWh markup | | | | 1.2557 | 0.3507 | 0.2501 | 0.5498 | 0.3306 | 0.2501 | 0.0072 | |
| % Markup | | | | 20.7% | 20.7% | 20.7% | 20.7% | 20.7% | 20.7% | 2.5% | |
| Revenue: Initial Tariff | 379 319 | 408 814 | - | 2 637 063 | 1 624 381 | 1 619 943 | 2 693 839 | 3 333 829 | 3 823 557 | 587 | |
| New tariff | 340.81 | 13.00 | - | 6.414 | 2.052 | 1.568 | 3.012 | 1.955 | 1.568 | 0.289 | |
| Revenue: New Tariff | 379 319 | 408 814 | - | 2 314 538 | 1 633 255 | 1 744 251 | 2 535 627 | 3 387 993 | 4 116 962 | 573 | |
| R/kWh markup | | | | 0.362 | 0.362 | 0.362 | 0.362 | 0.362 | 0.362 | - | |
| % Markup | | | | 5.98% | 21.41% | 30.01% | 13.66% | 22.71% | 30.01% | 0.00% | |
| Load shift impact initial tariff: | | | | | | | | | | | |
| | | Peak to Standard | | 4.36 | 5.27 | 0.90 | 1.06 | 1.28 | 0.22 | | |
| | | Peak to Off-Peak | | 4.85 | 5.85 | 1.01 | 1.44 | 1.74 | 0.30 | | |
| | | Standard to Off-peak | | 0.48 | 0.59 | 0.10 | 0.39 | 0.47 | 0.08 | | |
| 3.A. GEORGE TIME OF USE: LV > 100 kVA | | | | | | | | | | | |
| Customer service Customers | Access kVA | MD (all hours) kVA | Energy Peak kWh | Energy Standard kWh | Energy Off-Peak kWh | Energy Peak kWh | Energy Standard kWh | Energy Off-Peak kWh | Reactive energy kvarh | Total Rand | |
| Markup | 0.2566 | | | | | | | | | | |
| Consumption | 487 | 27 092 | 258 438 | 2 690 335 | 7 506 274 | 6 852 995 | 8 244 248 | 21 270 757 | 20 795 883 | 2 065 | |
| Initial tariff | 848.84 | 143.56 | 114.34 | 6.9394 | 1.9382 | 1.3824 | 3.0384 | 1.8271 | 1.3824 | 0.2965 | |
| R/kWh markup | | | | 0.887 | 0.248 | 0.177 | 0.388 | 0.234 | 0.177 | 0.007 | |
| % Markup | | | | 15% | 15% | 15% | 15% | 15% | 15% | 3% | |
| Revenue: Initial Tariff | 4 962 843 | 46 673 770 | 29 548 665 | 18 669 294 | 14 548 580 | 9 473 716 | 25 049 309 | 38 862 863 | 28 748 641 | 612 | |
| New tariff | 848.64 | 143.56 | 114.34 | 6.309 | 1.947 | 1.463 | 2.907 | 1.850 | 1.463 | 0.289 | |
| Revenue: New Tariff | 4 962 843 | 46 673 770 | 29 548 665 | 16 973 912 | 14 616 882 | 10 022 916 | 23 964 911 | 39 358 574 | 30 415 223 | 597 | |
| R/kWh markup | | | | 0.257 | 0.257 | 0.257 | 0.257 | 0.257 | 0.257 | - | |
| % Markup | | | | 4.24% | 15.19% | 21.30% | 9.69% | 16.12% | 21.30% | 0.00% | |
| Load shift impact initial tariff: | | | | | | | | | | | |
| | | Peak to Standard | | 4.36 | 5.00 | 0.64 | 1.06 | 1.21 | 0.15 | | |
| | | Peak to Off-Peak | | 4.85 | 5.56 | 0.71 | 1.44 | 1.66 | 0.21 | | |
| | | Standard to Off-peak | | 0.48 | 0.56 | 0.07 | 0.39 | 0.44 | 0.06 | | |
| 3.B. GEORGE TIME OF USE: MV | | | | | | | | | | | |
| Customer service Customers | Access kVA | MD (all hours) kVA | Energy Peak kWh | Energy Standard kWh | Energy Off-Peak kWh | Energy Peak kWh | Energy Standard kWh | Energy Off-Peak kWh | Reactive energy kvarh | Total Rand | |
| Markup | 0.2024 | | | | | | | | | | |
| Consumption | 68 | 17 611 | 172 710 | 2 232 841 | 5 927 006 | 6 359 593 | 7 028 384 | 17 556 753 | 19 192 311 | 60 422 | |
| Initial tariff | 3 654.70 | 100.14 | 69.90 | 6.76 | 1.89 | 1.35 | 2.96 | 1.78 | 1.35 | 0.30 | |
| R/kWh markup | | | | 0.707 | 0.198 | 0.141 | 0.310 | 0.198 | 0.141 | 0.014 | |
| % Markup | | | | 12% | 12% | 12% | 12% | 12% | 12% | 12% | |
| Revenue: Initial Tariff | 2 960 310 | 21 163 855 | 12 072 358 | 15 093 647 | 11 190 419 | 8 564 146 | 20 802 477 | 31 247 181 | 25 845 327 | 17 914 | |
| New tariff | 3 654.70 | 100.14 | 69.90 | 6.255 | 1.893 | 1.408 | 2.852 | 1.796 | 1.408 | 0.289 | |
| Revenue: New Tariff | 2 960 310 | 21 163 855 | 12 072 358 | 13 965 934 | 11 218 941 | 8 955 087 | 20 047 956 | 31 530 587 | 27 025 128 | 17 477 | |
| R/kWh markup | | | | 0.202 | 0.202 | 0.202 | 0.202 | 0.202 | 0.202 | - | |
| % Markup | | | | 3.34% | 11.97% | 16.79% | 7.64% | 12.70% | 16.79% | 0.00% | |
| Load shift impact initial tariff: | | | | | | | | | | | |
| | | Peak to Standard | | 4.36 | 4.87 | 0.51 | 1.06 | 1.18 | 0.12 | | |
| | | Peak to Off-Peak | | 4.85 | 5.41 | 0.57 | 1.44 | 1.61 | 0.17 | | |
| | | Standard to Off-peak | | 0.48 | 0.54 | 0.06 | 0.39 | 0.43 | 0.05 | | |
| 3.C. GEORGE TIME OF USE: MV at HV substation. | | | | | | | | | | | |
| Customer service Customers | Access kVA | MD (all hours) kVA | Energy Peak kWh | Energy Standard kWh | Energy Off-Peak kWh | Energy Peak kWh | Energy Standard kWh | Energy Off-Peak kWh | Reactive energy kvarh | Total Rand | |
| Markup | 0.1614 | | | | | | | | | | |
| Consumption | 14 | 12 563 | 117 450 | 1 522 279 | 4 008 506 | 3 922 098 | 4 900 562 | 13 011 034 | 12 669 799 | 531 | |
| Initial tariff | 8 943.14 | 76.27 | 46.03 | 6.613 | 1.847 | 1.317 | 2.896 | 1.741 | 1.317 | 0.30 | |
| R/kWh markup | | | | 0.561 | 0.157 | 0.112 | 0.246 | 0.148 | 0.112 | 0.012 | |
| % Markup | | | | 9% | 9% | 9% | 9% | 9% | 9% | 9% | |
| Revenue: Initial Tariff | 1 502 447 | 11 497 217 | 5 405 899 | 10 067 515 | 7 404 321 | 5 167 315 | 14 190 483 | 22 655 320 | 16 692 301 | 157 | |
| New tariff | 8 943.14 | 76.27 | 46.03 | 6.214 | 1.852 | 1.367 | 2.811 | 1.755 | 1.367 | 0.289 | |
| Revenue: New Tariff | 1 502 447 | 11 497 217 | 5 405 899 | 9 459 142 | 7 423 247 | 5 362 077 | 13 777 684 | 22 833 660 | 17 321 451 | 154 | |
| R/kWh markup | | | | 0.161 | 0.161 | 0.161 | 0.161 | 0.161 | 0.161 | - | |
| % Markup | | | | 2.67% | 9.55% | 13.39% | 6.09% | 10.13% | 13.39% | 0.00% | |
| Load shift impact initial tariff: | | | | | | | | | | | |
| | | Peak to Standard | | 4.36 | 4.77 | 0.40 | 1.06 | 1.15 | 0.10 | | |
| | | Peak to Off-Peak | | 4.85 | 5.30 | 0.45 | 1.44 | 1.58 | 0.13 | | |
| | | Standard to Off-peak | | 0.48 | 0.53 | 0.04 | 0.39 | 0.42 | 0.04 | | |
| EXISTING TARIFF EVALUATED | | | | | | | | | | | |
| Existing MV Eskom | Access | Demand | Energy Peak kWh | Energy Standard kWh | Energy Off-Peak kWh | Energy Peak kWh | Energy Standard kWh | Energy Off-Peak kWh | Reactive energy kvarh | Total Rand | |
| Eskom | 55.89 | 21.37 | 6.0524 | 1.6904 | 1.2057 | 2.6500 | 1.5935 | 1.2057 | - | - | |
| Existing tariff | | | | | | | | | | | |
| R/kWh markup | (55.89) | (21.37) | (6.052) | (1.690) | (1.206) | (2.650) | (1.594) | (1.206) | | | |
| % Markup | -100% | -100% | -100% | -100% | -100% | -100% | -100% | -100% | | | |

The following is important to note from this change to TOU tariffs:

- The basic, capacity and demand charges remain the same.
- The energy charges are set with the same c/kWh markup on each Eskom TOU energy charge.
- The revenue from each TOU tariff remains the same (difference in yellow)
- This is done by adjusting the c/kWh markup (in green).

1.16. Bulk TOU tariff impact study

Although the cost of supply study proposes tariffs that are cost reflective with subsidies for the poor it is important to get an idea of the impact on individual customers. Normally individual impact studies are done for all Bulk customers. Not all load profile data available to the municipality was made available for analysis. There was also an argument that the load profile data may not be displayed with any customer names. The data that was made available was analysed to illustrate the individual customer impact.

The tariffs used for the analysis is shown in Table 66. The existing maximum demand charges that are different for each TOU period has been recalculated to reflect one demand charge by using the relative demands of consumers in the different periods times the rate for each period.

Table 66

| TOU TARIFFS FROM COS | | Actual 2024/2025 | | | | Proposed 2024/2025 | | | | 0 | % increas | 0% | 0% |
|---|-------------------------------|------------------|---------|---------|--------|--------------------|---------|---------|--------|--------|-----------|--------|----|
| All rates include surcharges. | | BASIC | ACCESS | MAXIMUM | ENERGY | BASIC | ACCESS | MAXIMUM | ENERGY | BASIC | MAXIMUM | ENERGY | |
| SEGMENT | | CHARGE | DEMAND | DEMAND | CHARGE | CHARGE | DEMAND | DEMAND | CHARGE | CHARGE | DEMAND | CHARGE | |
| Tariff Name | | R/C/m | R/kVA/m | R/A/m | R/kWh | R/C/m | R/kVA/m | R/A/m | R/kWh | R/C/m | R/A/m | R/kWh | |
| TOU TARIFFS | | Basic | Access | Demand | R/kWh | Basic | Access | Demand | | | | | |
| 1.D.Domestic Flex (TOUP, TOUS , TOU) < 100 kVA. | Basic: MD (Hi / Low): MD/Acc | 97.33 | 5.88 | - | - | 340.81 | 13.00 | - | - | 250.2% | 121.1% | - | |
| DLV | Energy: High: P/St/OP (R/kWh) | 6.617 | 2.473 | 1.649 | - | 6.415 | 2.053 | 1.568 | 0.251 | -3.1% | -17.0% | -4.9% | |
| | Energy: Low: P/St/OP : R/kvar | 2.746 | 1.954 | 1.314 | - | 3.013 | 1.956 | 1.568 | - | 9.7% | 0.1% | 19.3% | |
| 2.C.Commercial Flex (TOUP, TOUS , TOU) < 100 kVA. | Basic: MD (Hi / Low): MD/Acc | 360.18 | 9.70 | - | - | 340.81 | 13.00 | - | - | -5.4% | 34.0% | - | |
| CLV | Energy: High: P/St/OP (R/kWh) | 6.617 | 2.473 | 1.649 | - | 6.414 | 2.052 | 1.568 | 0.251 | -3.1% | -17.0% | -5.0% | |
| | Energy: Low: P/St/OP : R/kvar | 2.746 | 1.954 | 1.314 | - | 3.012 | 1.955 | 1.568 | - | 9.7% | 0.1% | 19.3% | |
| 3.A. GEORGE TIME OF USE: LV > 100 kVA | Basic: MD (Hi / Low): Acc/MD | 748.28 | 81.72 | 171.59 | - | 848.64 | 143.56 | 114.34 | - | 13.4% | 75.7% | -33.4% | |
| lv | Energy: High: P/St/OP (R/kWh) | 6.740 | 2.557 | 1.725 | 0.273 | 6.309 | 1.947 | 1.463 | 0.251 | -6.4% | -23.8% | -15.2% | |
| | Energy: Low: P/St/OP : R/kvar | 2.696 | 2.086 | 1.593 | - | 2.907 | 1.850 | 1.463 | - | 7.8% | -11.3% | -8.2% | |
| 3.B. GEORGE TIME OF USE: MV | Basic: MD (Hi / Low): Acc/MD | 3 676.52 | 85.35 | 124.38 | - | 3 654.70 | 100.14 | 69.90 | - | -0.6% | 17.3% | -43.8% | |
| mv | Energy: High: P/St/OP (R/kWh) | 6.182 | 2.352 | 1.608 | 0.273 | 6.255 | 1.893 | 1.408 | 0.251 | 1.2% | -19.5% | -12.4% | |
| | Energy: Low: P/St/OP : R/kvar | 2.413 | 1.851 | 1.493 | - | 2.852 | 1.796 | 1.408 | - | 18.2% | -3.0% | -5.7% | |
| 3.C. GEORGE TIME OF USE: MV at HV substation. | Basic: MD (Hi / Low): Acc/MD | 6 312.10 | 71.73 | 99.31 | - | 8 943.14 | 76.27 | 46.03 | - | 41.7% | 6.3% | -53.7% | |
| MMV | Energy: High: P/St/OP (R/kWh) | 5.875 | 2.219 | 1.508 | 0.273 | 6.214 | 1.852 | 1.367 | 0.251 | 5.8% | -16.6% | -9.4% | |
| | Energy: Low: P/St/OP : R/kvar | 2.281 | 1.745 | 1.398 | - | 2.811 | 1.755 | 1.367 | - | 23.3% | 0.6% | -2.2% | |

The ½ hourly load profile of all the profiles that were sent were analysed. The result of this analysis is illustrated in Table 67 for one customer.

Table 67

| 3A0ABSA MAIN | | ENERGY | | | DEMAND | | | | | TOTAL | TOTAL | | | | |
|---------------|------|------------------|------------------|------------------|---------------|---------------|---------------|--------------|--------------|-------------------|----------|-----------------|---------------|---------------|---------------|
| MONTH | Days | P | S | O | MD - KVA ALL | MD - KW ALL | MD P&S | MD highest | MD highest | ENERGY | P&S | KVA LOAD FACTOR | P | S | O |
| | | kWh (for) | kWh (for) | kWh (for) | kVA | kW | kVA | kVA | kW | kWh (for) | kvarh | % | kWh (for) | kWh (for) | kWh (for) |
| 2023/07/31 | 31 | 2 920.98 | 8 207.00 | 4 068.83 | 48.20 | 48.20 | 48.20 | 54.25 | 54.25 | 15 196.80 | - | 42.38% | 19.22% | 54.00% | 26.77% |
| 2023/08/31 | 31 | 2 956.68 | 8 058.43 | 7 148.83 | 49.40 | 49.40 | 49.40 | 54.25 | 54.25 | 18 163.93 | - | 49.42% | 16.28% | 44.36% | 39.36% |
| 2023/09/30 | 30 | 2 686.08 | 7 997.68 | 6 920.10 | 44.30 | 44.30 | 44.30 | 54.25 | 54.25 | 17 603.85 | - | 55.19% | 15.26% | 45.43% | 39.31% |
| 2023/10/31 | 31 | 2 606.70 | 8 094.78 | 6 884.28 | 46.50 | 46.50 | 46.45 | 54.25 | 54.25 | 17 585.75 | - | 50.83% | 14.82% | 46.03% | 39.15% |
| 2023/11/30 | 30 | 2 800.85 | 8 686.38 | 7 014.05 | 44.15 | 44.15 | 44.15 | 54.25 | 54.25 | 18 501.28 | - | 58.20% | 15.14% | 46.95% | 37.91% |
| 2023/12/31 | 31 | 2 624.13 | 8 154.80 | 9 012.43 | 46.40 | 46.40 | 46.40 | 54.25 | 54.25 | 19 791.35 | - | 57.33% | 13.26% | 41.20% | 45.54% |
| 2024/01/31 | 31 | 2 895.88 | 8 984.90 | 7 772.00 | 47.70 | 47.70 | 45.75 | 54.25 | 54.25 | 19 652.78 | - | 55.38% | 14.74% | 45.72% | 39.55% |
| 2024/02/29 | 29 | 2 484.60 | 7 696.33 | 5 153.05 | 54.25 | 54.25 | 54.25 | 54.25 | 54.25 | 15 333.98 | - | 40.61% | 16.20% | 50.19% | 33.61% |
| 2024/03/31 | 31 | 2 145.88 | 7 474.43 | 5 709.40 | 50.85 | 50.85 | 50.85 | 54.25 | 54.25 | 15 329.70 | - | 40.52% | 14.00% | 48.76% | 37.24% |
| 2024/04/30 | 30 | 2 361.48 | 7 362.45 | 5 714.45 | 43.90 | 43.90 | 43.90 | 54.25 | 54.25 | 15 438.38 | - | 48.84% | 15.30% | 47.69% | 37.01% |
| 2024/05/31 | 31 | 2 499.45 | 7 932.13 | 5 886.30 | 42.95 | 42.95 | 42.95 | 54.25 | 54.25 | 16 317.88 | - | 51.07% | 15.32% | 48.61% | 36.07% |
| 2024/06/30 | 30 | 2 497.88 | 7 542.53 | 3 977.90 | 51.65 | 51.65 | 51.65 | 54.25 | 54.25 | 14 018.30 | - | 37.70% | 17.82% | 53.80% | 28.38% |
| TOTALS | | 31 480.55 | 96 191.80 | 75 261.60 | 570.25 | 570.25 | 568.25 | 54.25 | 54.25 | 202 933.95 | - | 42.70% | 15.51% | 47.40% | 37.09% |

The calculation of the revenue for each of the tariff components for each month is shown in Table 68. This is done for each of the tariff options.

Table 68

| Exm | New TOU | | | | | | | | |
|--------------|--------------|------------------------|------------------------|------------|----------------|----------------|---------------------------|---------|-------|
| | Admin Charge | Network access charge: | Network demand charge: | Peak c/kWh | Standard c/kWh | Off-peak c/kWh | Reactive energy (c/kvarh) | Total | c/kWh |
| 31-Jul-23 | 848.64 | 7 788 | 5 511 | 18 429 | 15 981 | 5 951 | - | 54 509 | 359 |
| 31-Aug-23 | 848.64 | 7 788 | 5 648 | 18 654 | 15 692 | 10 456 | - | 59 087 | 325 |
| 30-Sep-23 | 848.64 | 7 788 | 5 065 | 7 808 | 14 799 | 10 121 | - | 46 430 | 264 |
| 31-Oct-23 | 848.64 | 7 788 | 5 311 | 7 577 | 14 978 | 10 069 | - | 46 572 | 265 |
| 30-Nov-23 | 848.64 | 7 788 | 5 048 | 8 142 | 16 073 | 10 258 | - | 48 158 | 260 |
| 31-Dec-23 | 848.64 | 7 788 | 5 305 | 7 628 | 15 089 | 13 181 | - | 49 841 | 252 |
| 31-Jan-24 | 848.64 | 7 788 | 5 231 | 8 418 | 16 625 | 11 367 | - | 50 278 | 256 |
| 29-Feb-24 | 848.64 | 7 788 | 6 203 | 7 222 | 14 241 | 7 537 | - | 43 840 | 286 |
| 31-Mar-24 | 848.64 | 7 788 | 5 814 | 6 238 | 13 830 | 8 350 | - | 42 869 | 280 |
| 30-Apr-24 | 848.64 | 7 788 | 5 019 | 6 864 | 13 623 | 8 358 | - | 42 502 | 275 |
| 31-May-24 | 848.64 | 7 788 | 4 911 | 7 266 | 14 677 | 8 609 | - | 44 100 | 270 |
| 30-Jun-24 | 848.64 | 7 788 | 5 905 | 15 760 | 14 687 | 5 818 | - | 50 807 | 362 |
| Total | 10 184 | 93 460 | 64 971 | 120 006 | 180 297 | 110 075 | - | 578 993 | 285 |

This is then done for all customers. The results are shown in Table 69. It shows the following impact for each customer. The table shows the impact for the consumers who's load profiles were provided. This represents about 25% of the total bulk sales. The names have been hidden for privacy.

- Old to New TOU

Negative (-) amounts shown reduction in bill and positive (+) amounts show increases.

Table 69

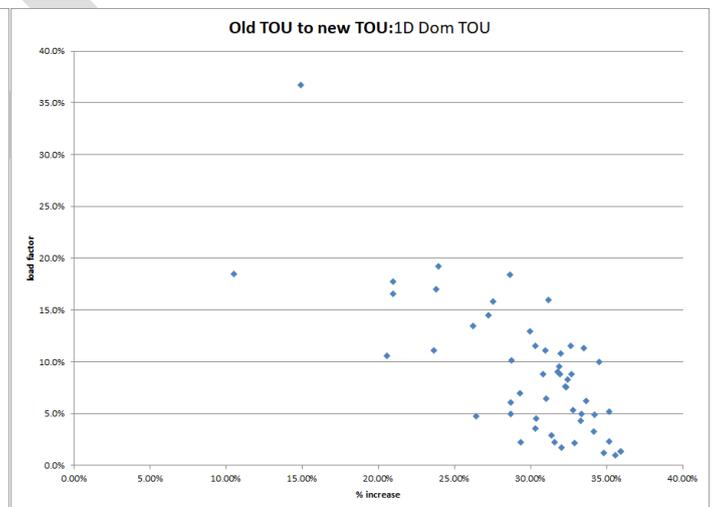
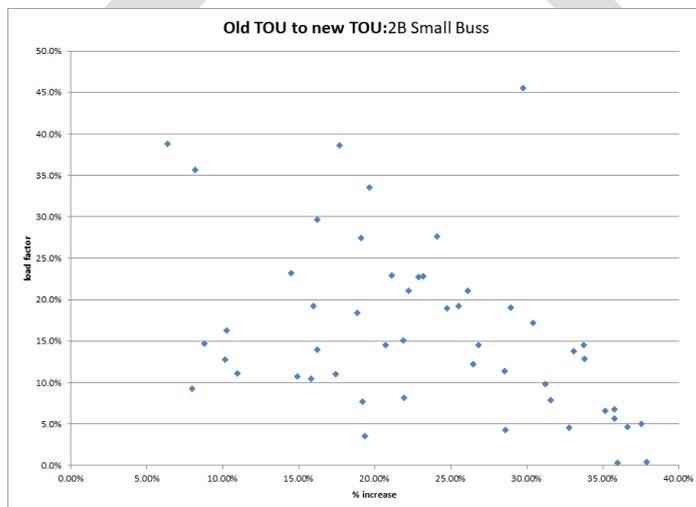
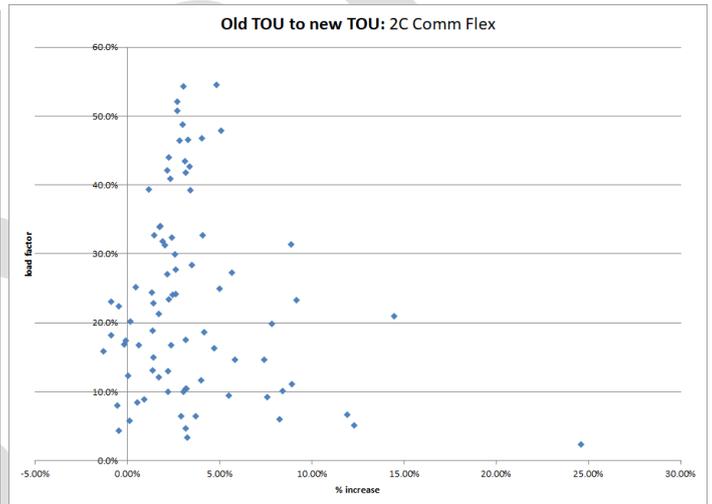
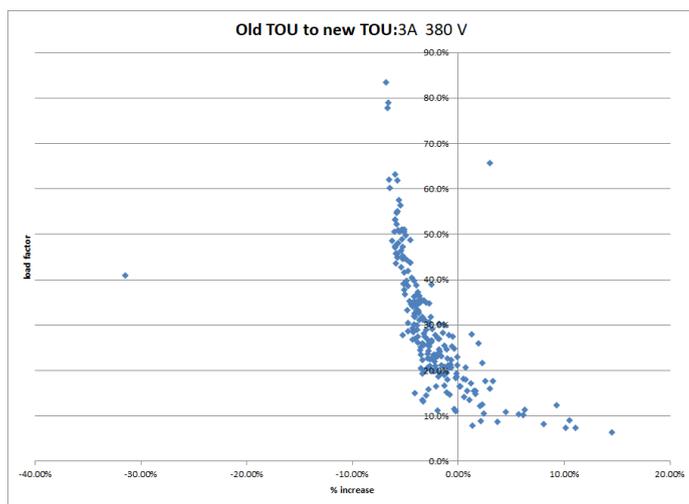
| TOU TARIFF IMPACT STUDY | | IMPACT SUMMARY | | | | | | | | | |
|------------------------------|--------|----------------------------------|---------|--------------|---------------|-------------|---------|--------|------------|-----------|--|
| IMPACT | Tariff | Old to New TOU Old to New TOU | Diff % | Annual LF | Monthly LF | Energy cost | kWH | c/kWh | Highest MD | | |
| 3A0ABSA MAIN | 3A | (33 190) | -5.42% | 42.7% | | 410 378 | 202 934 | 202.22 | 54 | 612 183 | |
| 3AsparADOMIX SPAR | 3A | (329 919) | -31.45% | 41.0% | | 708 760 | 349 828 | 202.60 | 98 | 1 048 863 | |
| 3AofficesAFRICAN COMPAS | 3A | (6 233) | -2.83% | 24.2% | | 124 721 | 60 857 | 204.94 | 29 | 220 137 | |
| 3AindustryAMF | 3A | (1 994) | -0.81% | 14.7% | | 113 272 | 56 634 | 200.01 | 44 | 245 087 | |
| 3AofficesAMOR TRUST | 3A | (2 704) | -1.62% | 19.3% | | 85 993 | 40 381 | 212.95 | 24 | 167 193 | |
| 3AshoppingAMRICHPROP 19 | 3A | 1 168 | 0.46% | 18.2% | | 125 874 | 67 877 | 185.44 | 42 | 254 462 | |
| 3AresortAQUA EDEN | 3A | (1 152) | -1.29% | 29.9% | | 50 622 | 25 567 | 198.00 | 10 | 89 074 | |
| 3Ashopping centreARBITRAC | 3A | (116 918) | -4.53% | 43.8% | | 1 786 854 | 873 714 | 204.51 | 228 | 2 583 227 | |
| 3AofficesARENDE RUGBY C | 3A | (290) | -0.26% | 18.3% | | 53 931 | 27 377 | 197.00 | 17 | 110 357 | |
| 3A0ATTACQ KFC | 3A | (4 045) | -1.31% | 25.5% | | 185 395 | 91 152 | 203.39 | 41 | 308 382 | |
| 3AhotelAVIOSTAR | 3A | (3 027) | -2.17% | 27.8% | | 80 131 | 38 930 | 205.83 | 16 | 139 490 | |
| 3AofficesBADGER INT | 3A | (4 599) | -2.87% | 22.7% | | 86 636 | 41 319 | 209.67 | 21 | 160 405 | |
| 3AtownhousesBALLOTSBAY | 3A | (9 616) | -2.79% | 30.2% | | 217 475 | 106 175 | 204.83 | 40 | 344 654 | |
| 3AfarmngBASFOUR 730 | 3A | 12 283 | 8.07% | 8.2% | | 55 174 | 29 165 | 189.18 | 41 | 152 283 | |
| 3A0BAECH HOTEL | 3A | (46 652) | -5.52% | 50.6% | | 594 803 | 301 138 | 197.52 | 68 | 845 346 | |
| 3AofficesANDRE FOURIE - | 3A | (4 233) | -1.33% | 20.8% | | 173 100 | 82 779 | 209.11 | 45 | 317 248 | |
| 3AshoppingANDRE FOURIE I | 3A | 4 459 | 3.67% | 8.7% | | 40 163 | 20 119 | 199.63 | 26 | 121 645 | |
| 3A0KUYLERS FARM | 3A | (16 009) | -3.23% | 28.2% | | 294 605 | 151 028 | 195.07 | 61 | 495 589 | |
| 3AofficesBIDVEST | 3A | (34 413) | -5.79% | 55.1% | | 421 604 | 213 606 | 197.37 | 44 | 594 622 | |
| 3AofficesBIOTECH | 3A | (1 982) | -1.77% | 19.4% | | 55 772 | 26 570 | 209.90 | 16 | 111 706 | |
| 3AtownhousesBISHOPSLEE | 3A | (15 624) | -4.46% | 34.5% | | 222 122 | 109 391 | 203.05 | 36 | 350 328 | |
| 3Ahungry lionBLAZING BLISS | 3A | 6 144 | 3.25% | 17.7% | | 100 640 | 52 415 | 192.00 | 34 | 189 327 | |
| 3AtownhousesBLUE MOUNTA | 3A | (24 369) | -4.60% | 35.3% | | 343 032 | 165 537 | 207.22 | 54 | 529 322 | |
| 3Awood factoryBLUE NIGHTI | 3A | (10 506) | -3.42% | 13.6% | | 126 872 | 64 359 | 197.13 | 54 | 307 165 | |
| 3AofficesBLUE MOUNTAIN P | 3A | (3 961) | -3.27% | 35.5% | | 73 441 | 37 356 | 196.60 | 12 | 121 164 | |
| 3AshopsBOVAN VALLEY | 3A | (383) | -0.21% | 19.4% | | 97 939 | 48 777 | 200.79 | 29 | 181 091 | |
| 3A0BP KRAAIBOSCH | 3A | (42 045) | -5.96% | 53.2% | | 495 423 | 249 717 | 198.39 | 54 | 705 620 | |
| 3AtownhouseCAPE ESTATE | 3A | (1 389) | -0.70% | 22.4% | | 113 761 | 56 458 | 201.50 | 29 | 199 250 | |
| 3AtownhouseCAPE ESTATE | 3A | (7 521) | -3.64% | 35.0% | | 131 441 | 62 324 | 210.90 | 20 | 206 816 | |
| 3AhotelCARMEL | 3A | (14 083) | -4.73% | 41.9% | | 197 207 | 96 641 | 204.06 | 26 | 297 876 | |
| 3AschoolCARPE DIEM | 3A | (10 110) | -2.65% | 26.2% | | 225 845 | 106 988 | 211.09 | 47 | 381 304 | |
| 3AshopsCATHEDRAL SQUAR | 3A | (32 055) | -4.35% | 29.3% | | 451 855 | 219 848 | 205.53 | 86 | 736 330 | |
| 3A0CLICKS | 3A | (2 188) | -0.77% | 21.3% | | 159 820 | 81 926 | 195.08 | 44 | 284 505 | |
| 3AfactoryCLOVER CHEESE | 3A | (36 577) | -5.65% | 57.5% | | 462 418 | 243 102 | 190.22 | 48 | 647 778 | |
| 3Acold roomCOLD CHAIN | 3A | (110 999) | -5.96% | 47.1% | | 1 272 687 | 643 193 | 197.87 | 156 | 1 862 910 | |
| 3AtownhouseCONSTANTIA K | 3A | 3 614 | 10.53% | 9.1% | | 10 946 | 5 820 | 188.07 | 7 | 34 328 | |
| 3A0CONVILLE SWIMMINGP | 3A | 1 914 | 1.90% | 26.0% | | 60 575 | 31 656 | 191.35 | 14 | 100 921 | |
| 3A0CTM | 3A | (7 225) | -4.76% | 28.7% | | 84 077 | 41 323 | 203.46 | 16 | 151 657 | |
| 3AschoolCURRO CASTLE | 3A | 3 835 | 5.73% | 10.4% | | 23 512 | 11 709 | 200.80 | 13 | 66 909 | |
| 3ApotteryD MARSHAL | 3A | 8 531 | 2.12% | 8.9% | | 149 128 | 70 950 | 210.19 | 91 | 402 540 | |
| 3ApotteryD TADILL | 3A | (50 844) | -3.55% | 25.2% | | 844 140 | 384 126 | 219.76 | 174 | 1 433 849 | |
| 3AschoolDEPT VAN GESONI | 3A | (23 041) | -4.10% | 27.0% | | 333 522 | 161 842 | 206.08 | 69 | 562 299 | |
| 3AwholesaleDF SCOTT | 3A | 4 419 | 1.26% | 27.9% | | 222 879 | 121 359 | 183.65 | 50 | 350 400 | |
| 3AfactoryDISTELL | 3A | (4 109) | -3.06% | 28.9% | | 78 242 | 35 614 | 219.69 | 14 | 134 204 | |
| 3AofficesDOUGLOU TRUST | 3A | (31 863) | -5.37% | 48.9% | | 412 847 | 207 895 | 198.58 | 49 | 593 626 | |
| 3AofficesDOW | 3A | (3 200) | -2.75% | 30.7% | | 69 012 | 33 076 | 208.65 | 12 | 116 244 | |
| 3AshopDUGGIES | 3A | (14 860) | -3.78% | 34.8% | | 252 893 | 126 652 | 199.67 | 42 | 393 160 | |
| 3AofficeEDEN BUSINESS PA | 3A | (6 299) | -2.79% | 26.2% | | 130 664 | 66 707 | 195.88 | 29 | 225 862 | |
| 3Aindustrial cold roomsERF 3 | 3A | (24 123) | -5.99% | 63.1% | | 288 714 | 148 028 | 195.04 | 27 | 402 551 | |
| 3AofficeESKOM INDUSTRIAL | 3A | (6 685) | -3.73% | 32.6% | | 108 513 | 55 048 | 197.13 | 19 | 179 108 | |
| 3AofficeFACTAPROPS | 3A | (13 866) | -4.78% | 38.6% | | 186 749 | 94 008 | 198.65 | 28 | 290 258 | |
| 3AshoppingFAIRVEST PROP | 3A | (121 922) | -5.12% | 44.7% | | 1 648 004 | 786 725 | 209.48 | 201 | 2 380 210 | |
| 3AcoldroomFAIRVIEW SILK | 3A | (46 036) | -5.43% | 46.4% | | 576 927 | 307 093 | 187.87 | 75 | 847 466 | |
| 3AhotFAIRY KNOWE HOTEL | 3A | (13 948) | -4.16% | 36.3% | | 218 004 | 106 261 | 205.16 | 33 | 335 589 | |
| 3A0FAR HILLS HOTEL | 3A | 6 628 | 2.98% | 16.0% | | 119 389 | 57 513 | 207.59 | 41 | 222 066 | |
| 3AfarmsFIRGROVE | 3A | (32 491) | -4.28% | 34.9% | | 485 536 | 248 723 | 195.21 | 81 | 759 585 | |
| 3AhotelFLAVIDA | 3A | (1 944) | -0.96% | 21.2% | | 112 694 | 53 664 | 210.00 | 29 | 202 582 | |
| 3A0FNB | 3A | (5 202) | -3.86% | 33.3% | | 79 736 | 40 287 | 197.92 | 14 | 134 783 | |
| 3A0FOSCHINI | 3A | 1 920 | 2.26% | 12.5% | | 34 353 | 17 886 | 192.07 | 16 | 84 950 | |
| 3A0GARDEN ROUTE SURGI | 3A | (12 787) | -3.42% | 22.3% | | 207 771 | 98 830 | 210.23 | 51 | 373 898 | |
| 3AlodgeGATEWAY LODGE | 3A | (9 205) | -3.40% | 31.8% | | 167 659 | 81 286 | 206.26 | 29 | 270 681 | |
| 3AstoresGE PACKHOUSE | 3A | (14 796) | -1.86% | 26.9% | | 474 095 | 251 629 | 188.41 | 107 | 797 303 | |
| 3A0GENEVA CLINIC | 3A | (40 871) | -5.78% | 45.7% | | 478 908 | 237 320 | 201.80 | 59 | 706 595 | |
| 3AgarageGEORGE DELTA | 3A | 996 | 1.60% | 15.4% | | 26 916 | 13 039 | 206.43 | 10 | 62 430 | |
| 3A0GEORGE LAUNDRY | 3A | (32 439) | -2.74% | 34.7% | | 800 969 | 412 271 | 194.28 | 136 | 1 184 600 | |
| 3A0GEORGE PUMPS 2 | 3A | (134 411) | -6.64% | 79.0% | | 1 546 229 | 796 589 | 194.11 | 115 | 2 024 494 | |
| 3A0GEORGE SEN SEC SCH | 3A | (10 051) | -2.94% | 27.0% | | 207 056 | 93 826 | 220.68 | 40 | 341 344 | |
| 3AschoolGLENWOOD HOUS | 3A | (33 427) | -4.74% | 30.5% | | 433 120 | 216 333 | 200.21 | 81 | 704 891 | |
| 3AfactoryGOLDEN HARVEST | 3A | (4 622) | -2.50% | 29.1% | | 111 111 | 54 609 | 203.47 | 21 | 184 942 | |
| 3A0GOLDEN HARVEST OSS | 3A | 1 060 | 2.58% | 17.7% | | 17 242 | 8 831 | 195.23 | 6 | 41 142 | |
| 3A0GOLDEN HARVEST TOV | 3A | (1 723) | -0.36% | 24.8% | | 298 224 | 149 515 | 199.46 | 69 | 484 103 | |
| 3Afrail careGROENKLOOF | 3A | (28 240) | -3.94% | 35.1% | | 473 993 | 226 218 | 209.53 | 74 | 716 921 | |
| 3AofficesGROUP EDITORS I | 3A | (7 934) | -3.52% | 23.4% | | 121 894 | 60 953 | 199.98 | 30 | 225 170 | |
| 3A0HALFWAY TOYOTA | 3A | (6 817) | -3.16% | 27.4% | | 126 424 | 60 156 | 210.16 | 25 | 215 657 | |
| 3A0HARRY COMAY | 3A | (30 608) | -5.16% | 39.0% | | 390 014 | 194 983 | 200.02 | 57 | 592 631 | |
| 3AbutcheryHARTMAN FACTO | 3A | (17 936) | -4.14% | 32.7% | | 270 300 | 129 476 | 208.76 | 45 | 433 479 | |
| 3AfarmsHAYGROVE HEAVEI | 3A | (32 932) | -2.36% | 19.9% | | 727 499 | 384 419 | 189.25 | 221 | 1 396 127 | |
| 3AfarmsHAYGROVE MOERA | 3A | (6 462) | -2.57% | 26.7% | | 145 860 | 73 849 | 197.51 | 32 | 251 155 | |
| 3AfarmsHAYGROVE SHED | 3A | (24 594) | -4.57% | 43.7% | | 363 176 | 180 275 | 201.46 | 47 | 538 111 | |
| 3A0HENMAR SUPERMARKE | 3A | (10 577) | -3.69% | 36.5% | | 186 218 | 90 813 | 205.06 | 28 | 286 592 | |
| 3A0HEROLDSBAY HOTEL | 3A | (274) | -0.10% | 22.9% | | 160 484 | 77 678 | 206.60 | 39 | 275 252 | |
| 3AhousingHOSPITAL STAFF | 3A | (2 039) | -1.13% | 24.7% | | 104 805 | 51 286 | 204.36 | 24 | 180 713 | |
| 3Awood factoryHOUTTEK | 3A | (4 015) | -2.39% | 22.8% | | 90 978 | 42 709 | 213.02 | 21 | 167 643 | |
| 3AsupermarketHYPERSAVE | 3A | (5 183) | -4.43% | 40.5% | | 71 377 | 36 352 | 196.35 | 10 | 116 996 | |
| 3AgarageIMPERIAL MOTOR | 3A | (20 481) | -5.72% | 48.1% | | 242 137 | 122 347 | 197.91 | 29 | 357 973 | |
| 3Afrail careJ J WATSON HOM | 3A | (11 712) | -4.17% | 30.1% | | 170 967 | 81 769 | 209.09 | 31 | 280 598 | |
| 3AfactoryJOHN PACE | 3A | (1 099) | -1.63% | 21.1% | | 33 031 | 15 257 | 216.50 | 8 | 67 548 | |
| 3AshopsJORDYSIS | 3A | (32 952) | -5.10% | 37.8% | | 418 201 | 213 982 | 195.44 | 65 | 646 381 | |
| 3AhousingKE NAKO | 3A | 8 942 | 14.49% | 6.3% | | 19 726 | 10 189 | 193.60 | 18 | 61 693 | |
| 3A0KING GEORGE HOTEL | 3A | (55 709) | -3.98% | 36.7% | | 945 341 | 482 712 | 195.84 | 150 | 1 401 389 | |
| 3AofficesKING OF STORMS | 3A | 7 790 | 2.41% | 10.6% | | 140 042 | 62 651 | 223.53 | 68 | 323 789 | |
| 3A0KLEINKRANTZ PUMPS | 3A | 2 128 | 0.83% | 15.5% | | 128 412 | 62 530 | 205.36 | 46 | 255 448 | |
| 00KLEINKRANTZ RIOOL | 00 | 15 251 | 2.95% | 65.7% | | 375 969 | 201 381 | 186.70 | 35 | 516 835 | |
| 3A0KRAAIBOSCH PUMPS | 3A | 2 633 | 1.03% | 13.6% | | 118 076 | 57 900 | 203.93 | 49 | 256 815 | |
| 3AfarmsKUYLERS | 3A | (4 811) | -1.05% | 22.7% | | 251 220 | 133 469 | 188.22 | 67 | 458 525 | |

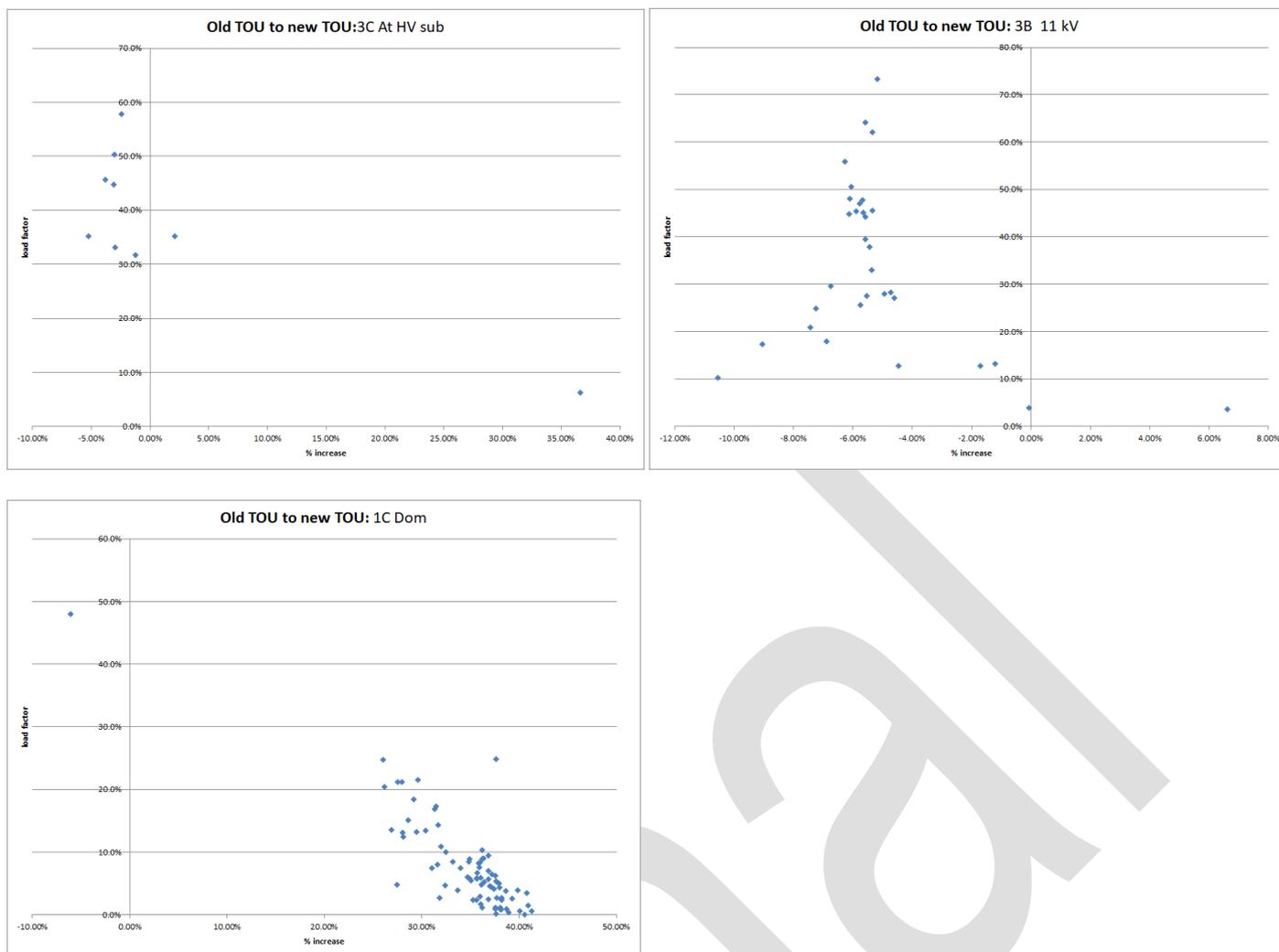
Table 70 below shows the sum for each tariff.

Table 70

| Row Labels | Sum of Total Old TOU | Sum of Old to New TOU | % |
|--------------------|----------------------|-----------------------|--------------|
| 00 | 516 835 | 15 251 | 3.0% |
| 1C | 7 166 153 | 2 487 365 | 34.7% |
| 1D | 4 977 628 | 1 578 640 | 31.7% |
| 2B | 6 110 636 | 1 417 643 | 23.2% |
| 2c | 9 779 661 | 304 917 | 3.1% |
| 3A | 105 649 745 | (4 162 250) | -3.9% |
| 3B | 66 137 930 | (3 707 554) | -5.6% |
| 3C | 50 214 454 | (1 840 557) | -3.7% |
| SP | 483 856 | 59 327 | 12.3% |
| Grand Total | 251 036 897 | (3 847 218) | -1.5% |

The impacts are illustrated graphically in the graphs below for each tariff.





1.17. TOU tariff recommendations

The following is thus proposed in this respect:

- The tariffs thus be developed based on the cost of supply results.
- The differentiation will be set as per cost differences.
- The markup on energy will be in R/kWh and not in %.
- The small changes should be implemented.

18. AVAILABILITY CHARGES

The calculation of availability charges to reflect the network costs are usually done as follows:

- No contribution is made to the costs covered by the basic charge.
- No contribution is made to the Maximum demand charge which include:
 - The Eskom maximum demand charge
 - 50% of the municipal network costs
- The full contribution is made to the Access charge which include:
 - 50% of the municipal network costs (the more dedicated portion)
 - The Eskom Access charge as capacity has to be reserved to Eskom.
- The demand on the network to calculate the access charge is based on the following:
 - The design capacity of the network. This refer to the so called ADMD (After Diversity maximum Demand) which is usually about 1 to 5 kVA depending on the type of area.

- This can be expressed by the installed capacity before diversity. For these calculations a 40 Amp single phase supply with a 30% co-incident factor is used which comes to:
 - $50 \text{ Amps} \times 230 \text{ Volts} = 11.5 \text{ kVA} \div 3 = 3.8 \text{ kVA (ADMD)}$.

This represents the minimum that should be charged as the whole network still needs to be maintained and be paid for whether consumers use electricity or not.

19. SMALL SCALE EMBEDDED GENERATION (SSEG)

The important issue in respect of SSEG customers is that they must be on a cost reflective tariff with fixed and capacity / demand charges close to cost.

Ideally all SSEG consumers should be on a TOU tariff with 4 quadrant meters:

- A new TOU tariff for small consumers, <100 kVA, has been developed.
- Any consumer can select this tariff, but all SSEG consumers must be on this tariff.
- It is subject to an application and payment for the supply and installation of a 4 wire, 4 quadrant TOU meter.
- The tariff has been designed as follows:
 - The basic charge equal to the average of a 1 and 3 phase TOU meter supply.
 - The capacity charge is set at the average of the Domestic and Commercial tariff capacity charge.
 - The energy rates are set equal to the Bulk LV plus the additional losses on the LV network.
 - No reactive any charge is levied.

The SSEG Feed-in tariff, which caters for consumers who want to feed-in to the network, is as follows:

- An additional basic charge to cater for the additional metering & administration costs to administer the feed-in.
- The energy credit rates are set at 80% of Eskom Megaflex energy charges applicable to George.
- This tariff applies to any customer wanting to feed-in irrespective of whether they have a LV or MV connection.
- Various other conditions apply.

Currently the TOU tariff for small consumers is applied to SSEG consumers. No additional SSEG support charge is applied.

The following challenges remain in this respect:

- Many consumers with SSEG systems do not apply for their systems to be authorised.
- Many consumers apply to have their systems authorised but say they don't want to export energy and thus don't want to pay for a 4-quadrant meter.
- This means that many consumers are not on the correct tariff, being TOU and do not have 4 quadrant meters allowing them to export surplus energy.
- Conventional consumers with Ferraris disc meters obtain unfair advantages as these meters turn backwards when any energy is exported and they thus receive a credit at the municipal selling price, close to double that of the approved credit rate.
- In the case of pre-payment meters, it applies export energy as usage as it is not a bi-directional meter. Some pre-payment meters trip when export takes place.

The following is proposed in this respect:

- All SSEG consumers must apply to have their systems approved.
- All SSEG consumers have to pay for a 4 quadrant meter and be placed on the TOU tariff.
- These consumers must at least take a minimum 30 Amp supply to allow ample export based on 20% of installed municipal supply capacity limit.

It is realised that many SSEG consumers use very little energy. In terms of the current industry accepted norm consumers can only export so much energy as the value of their energy consumed. This seriously limits any exports. Cape Town has obtained approval from NERSA to buy more than the value of what the consumer buys from National Treasury.

The potential to buy massive amounts of energy from SSEG consumers is very real. It is therefore proposed that the TOU option with 4 quadrant meters be the preferred way to address these consumers. In terms of managing the electronic meters with remote access it is strongly proposed that an external contractor be appointed to do this management. The additional cost can be the basis for the additional SSEG basic charge and thus it would not have a negative financial impact on the municipality. The relevant TOU energy rates are shown in Table 71.

Table 71

| TOU TARIFFS | | Proposed 2024/2025 | | | 0 |
|---|---------------------------------------|---------------------------|----------------|----------------|---------------|
| All rates include surcharges. | | BASIC | ACCESS | MAXIMUM | ENERGY |
| SEGMENT | | CHARGE | DEMAND | DEMAND | CHARGE |
| Tariff Name | Code | R/C/m | R/kVA/m | R/A/m | R/kWh |
| 3.A. Low voltage consumers (Tariff code LV) | | | | | |
| TOU TARIFFS | | Basic | Access | Demand | |
| Existing Megaflex 66 KV 2024/2025 | Basic: MD (Hi / Low): MD/Acc | | | | |
| Escalated to 2024/2025 | Energy: High: P/St/OP (R/kWh) | 6.3910 | 2.0505 | 1.1884 | |
| | Energy: Low: P/St/OP : R/kvarh | 2.1952 | 1.5617 | 1.0507 | |
| New Munic Flex 2024/2025 | Basic: MD (Hi / Low): MD/Acc | | | | |
| | Energy: High: P/St/OP (R/kWh) | 6.0524 | 1.6904 | 1.2057 | |
| | 11.32% Energy: Low: P/St/OP : R/kvarh | 2.6500 | 1.5935 | 1.2057 | |
| Change to Municflex | | | | | |
| | Energy: High: P/St/OP (R/kWh) | -5.3% | -17.6% | 1.5% | |
| | Energy: Low: P/St/OP : R/kvarh | 20.7% | 2.0% | 14.8% | |

The TOU quantities on the old Megaflex and new Municflex is shown in Table 72.

Table 72

| PV - non-tracking | | ENERGY | | | DEMAND | TOTAL | TOTAL | | | | |
|-------------------|------|------------------|-------------------|------------------|-------------------|-------------------|----------|-----------------|--------------|---------------|---------------|
| | | P | S | O | MD - KVA ALL | ENERGY | P&S | KVA LOAD FACTOR | P | S | O |
| MONTH | Days | kWh (for) | kWh (for) | kWh (for) | KVA | kWh (for) | kvarh | % | kWh (for) | kWh (for) | kWh (for) |
| 2022/07/31 | 31 | 29 024 | 614 155 | 234 319 | 6 249.21 | 877 498 | - | 18.87% | 3.31% | 69.99% | 26.70% |
| 2022/08/31 | 31 | 58 370 | 1 053 429 | 351 042 | 13 781.23 | 1 462 841 | - | 14.27% | 3.99% | 72.01% | 24.00% |
| 2022/09/30 | 30 | 264 899 | 1 692 285 | 489 497 | 16 117.05 | 2 446 680 | - | 21.08% | 10.83% | 69.17% | 20.01% |
| 2022/10/31 | 31 | 331 995 | 1 986 258 | 711 289 | 17 339.60 | 3 029 542 | - | 23.48% | 10.96% | 65.56% | 23.48% |
| 2022/11/30 | 30 | 425 739 | 2 202 488 | 706 674 | 18 097.71 | 3 334 901 | - | 25.59% | 12.77% | 66.04% | 21.19% |
| 2022/12/31 | 31 | 403 005 | 2 158 430 | 1 021 212 | 17 736.56 | 3 582 647 | - | 27.15% | 11.25% | 60.25% | 28.50% |
| 2023/01/31 | 31 | 395 002 | 2 381 952 | 827 216 | 18 600.00 | 3 604 170 | - | 26.04% | 10.96% | 66.09% | 22.95% |
| 2023/02/28 | 28 | 296 273 | 2 099 435 | 681 986 | 17 888.04 | 3 077 693 | - | 25.60% | 9.63% | 68.21% | 22.16% |
| 2023/03/31 | 31 | 282 855 | 2 062 498 | 638 316 | 17 043.75 | 2 983 669 | - | 23.53% | 9.48% | 69.13% | 21.39% |
| 2023/04/30 | 30 | 137 508 | 1 078 798 | 699 107 | 15 703.97 | 1 915 413 | - | 16.94% | 7.18% | 56.32% | 36.50% |
| 2023/05/31 | 31 | 91 845 | 686 257 | 220 245 | 7 077.33 | 998 348 | - | 18.96% | 9.20% | 68.74% | 22.06% |
| 2023/06/30 | 30 | 22 144 | 562 218 | 186 789 | 5 389.65 | 771 151 | - | 19.87% | 2.87% | 72.91% | 24.22% |
| TOTALS | | 2 738 659 | 18 578 202 | 6 767 689 | 171 024.10 | 28 084 551 | - | 17.24% | 9.75% | 66.15% | 24.10% |

| PV non-track: new tariff | | ENERGY | | | DEMAND | TOTAL | TOTAL | | | | |
|--------------------------|------|------------------|-------------------|------------------|-------------------|-------------------|----------|-----------------|--------------|---------------|---------------|
| | | P | S | O | MD - KVA ALL | ENERGY | P&S | KVA LOAD FACTOR | P | S | O |
| MONTH | Days | kWh (for) | kWh (for) | kWh (for) | KVA | kWh (for) | kvarh | % | kWh (for) | kWh (for) | kWh (for) |
| 2023/07/31 | 31 | 4 870 | 634 612 | 233 298 | 6 215.61 | 872 780 | - | 18.87% | 0.56% | 72.71% | 26.73% |
| 2023/08/31 | 31 | 17 949 | 1 132 414 | 304 613 | 13 707.13 | 1 454 976 | - | 14.27% | 1.23% | 77.83% | 20.94% |
| 2023/09/30 | 30 | 109 930 | 1 796 045 | 527 551 | 16 030.39 | 2 433 526 | - | 21.08% | 4.52% | 73.80% | 21.68% |
| 2023/10/31 | 31 | 174 483 | 2 145 597 | 693 174 | 17 246.38 | 3 013 254 | - | 23.48% | 5.79% | 71.21% | 23.00% |
| 2023/11/30 | 30 | 215 933 | 2 423 040 | 677 998 | 18 000.41 | 3 316 971 | - | 25.59% | 6.51% | 73.05% | 20.44% |
| 2023/12/31 | 31 | 203 846 | 2 207 715 | 1 151 824 | 17 641.20 | 3 563 385 | - | 27.15% | 5.72% | 61.96% | 32.32% |
| 2024/01/31 | 31 | 216 820 | 2 582 064 | 785 909 | 18 500.00 | 3 584 793 | - | 26.04% | 6.05% | 72.03% | 21.92% |
| 2024/02/29 | 29 | 157 707 | 2 261 808 | 746 233 | 17 791.87 | 3 165 749 | - | 25.56% | 4.98% | 71.45% | 23.57% |
| 2024/03/31 | 31 | 108 120 | 1 874 277 | 949 589 | 16 952.12 | 2 931 986 | - | 23.25% | 3.69% | 63.93% | 32.39% |
| 2024/04/30 | 30 | 59 975 | 1 335 026 | 469 314 | 15 619.54 | 1 864 314 | - | 16.58% | 3.22% | 71.61% | 25.17% |
| 2024/05/31 | 31 | 36 167 | 736 282 | 221 726 | 7 039.28 | 994 175 | - | 18.98% | 3.64% | 74.06% | 22.30% |
| 2024/06/30 | 30 | 850 | 536 834 | 199 965 | 5 360.67 | 737 649 | - | 19.11% | 0.12% | 72.78% | 27.11% |
| TOTALS | | 1 306 651 | 19 665 712 | 6 961 195 | 170 104.62 | 27 933 558 | - | 17.24% | 4.68% | 70.40% | 24.92% |

The calculation of costs at the two tariffs is shown in Table 73.

Table 73

| PV - non-tracking | | | | | | |
|---------------------------------|------------------|-------------------|------------------|---------------------------|-------------------|--------------|
| | Peak c/kWh | Standard c/kWh | Off-peak c/kWh | Reactive energy (c/kvarh) | Total | c/kWh |
| 31-Jul-22 | 185 494 | 1 259 324 | 278 464 | - | 1 723 283 | 196 |
| 31-Aug-22 | 373 044 | 2 160 057 | 417 178 | - | 2 950 279 | 202 |
| 30-Sep-22 | 581 506 | 2 642 841 | 514 314 | - | 3 738 661 | 153 |
| 31-Oct-22 | 728 796 | 3 101 939 | 747 351 | - | 4 578 086 | 151 |
| 30-Nov-22 | 934 582 | 3 439 626 | 742 502 | - | 5 116 710 | 153 |
| 31-Dec-22 | 884 677 | 3 370 820 | 1 072 987 | - | 5 328 484 | 149 |
| 31-Jan-23 | 867 109 | 3 719 894 | 869 156 | - | 5 456 159 | 151 |
| 28-Feb-23 | 650 378 | 3 278 687 | 716 562 | - | 4 645 627 | 151 |
| 31-Mar-23 | 620 923 | 3 221 003 | 670 678 | - | 4 512 605 | 151 |
| 30-Apr-23 | 301 857 | 1 684 760 | 734 552 | - | 2 721 168 | 142 |
| 31-May-23 | 201 619 | 1 071 728 | 231 412 | - | 1 504 758 | 151 |
| 30-Jun-23 | 141 521 | 1 152 828 | 221 980 | - | 1 516 328 | 197 |
| Total | 6 471 505 | 30 103 506 | 7 217 136 | - | 43 792 147 | 156 |
| PV non-track: new tariff | | | | | | |
| | Peak c/kWh | Standard c/kWh | Off-peak c/kWh | Reactive energy (c/kvarh) | Total | c/kWh |
| 31-Jul-23 | 29 474 | 1 072 775 | 281 290 | - | 1 383 539 | 159 |
| 31-Aug-23 | 108 637 | 1 914 280 | 367 276 | - | 2 390 192 | 164 |
| 30-Sep-23 | 291 315 | 2 862 023 | 636 076 | - | 3 789 414 | 156 |
| 31-Oct-23 | 462 383 | 3 419 039 | 835 769 | - | 4 717 191 | 157 |
| 30-Nov-23 | 572 226 | 3 861 148 | 817 472 | - | 5 250 846 | 158 |
| 31-Dec-23 | 540 196 | 3 518 026 | 1 388 769 | - | 5 446 991 | 153 |
| 31-Jan-24 | 574 578 | 4 114 555 | 947 581 | - | 5 636 714 | 157 |
| 29-Feb-24 | 417 927 | 3 604 224 | 899 743 | - | 4 921 894 | 155 |
| 31-Mar-24 | 286 521 | 2 986 686 | 1 144 932 | - | 4 418 139 | 151 |
| 30-Apr-24 | 158 934 | 2 127 382 | 565 858 | - | 2 852 174 | 153 |
| 31-May-24 | 95 842 | 1 173 275 | 267 339 | - | 1 536 456 | 155 |
| 30-Jun-24 | 5 147 | 907 486 | 241 101 | - | 1 153 734 | 156 |
| Total | 3 543 180 | 31 560 900 | 8 393 205 | - | 43 497 285 | 156 |
| | | | 15.9 | Change | | -0.1% |

To assess the impact on the selling price the following calculations are done. The markup on the respective TOU tariff is shown in Table 74.

Table 74

| TOU tariff markup | |
|---|-------|
| 1.D.Domestic Flex (TOUP, TOUS , TOU) < 100 kVA. | 20.7% |
| 2.C.Commercial Flex (TOUP, TOUS , TOU) < 100 kVA. | 20.7% |
| 3.A. GEORGE TIME OF USE: LV > 100 kVA | 14.7% |
| 3.B. GEORGE TIME OF USE: MV | 11.7% |
| 3.C. GEORGE TIME OF USE: MV at HV substation. | 9.3% |

The effective discount on the selling prices is shown in

Table 75.

Final

Table 75

| SSEG EXPORT RATE | | 2024/2025 rate | | | | | |
|-------------------------------------|-------|----------------|---|--|--|------------------------------|---|
| | | | 1.D.Domestic Flex (TOUP. TOUS . TOU) < 100 kVA. | 2.C.Commercial Flex (TOUP. TOU) < 100 kVA. | 3.A. GEOR GE TIME OF USE: LV > 100 kVA | 3.B. GEOR GE TIME OF USE: MV | 3.C. GEOR GE TIME OF USE: MV at HV substation . |
| Energy cost PV at Megaflex | c/kWh | 155.717 | | | | | |
| Discount | | 20% | | | | | |
| Export credit average c/kWh | | 124.5736 | | | | | |
| Savings in losses | | | 11.97% | 11.97% | 6.32% | 3.57% | 1.33% |
| % Savings in purchase price | | | 34.4% | 34.4% | 27.6% | 24.3% | 21.6% |
| Effective Savings c/kWh | | | 53.51 | 53.51 | 42.96 | 37.82 | 33.63 |
| TOU tariff markup | | | 20.7% | 20.7% | 14.7% | 11.7% | 9.3% |
| Effective discount on selling price | | | 55.1% | 55.1% | 42.2% | 36.0% | 30.9% |

20. PHASE IN

It is accepted that the proposed tariff structure changes will have a marked impact on customers. Some customers will pay much less and others much more. The first stage of a 3 year phase in was already applied in 2023. For this reason, phase should be done over 2 years. This can be done as follows:

- Calculate the difference between the current charge and the proposed charge. (basic, Amp, R/kVA, energy).
- Divide the difference by 2 and add to the current charge.
- Then add annual price increase %.
- In year two add 1/2 of the difference and year three the full difference.
- Continue this trend to the end of the 2 year phase in.
- In some cases, combine different tariffs to reduce the total number.

This phase in plan has many difficulties:

Domestic.

- Indigents and 20 Amp will see no change.
- Those with supplies > 20 Amp single phase will see basic charges reducing and capacity charges increasing and the higher energy block prices reducing.

Commercial

- They will see basic charges reducing and capacity charges increasing and the energy charges reducing.

Bulk.

- Capacity charges increasing and demand charges decreasing.
- Small changes to energy charges.

All of this will create careful administration.

The following is proposed for implementation with no phase in:

- All SSEG consumer go to the full cost reflective tariffs.
- Streetlight tariff.

Table 76 shows the tariffs for year 1 and 2 of a 2 year phase in plan without any annual increases.

Table 76

| GEORGE | | 2024/2025 Proposed after increase | | | | | | | | | | |
|------------------|--|-----------------------------------|-----------|-----------|----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|--------|
| 1 | Phase in year 1 | 1 | Increase | 0.00% | Phase in years | | | 2 | Eskom Increase | 0.00% | | |
| 1 | | | | | Energy Peak | Energy Standard | Energy Off-Peak | Energy Peak | Energy Standard | Energy Off-Peak | Reactive energy | |
| PROPOSED TARIFFS | | Basic charge | Capacity | MD / kVA | Energy | Block 1 energy | Block 2 energy | Block 3 energy | Block 4 energy | Block 5 energy | | |
| Nr | TARIFF NAME | Rand/month | R/kVA/A/m | R/kVA/A/m | R/kWh | R/kWh | R/kWh | R/kWh | R/kWh | R/kWh | R/kWh | R/kWh |
| 1.00 | Domestic Indigent PP | - | - | - | - | 2.347 | 2.347 | 3.396 | - | - | - | - |
| 1.00 | Domestic Indigent Conv | - | - | - | - | 2.347 | 2.347 | 3.396 | - | - | - | - |
| 1.00 | Domestic 20 Amp PP | - | - | - | 3.102 | - | - | - | - | - | - | - |
| 1.00 | Domestic 20 Amp Conv | - | - | - | 3.102 | - | - | - | - | - | - | - |
| 1.00 | Domestic > 20 Amp PP | 109.52 | 9.42 | - | 2.440 | - | - | - | - | - | - | - |
| 1.00 | Domestic > 20 Amp Conv | 109.52 | 9.42 | - | 2.440 | - | - | - | - | - | - | - |
| 1.00 | Domestic > 20 Amp 3 ph Conv | 136.72 | 9.42 | - | 2.440 | - | - | - | - | - | - | - |
| 1.00 | Commercial PP = 20 Amps 1 ph | - | - | - | 3.102 | - | - | - | - | - | - | - |
| 1.00 | Commercial Credit = 20 Amps 1 ph | - | - | - | 3.102 | - | - | - | - | - | - | - |
| 1.00 | Commercial PP > 20 Amps 1 ph | 105.32 | 11.35 | - | 2.565 | - | - | - | - | - | - | - |
| 1.00 | Commercial Credit > 20 Amps 1 ph | 122.21 | 11.35 | - | 2.565 | - | - | - | - | - | - | - |
| 1.00 | Commercial Credit > 20 Amps 3 ph | 132.63 | 11.35 | - | 2.565 | - | - | - | - | - | - | - |
| 1.00 | 5.1. Agric 10 kVA to 16 kVA | 403.90 | - | - | 2.946 | - | - | - | - | - | - | - |
| 1.00 | 5.2 Agric above 16 kVA. up to 25 kVA | 683.36 | - | - | 2.946 | - | - | - | - | - | - | - |
| 1.00 | 5.3 Agric above 25 kVA. up to 50 kVA | 1 366.75 | - | - | 2.946 | - | - | - | - | - | - | - |
| 1.00 | 5.4 Agric above 50 kVA. up to 100 kVA | 1 514.95 | - | - | 2.946 | - | - | - | - | - | - | - |
| 1.00 | 1.D Domestic Flex (TOUP, TOUS, TOU) < 1 | 219.07 | 9.44 | - | - | 6.52 | 2.2627 | 1.6088 | 2.8793 | 1.9549 | 1.4413 | - |
| 1.00 | 2.C Commercial Flex (TOUP, TOUS, TOU) < 1 | 350.49 | 11.35 | - | - | 6.52 | 2.2624 | 1.6084 | 2.8789 | 1.9545 | 1.4410 | - |
| 1.00 | 3.A. GEORGE TIME OF USE: LV > 100 kVA | 798.46 | 112.64 | 142.96 | - | 6.52 | 2.2520 | 1.5935 | 2.8015 | 1.9680 | 1.5279 | 0.2893 |
| 1.00 | 3.B. GEORGE TIME OF USE: MV | 3 665.61 | 92.75 | 97.14 | - | 6.22 | 2.1225 | 1.5082 | 2.6326 | 1.8234 | 1.4505 | 0.2893 |
| 1.00 | 3.C. GEORGE TIME OF USE: MV at HV sub | 7 627.62 | 74.00 | 72.67 | - | 6.04 | 2.0356 | 1.4377 | 2.5462 | 1.7499 | 1.3825 | 0.2893 |
| 1.00 | 3.D Embedded Generation Tariff (Tariff Code) | - | - | - | - | - | - | - | - | - | - | - |
| 1.00 | 6.1. STREET LIGHTING (Tariff code: 1530) | 183.90 | - | - | 3.410 | - | - | - | - | - | - | - |
| 1.00 | 6.2. NON MUNICIPAL STREETLIGHTS. SEC | 183.90 | - | - | 3.410 | - | - | - | - | - | - | - |
| 1.00 | Wheeling | - | - | - | - | - | - | - | - | - | - | - |
| 1.00 | Availability | 595.74 | 0.00 | - | - | - | - | - | - | - | - | - |

| GEORGE | | 2025/2026 Proposed after increase | | | | | | | | | | |
|------------------|--|-----------------------------------|--------------|-----------|----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|--------|
| 1 | Phase in year | 2 | Increase | 0.00% | Phase in years | | | | Eskom Increase | 0.00% | | |
| 1 | | | | | Energy Peak | Energy Standard | Energy Off-Peak | Energy Peak | Energy Standard | Energy Off-Peak | Reactive energy | |
| PROPOSED TARIFFS | | Basic charge | Access / kVA | MD / kVA | Energy | Block 1 energy | Block 2 energy | Block 3 energy | Block 4 energy | Block 5 energy | | |
| Nr | TARIFF NAME | Rand/month | R/kVA/A/m | R/kVA/A/m | R/kWh | R/kWh | R/kWh | R/kWh | R/kWh | R/kWh | R/kWh | R/kWh |
| 1.00 | Domestic Indigent PP | - | - | - | - | - | 2.347 | 3.396 | - | - | - | - |
| 1.00 | Domestic Indigent Conv | - | - | - | - | - | 2.347 | 3.396 | - | - | - | - |
| 1.00 | Domestic 20 Amp PP | - | - | - | 3.102 | - | - | - | - | - | - | - |
| 1.00 | Domestic 20 Amp Conv | - | - | - | 3.102 | - | - | - | - | - | - | - |
| 1.00 | Domestic > 20 Amp PP | 122.43 | 13.00 | - | 2.181 | - | - | - | - | - | - | - |
| 1.00 | Domestic > 20 Amp Conv | 122.43 | 13.00 | - | 2.181 | - | - | - | - | - | - | - |
| 1.00 | Domestic > 20 Amp 3 ph Conv | 176.83 | 13.00 | - | 2.181 | - | - | - | - | - | - | - |
| 1.00 | Commercial PP = 20 Amps 1 ph | - | - | - | 3.102 | - | - | - | - | - | - | - |
| 1.00 | Commercial Credit = 20 Amps 1 ph | - | - | - | 3.102 | - | - | - | - | - | - | - |
| 1.00 | Commercial PP > 20 Amps 1 ph | 122.21 | 13.00 | - | 2.098 | - | - | - | - | - | - | - |
| 1.00 | Commercial Credit > 20 Amps 1 ph | 122.21 | 13.00 | - | 2.098 | - | - | - | - | - | - | - |
| 1.00 | Commercial Credit > 20 Amps 3 ph | 176.83 | 13.00 | - | 2.098 | - | - | - | - | - | - | - |
| 1.00 | 5.1. Agric 10 kVA to 16 kVA | 403.90 | - | - | 2.946 | - | - | - | - | - | - | - |
| 1.00 | 5.2 Agric above 16 kVA. up to 25 kVA | 683.36 | - | - | 2.946 | - | - | - | - | - | - | - |
| 1.00 | 5.3 Agric above 25 kVA. up to 50 kVA | 1 366.75 | - | - | 2.946 | - | - | - | - | - | - | - |
| 1.00 | 5.4 Agric above 50 kVA. up to 100 kVA | 1 514.95 | - | - | 2.946 | - | - | - | - | - | - | - |
| 1.00 | 1.D Domestic Flex (TOUP, TOUS, TOU) < 1 | 340.81 | 13.00 | - | - | 6.415 | 2.0530 | 1.5683 | 3.0126 | 1.9561 | 1.5683 | - |
| 1.00 | 2.C Commercial Flex (TOUP, TOUS, TOU) < 1 | 340.81 | 13.00 | - | - | 6.414 | 2.0523 | 1.5676 | 3.0119 | 1.9554 | 1.5676 | - |
| 1.00 | 3.A. GEORGE TIME OF USE: LV > 100 kVA | 848.64 | 143.56 | 114.34 | - | 6.309 | 1.9473 | 1.4626 | 2.9069 | 1.8504 | 1.4626 | 0.2893 |
| 1.00 | 3.B. GEORGE TIME OF USE: MV | 3 654.70 | 100.14 | 69.90 | - | 6.255 | 1.8929 | 1.4081 | 2.8524 | 1.7959 | 1.4081 | 0.2893 |
| 1.00 | 3.C. GEORGE TIME OF USE: MV at HV sub | 8 943.14 | 76.27 | 46.03 | - | 6.214 | 1.8519 | 1.3671 | 2.8114 | 1.7549 | 1.3671 | 0.2893 |
| 1.00 | 3.D Embedded Generation Tariff (Tariff Code) | - | - | - | - | - | - | - | - | - | - | - |
| 1.00 | 6.1. STREET LIGHTING (Tariff code: 1530) | 247.14 | - | - | 3.249 | - | - | - | - | - | - | - |
| 1.00 | 6.2. NON MUNICIPAL STREETLIGHTS. SEC | 247.14 | - | - | 3.249 | - | - | - | - | - | - | - |
| 1.00 | Wheeling | - | - | - | - | - | - | - | - | - | - | - |
| 1.00 | Availability | 627.08 | - | - | - | - | - | - | - | - | - | - |

21. TARIFF SCHEDULE

The proposed tariff schedule is shown in Table 77 It shows the following rates:

- The fully cost reflective rates for 2024/2026 without phase in or annual price increase for 2025/2026.

Table 77

| GEORGE ELECTRICITY TARIFF SCHEDULE | | | 2024/2025 Actual | | | | 2025/2026 Proposed tariffs | | | | | |
|---|-------------------|-------------------|-------------------|-----------------|---------------|--------------------|--|-------------------|-----------------|---------------|--------------------|-------------------|
| ELECTRICITY RATES* | | | | | | | Including annual increase and phase in | | | | | |
| Exc Vat | Annual increase | | | 14.75% | | Annual increase | | | 9.00% | | | |
| TARIFF 1 : DOMESTIC CONSUMERS: INDIGENT ONLY | | | Energy charges | | | | Energy charges | | | | | |
| | Block 0 kWh/month | Block 1 kWh/month | Block 2 kWh/month | BloRk 1 R/kWh | BloRk 2 R/kWh | Block 0 kWh/month | Block 1 kWh/month | Block 2 kWh/month | BloRk 1 R/kWh | BloRk 2 R/kWh | | |
| 1.A.1 One part Pre- paid. 20 Amps 1 PH: (70 kWh/m free) | | | | | | | | | | | | |
| 1.A.1. Dom Indigent 1 PH: One part Pre- paid. 20 Amps One custo | 70.00 | 400.00 | >400 | 2.347 | 3.396 | 70.000 | 400 | >400 | 2.558 | 3.702 | | |
| 1.A.2. Dom Indigent 1 PH: One part Pre- paid. 30 Amps Plus 1 Bad | 140.00 | 800.00 | >800 | 2.347 | 3.396 | 140.000 | 800 | >800 | 2.558 | 3.702 | | |
| 1.A.3. Dom Indigent 1 PH: One part Pre- paid. 40 Amps Plus 2 Bad | 210.00 | 1 200.00 | >1200 | 2.347 | 3.396 | 210.000 | 1 200 | >1200 | 2.558 | 3.702 | | |
| | | | | | | | | | | | | |
| TARIFF 1 : DOMESTIC CONSUMERS: OTHER | | | Basic: R/month | Capacity: R/Amp | Demand: R/kVA | Energy High: R/kWh | Energy Low: R/kWh | Basic: R/month | Capacity: R/Amp | Demand: R/kVA | Energy High: R/kWh | Energy Low: R/kWh |
| 1.B.Domestic 1 ph (1503, 1580) : One part 20 Amp | | | | | | 3.102 | | | | | 3.381 | |
| 1.C.Domestic 1 ph (1504, 1581): Three part: > 20 Amp 1 ph | 96.61 | 5.83 | | | | 2.699 | | 119.377 | 10.264 | - | 2.659 | |
| 1.C.Domestic 1 ph (1506.): Three part ≤ 20 Amp 3 ph | 96.61 | 5.83 | | | | 2.699 | | 119.377 | 10.264 | - | 2.659 | |
| | | | | | | | | | | | | |
| 2.TARIFF 2 : GENERAL TARIFF : COMMERCIAL CO | | | Basic: R/month | Capacity: R/Amp | Demand: R/kVA | Energy High: R/kWh | Energy Low: R/kWh | Basic: R/month | Capacity: R/Amp | Demand: R/kVA | Energy High: R/kWh | Energy Low: R/kWh |
| 2.A.. Small General (1507,1582) :20 Amps 1 ph | | | | | | 3.740 | | | | | 3.381 | |
| 2.B.. Small General (1507,1582) : >20 Amps | 88.43 | 9.70 | | | | 3.033 | | 114.798 | 12.373 | - | 2.796 | |
| | | | | | | | | | | | | |
| 3.C GEORGE TIME OF USE: | | | | | | | | | | | | |
| 1.D.Domestic Flex (TOUP, TOUS , TOU) < 100 kVA. | 97.33 | 5.88 | | | | | | 238.785 | 10.291 | | | |
| Energy – High/ Low Demand: Peak | | | | | | 6.6172 | 2.7460 | | | | 7.1025 | 3.1384 |
| Energy – High/Low Demand: Standard | | | | | | 2.4725 | 1.9537 | | | | 2.4664 | 2.1308 |
| Energy – High/Low Demand: Off-Peak | | | | | | 1.6493 | 1.3144 | | | | 1.7536 | 1.5711 |
| 2.C.Commercial Flex (TOUP, TOUS , TOU) < 100 kVA. | 360.18 | 9.70 | | | | | | 382.038 | 12.373 | | | |
| Energy – High/ Low Demand: Peak | | | | | | 6.6172 | 2.7460 | | | | 7.1021 | 3.1380 |
| Energy – High/Low Demand: Standard | | | | | | 2.4725 | 1.9537 | | | | 2.4660 | 2.1304 |
| Energy – High/Low Demand: Off-Peak | | | | | | 1.6493 | 1.3144 | | | | 1.7532 | 1.5707 |
| 3.A. GEORGE TIME OF USE: LV > 100 kVA | 748.28 | 81.72 | 171.59 | | | | | 870.32 | 122.78 | 155.83 | | |
| Energy – High/ Low Demand: Peak | | | | | | 6.740 | 2.696 | | | | 7.1118 | 3.0537 |
| Energy – High/Low Demand: Standard | | | | | | 2.557 | 2.086 | | | | 2.4547 | 2.1452 |
| Energy – High/Low Demand: Off-Peak | | | | | | 1.725 | 1.593 | | | | 1.7369 | 1.6654 |
| Reactive energy charge. c/kvarh | | | | | | 0.273 | | | | | 0.289 | |
| 3.B. GEORGE TIME OF USE: MV | 3 676.52 | 85.35 | 124.38 | | | | | 3 995.52 | 101.09 | 105.88 | | |
| Energy – High/ Low Demand: Peak | | | | | | 6.182 | 2.413 | | | | 6.7778 | 2.8695 |
| Energy – High/Low Demand: Standard | | | | | | 2.352 | 1.851 | | | | 2.3135 | 1.9875 |
| Energy – High/Low Demand: Off-Peak | | | | | | 1.608 | 1.493 | | | | 1.6439 | 1.5810 |
| Reactive energy charge. c/kvarh | | | | | | 0.273 | | | | | 0.289 | |
| 3.C. GEORGE TIME OF USE: MV at HV substation. | 6 312.10 | 71.73 | 99.31 | | | | | 8 314.10 | 80.66 | 79.21 | | |
| Energy – High/ Low Demand: Peak | | | | | | 5.875 | 2.281 | | | | 6.5885 | 2.7754 |
| Energy – High/Low Demand: Standard | | | | | | 2.219 | 1.745 | | | | 2.2188 | 1.9074 |
| Energy – High/Low Demand: Off-Peak | | | | | | 1.508 | 1.398 | | | | 1.5671 | 1.5069 |
| Reactive energy charge. c/kvarh | | | | | | 0.273 | | | | | 0.289 | |
| 3.D Embedded Generation Tariff (Tariff Code : TOUBP, TOUBS, TOUBO, IMBB1) | | | | | | | | | | | | |
| Energy – High/ Low Demand: Peak | | | | | | (5.43) | (1.770) | | | | (4.839) | (2.117) |
| Energy – High/Low Demand: Standard | | | | | | (1.64) | (1.218) | | | | (1.350) | (1.272) |
| Energy – High/Low Demand: Off-Peak | | | | | | (0.89) | (0.773) | | | | (0.962) | (0.962) |
| 3.E WHEELING TARIFF | | | | | | | | | | | | |
| Additional Basic charge | 129.35 | | | | | | | | | | | |
| Standard TOU tariff apply | | | | | | | | | | | | |
| Energy credit at Eskom Bulk energy rate | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| TARIFF 5 : AGRICULTURAL | | | Basic: R/month | Capacity: R/Amp | Demand: R/kVA | Energy: R/kWh | | Basic: R/month | Capacity: R/Amp | Demand: R/kVA | Energy: R/kWh | |
| 5.TARIFF 5 : AGRICULTURAL CONSUMPTION (1541, 1542, 1543) | | | | | | | | | | | | |
| 5.1. AGRICULTURAL 10 kVA to 16 kVA | 403.90 | | | | | 2.946 | | 440.251 | - | - | 3.211 | |
| 5.2 AGRICULTURAL above 16 kVA. up to 25 kVA | 683.36 | | | | | 2.946 | | 744.862 | - | - | 3.211 | |
| 5.3 AGRICULTURAL above 25 kVA. up to 50 kVA | 1 366.75 | | | | | 2.946 | | 1 489.758 | - | - | 3.211 | |
| 5.4 AGRICULTURAL above 50 kVA. up to 100 kVA. | 1 514.95 | | | | | 2.946 | | 1 651.296 | - | - | 3.211 | |
| | | | | | | | | | | | | |
| TARIFF 6 : STREET LIGHTING (Tariff code : 1530, 1531, 1559) | | | Per Lamp | | | Energy: R/kWh | | Per Lamp | | | Energy: R/kWh | |
| 6.1. STREET LIGHTING (Tariff code : 1530, 1531, 1559) | 120.65 | | | | | 3.572 | | 200.446 | | | 3.717 | |
| 6.2. NON MUNICIPAL STREETLIGHTS, SECURITY CAMERAS, SPORTS FIELDS AND FACILITIES (Ta | | | | | | 3.572 | | | | | 3.717 | |
| | | | | | | | | | | | | |
| TARIFF 7 : AVAILABILITY CHARGES | | | Per erf | | | | | Per erf | | | | |
| 6.1. STREET LIGHTING (Tariff code : 1530, 1531, 1559) | 564.40 | | | | | | | 649.356 | | | - | |
| | | | | | | | | | | | | |

22. CONCLUSIONS

This detailed Ringfencing, Cost of supply and Pricing study presented many different challenges. All these have been addressed and the results obtained are considered 95% accurate. The current tariffs were found needing major changes. These will send a clear signal about the value of capacity which in time will assist the municipality in controlling it costs which are largely dictated by capacity.

The COS study must now be workshopped internally and be approved by Council and then be submitted to NERSA. Once the budget process starts the proposed tariffs need to be submitted to proper public participation. Only once NERSA approval and public participation process is completed can implementation begin.

1.18. Definitions.

Ampere (A): The unit in which electric current is measured being the rate of flow of electric current through a conductor and which is comparable to the rate of volume of water flow through a pipe.

Capacity utilisation. – This refers to the extent to which the capacity that has been installed for a customer has been utilised by the customer.

Charges. – This refers to different charges that a customer has to pay such as a charge for energy or charge for installed capacity.

Clients. – This refers to other contacts of the utility such as contractors, consultants, etc.

Connection fee: The minimum, once-off, up-front payment for new or additional capacity

Consumers. – This refers to any user of electricity whether it be an illegal connected supply, unpaid supply or third-party person.

Cross subsidy. – This refers to cases where one set of customers are subsidised by another set of customers because their tariff does not cover their cost of supply.

Customer. – This refers to a consumer that is legally connected to the electricity network, is contracted with the supply utility and is paying their dues.

Demand charge: A R/kVA or R/kW charge which is time and/or seasonally differentiated and is applied to the chargeable demand registered during the month.

Demand tariffs. – This refers to tariffs that charge for the maximum demand taken by the customer every month.

Diversity Factor: This is defined as the ratio of the sum of individual consumers' non-coincident maximum demands to the total maximum demand of a group, which is an indication of the extent to which the same capacity can be used for different consumers

Electrical Energy – This refers to the amounts of units of electricity consumed. This is normally measured for a month.

Gigawatt (GW): Equal to one thousand MW or one million kW.

Inter tariff cross subsidies. – This is where one category of customers is cross-subsidising another category of customers.

Intra tariff cross subsidies. – This is where there is cross subsidisation between the different customers within a particular customer category such as high usage customers cross-subsidising low usage customers.

kWh (kilo Watt hour) – This is the unit of measure for energy. It means 1000 of Watt hours. In other words, if a 100 Watt globe was burning for 10 hours.

Kilovolt-Ampere (kVA): The product of volts and amperes times 1 000, i.e. $V \times A \times 1\,000$. This is a measure of "apparent" electrical power.

Kilowatt (kW): The product of kVA and power factor which is a measure of "true" electrical power. The expression for kW is $V \times A \times \text{power factor} \times 1\,000$.

Kilowatt-hour (kWh): The total amount of energy used in one hour by a device that requires one kilowatt of power for continuous operation, i.e. the product of kilowatts and hours.

kVA (kilo Volt Ampere) – This is the unit of measure for maximum demand. It includes the real and reactive components of power.

kW (kilo Watt) – This is also a unit of measure for maximum demand but only the real component. Here the calculation is done over a 1-hour period. The maximum demand taken by ten 100-Watt globes equals to 1 kW.

Load factor. – This refers to the amount of electricity consumed by a customer in a billing period relative to the amount of energy that could have been consumed had the appliances been kept on all the time. This indicates how effective the capacity had been used.

Load factor (LF) annual: Total kWh/y divided by the highest maximum demand in the year times 12 times the total hours in the year. $(\text{Total kWh for year}) \div (\text{Highest maximum demand in year} \times 12 \times \text{hours in year})$.

Load factor (LF) average monthly: Total kWh/y divided by the sum of the maximum demands of all months in the year times 12 times the total hours in the year. $(\text{Total kWh for year}) \div (\text{Sum of 12 maximum demands in year} \times \text{hours in year})$.

Life line. – This refers to a tariff that provides support, subsidy, discount to customers. This is usually not available to all customers and provide more support at low consumption levels and become more expensive at high consumption levels.

Maximum demand. – This refers to the maximum demand that the customer places on the network normally averaged over a half hour period.

Megawatt (MW): Equal to one million Watts or 1 000 kW.

Network voltage. – This refers to the voltage at which the network operates. This voltage is usually higher to transfer large amounts of power.

Network capacity. – This refers to the maximum rating of the network equipment that has been installed to supply a customer. This is expressed as kVA or A (Amperes).

Point of delivery (POD): A physical point on the electrical network, where electricity is delivered to a customer, usually the metering point.

Point of supply: It could be a single point of delivery to a customer or a specific group of points of delivery on the System from where electricity is supplied to the customer.

Power Factor (PF): The ratio kW / kVA indicates the ratio of “true” electrical power to “apparent” electrical power, i.e. the ratio of useful work to the total quantity of volts and amperes supplied.

Reactive energy charge: In case of Megaflex, it is levied on every kvarh which is registered in excess of 30% of the kWh supplied during the specified periods of the month.

Supply voltage. – This refers to the voltage at which customers are supplied. The supply voltage for households is usually 240 V (volt).

Single energy rate tariff. – This refers to a tariff that only has one charge and that is a simple energy charge eg. 25 c/kWh.

Seasonal tariffs. - This refers to tariffs where the price for electricity consumed during different seasons of the year is different. This is because there is a much higher demand for electricity typically in Winter making it more expensive to provide.

Tariff. – A tariff is the combination of various charges as mentioned above to make up a tariff applicable for a specific customer category.

Tariff structure. – This refers to the type of charges in the tariff as well as the relative sizes of the different charges.

Tariff restructuring. – This refers to the process of changing the charges in a tariff but also the relationship with other tariffs.

Two part tariff. - This refers to a tariff that has a single energy rate plus a fixed charge, sometimes called a basic charge. For example, the tariff has a basic charge of R100/month and an energy rate of 105 c/kWh.

TOU (Time of Use) tariffs. - This refers to tariffs where the electricity consumed at different times of the day is measured separately and are charged for differently.

Time-of-use (TOU) tariff: A tariff that has different energy rates for different time periods and seasons in order to reflect different cost of supply at different times more accurately.

Voltage discount. – This refers to a discount applied to customers supplied at higher voltages because it is cheaper to supply, and the customer incurs more costs to transfer the energy for their own applications.

Voltage (V): Measure of electric pressure that drives electric current through a conductor.

Watt (W): The unit of electrical power or energy transfer equivalent to one ampere flowing due to an electrical pressure of one volt at unity power factor, $W = V \times A$

1.19. Abbreviations

| | | | |
|---------|--|-------|--|
| < | less than | CRC | Current replacement cost. |
| ≤ | less than or equal to | ROA | Return on Assets |
| > | greater than | HV | High Voltage ≥ 40 kV |
| ≥ | greater than or equal to | MV | Medium Voltage ≥ 1000 V < 40 kV |
| A | ampere | LV | Low Voltage < 1000 V |
| c | cents | COS | Cost Of Supply |
| c/kvarh | cents / reactive kilovolt-ampere-hour | POD | Point of delivery |
| c/kWh | cents per kilowatt-hour | POS | Point of Supply |
| CPI | consumer price index | EPP | South African Electricity Pricing Policy |
| GWh | gigawatt-hour | MFMA. | Municipal Finance Management Act |
| km | kilometre | MSA | Municipal Systems Act |
| kVA | kilovolt-ampere | IBT | Inclining Block Rate Tariff |
| kvarh | reactive kilovolt-ampere-hour | CRC | Current replacement cost. |
| kV | kilovolt | LF | Load factor |
| kW | kilowatt | FBE. | Free Basic Electricity |
| kWh | kilowatt-hour | | |
| MVA | megavolt-ampere | | |
| N/A | Not applicable | | |
| NERSA | National Electricity Regulator of South Africa | | |
| NMD | Notified Maximum Demand | | |
| PF | Power factor | | |
| R | Rand | | |
| R/kVA | Rand per kilovolt-ampere | | |
| R/kW | Rand per kilowatt | | |
| TOU | Time-of-Use | | |
| V | volt | | |
| VAT | value added tax | | |
| W | watt | | |

Final