NCPC
NATIONAL CLEANER PRODUCTION CENTRE
SOUTH AFRICA

RESOURCE EFFICIENCY AND CLEANER PRODUCTION

A GUIDE TO UNDERSTANDING YOUR INDUSTRIAL ELECTRICITY BILL




the dti
Department:
Trade and Industry
REPUBLIC OF SOUTH AFRICA

CSIR
our future through science

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DEFINITIONS

Electrical energy is measured in a unit called kWh. The kilowatt-hour (symbol kWh, kW·h or kW h) is a derived unit of energy equal to 3.6 megajoules. If the energy is being transmitted or used at a constant rate (power) over a period of time, the total energy in kilowatt-hours is the power in kilowatts multiplied by the time in hours.

Electrical power (kW) is the rate, per unit time, at which electrical energy is transferred by an electric circuit. The SI unit of power is the watt, one joule per second. Electric power is usually produced by electric generators, but can also be supplied by sources such as electric batteries.

Maximum demand is measured in kVA. It is the power consumed over a pre-determined period of time usually 30 minutes. A kVA is simply 1,000 volt amps. A volt is electrical pressure. An amp is electrical current. A term called apparent power (the absolute value of complex power, S) is equal to the product of the volts and amps. On the other hand, a watt (W) is a measurement of real power.

Network demand charge (NDC) is a charge that is variable on a monthly basis and is charged on the actual demand measured.

Notified maximum demand / Network access charge (NAC) is a tariff component that is fixed on an annual basis and is charged as a R/kVA on the greater of the notified maximum demand or the actual demand. The network access charge should be the highest kVA that the customer expects the municipality to be in a position to supply.

Restricted demand is the highest half-hourly demand in kVA taken by the customer between 16:00 and 20:00 from Monday to Friday.

Retailer refers to the utility service provider. This could either be Eskom or the local municipality that sells electricity to the public for use or consumption rather than for resale.

Notified minimum demand refers to the minimum half-hourly demand notified in writing by the customer for the purpose of claiming a discount and accepted as the minimum value to be used for calculating the maximum demand charge. The notified minimum demand remains in force for one year and may be reduced by giving one month's notice, the revised notified minimum demand shall remain in force for a further period of one year.

Service charge is the fixed charge payable per account to recover service related costs.

GENERAL

The first thing we look at when opening an electricity bill is the amount owing. But there is so much more information within your electricity bill. From meter numbers, to whether your last meter reading was estimated or refers to average daily usage; your bill contains this information and much more.

On the surface, a commercial and industrial electricity bill can seem pretty simple. Dependant on the tariff structure your premises has registered for with the council, every month you would either get charged a flat unit rate or a more complex bill using a time of use (TOU) tariff. When you start asking questions like why you get charged what you do, or how much do similar businesses pay, or what do all of the extra tariffs and fees mean, things can get pretty complex, pretty quickly.

Background to electricity tariffs[1]

In South Africa, our electricity is predominantly generated using fossil fuels via thermal coal fired power stations. Eskom is South Africa's primary electricity utility provider and supplies electricity to local municipalities, large industry and rural areas. All electricity tariffs are approved by the National Energy Regulatory of South Africa (NERSA) and then passed on to the relevant stakeholders.

Eskom tariffs are typically divided according to the following categories:

- Night save urban large – refers to an electricity tariff for high load factor urban customers with a notified maximum demand (NMD) greater than 1MVA.
- Night save urban small – refers to an electricity tariff for high load factor urban customers with an NMD greater than 25 kVA but not exceeding 1 MVA.
- Mega flex–TOU – refers to an electricity tariff for urban customers with an NMD greater than 1 MVA able to shift load.
- Mini flex–TOU – refers to an electricity tariff for urban customers with an NMD ranging from 25 kVA up to 5 MVA able to shift load.
- Business rate – refers to a tariff for small businesses, governmental institutions or similar supplies in urban areas with an NMD up to 100 kVA.
- Home power standard – refers to an electricity tariff suitable for residential customers, in urban areas with an NMD of up to 100kVA.
- Home light – refers to a set of electricity tariffs that provides a subsidy to low-usage, single-phase residential supplies in urban areas.
- Night save rural – refers to an electricity tariff for high load factor rural customers with an NMD from 25 kVA with a supply voltage ≤ 22 kV (or 33 kV where designated by Eskom as rural).
- Ruraflex–TOU – refers to an electricity tariff for rural customers with dual and three-phase supplies with an NMD from 25 kVA with a supply voltage ≤ 22 kV (or 33 kV where designated by Eskom as rural).
- Land rate – refers to an electricity tariff for rural customers with an NMD up to 100 kVA with a supply voltage of ≤ 500V.
- Land light – refers to an electricity tariff that provides a subsidy to low-usage single-phase supplies in rural areas, limited to 20A.

Local Municipal tariffs are typically divided according to the following categories:

- Residential – this is typically charged on a flat R/kWH rate. The best way to save money on this tariff structure is to switch of appliances when not needed.
- Residential TOU – this will be active in the near future.
- Business and general – this is typically charged on a flat R/kWH rate. The best way to save money on this tariff structure is to switch of appliances when not needed.
- Commercial TOU – this tariff structure charges different rates according to the time of day it is (peak, standard and off peak). The tariff type charges different rates according to the time of day and month of the year. There is also a maximum demand (MD) element. This tariff is favoured over the standard business and general and is recommended to users who have a notified maximum demand of <100KVA and predominantly operate 12 hour shifts where loads can be shifted out of peak periods to standard or off peak periods.
- Industrial TOU – this tariff structure charges different rates according to the time of day it is (peak, standard and off peak). The tariff type charges different rates according to the time of day and month of the year. There is also a maximum demand (MD) element. This tariff structure is applicable to clients typically >100KVA. This tariff's rates during peak, standard and off peak are less than commercial time of use tariff.

1. Eskom electricity tariff 2017 booklet [Online]. Available: http://www.eskom.co.za/CustomerCare/TariffsAndCharges/Pages/Tariffs_And_Charges.aspx
EThekwini Municipality Electricity Tariff Booklet 2017 – http://www.durban.gov.za/Resource_Centre/Services_Tariffs/Electricity%20Tariffs/Forms/AllItems.aspx

PRICING OF ELECTRICITY

Eskom's average price for electricity is based on the overall cost of supply. However, in order to determine tariffs, it is necessary to initially break down the overall costs into relevant cost categories. Costs are expressed in a manner that will ultimately be applied to derive the tariffs according to an appropriate cost driver. By using the correct cost driver for each cost component, the possibility of inappropriate pooling of costs is reduced.

Common cost drivers are:

- R/customer/month or R/customer/day – is typically for customer service and administration costs.
- R/kVA or R/kW – is typically for network costs.
- c/kWh – is typically for energy costs.
- c/kvarh – refers to reactive energy costs.
- Energy loss factors for energy loss costs.

The cost of providing electricity to customers varies according to:

- The quantity of electricity used and the period (time or season) when the electricity is used.
- The size or capacity of the supply required.
- The geographic location of the customer.
- The voltage at which supply is provided.
- The cost of connecting supply.
- The density of the points of delivery where the customer's supply is located.

A totally cost representative tariff will reflect the cost drivers and the factors that could influence cost by taking into account the following:

- The time of use and seasonal variance of energy costs.
- The unbundled costs for distribution and transmission networks. These costs are differentiated according to the supply voltage and the density of the points of delivery.
- Retail charges that reflect the size of the customer and the service provided.
- A connection charge that reflects the location of the supply and the impact on upstream costs.

However, the tariff applied depends on meter capability, billing functionality and logistics, as well as limitations on tariff complexity, and the impact of changes to existing tariffs. For more energy-intensive users of electricity, tariff structures tend to be more complex, whereas for users such as domestic customers tariffs are simpler.

A larger customer will have much lower supply cost than a smaller customer. Eskom larger customers generally subsidise smaller customers. The reasons for the higher cost for small customers follow:

- As a ratio of overall consumption, smaller customers tend to use much more electricity in the more expensive peak periods and have a poorer load factor than larger customers.
- Significantly more network capacity is required at the lower voltage level (e.g. 500 V) to supply a smaller customer than is required to supply a larger customer (e.g. 132 kV). This means that more electrical networks have to be built, maintained and operated to supply smaller customers. Also, more electrical losses occur in the latter sector.

The overall price of Eskom electricity is regulated and is based on approved costs plus a return on investment as determined by NERSA. While Eskom's average price (total revenue or total consumption) is based on cost, individual price levels per customer or per customer class might not be cost representative. This is due to cost averaging, historical cross-subsidies and social factors such as the customer's ability to pay the determined price.

SO WHAT IS YOUR ELECTRICITY BILL TELLING YOU?

Many people have trouble understanding their electricity bill or even struggle to find specific information.

Some of the things you will find on your electricity bill

- Payments you have made since your previous bill.
- Any amounts still outstanding, as well as new charges for the current period.
- The billing period for the current account.
- Your average daily usage in units and Rands.
- Your meter number(s) and the previous and current readings taken from the meter(s).

What you should check for on each electricity bill received

- If you receive concessions, check that they have been applied.
- If there are any amounts outstanding from previous bills.
- If there are any messages from your utility service provider relating to changes to your bill (i.e. rate increases, offers of monthly billing).

Breakdown of your bill

Keeping in mind that bills vary from retailer to retailer, you will find most of the following information on your electricity bill. Please note that retailers may use slightly different wording.

You will usually find the following on the front page of your bill:

- Issue date – the date that the bill was generated by the retailer.
- Account number and/or customer number – this is your account number. You should quote this any time you call your electricity retailer.
- Your name and postal address – the postal address may differ from the supply/service address (i.e. post office box).
- Due date – the last day by which you must pay your bill.
- Billing period – the range of dates the bill covers (e.g. 1 January 2017 – 1 March 2017).
- Opening balance – the amount that was owed, or is in credit, when the previous bill was issued.
- Payments received – the amount you paid since the previous bill.
- Balance carried forward – the difference between the opening balance and the payments received. If you did not pay your last bill in full by the due date, a balance may be carried forward and added to your new charges. It is possible that you may have a credit carried forward.
- New charges or current charges – the new charges for the billing period covered by this bill.
- Discounts or credits – any discounts that are applied to your account in accordance with your plan, such as pay-on-time discounts or solar credits.
- Total amount due – the total amount that you currently owe. This may be split into two amounts if your plan has a pay-on-time discount, in that regard it will detail with and without discounts if paid by due date.

SO WHY BOTHER?

Effective management of electricity bills saves money. Electricity consumption should not be viewed as a fixed utility cost, because electricity consumption varies due to many factors which can be controlled, thus electricity consumption can be effectively managed.

Understanding your electricity bill is an important step toward answering this question, and ultimately it's one of the first steps toward saving money on your bill every month.

DIFFERENT RATES FOR DIFFERENT ENERGY SERVICE PROVIDERS

Electricity is billed as a charge per kilowatt hour – kWh. Depending on the type of customer you are, where you're located, this rate can vary widely dependent on the energy service provider and must be approved by NERSA.

If you don't know what your rate is – you can look at your latest electricity bill. Sometimes it'll be listed outright as something like a "blended rate", otherwise you can divide your electricity charges (cost) by your total kWh to get a close approximation.

MORE THAN JUST CENTS PER KWH

While the cost per kWh is the simplest way to look at your electricity bill, there's quite a bit more to it than that. To make things extra-complex, the bill you get from one utility provider could be very different from the bill you receive from another utility provider. Your electricity bill depends on which local municipality supplies for you, at what voltage you are supplied at etc. Still, even with all the differences, most electricity bills can be broken down into just a few broad categories.

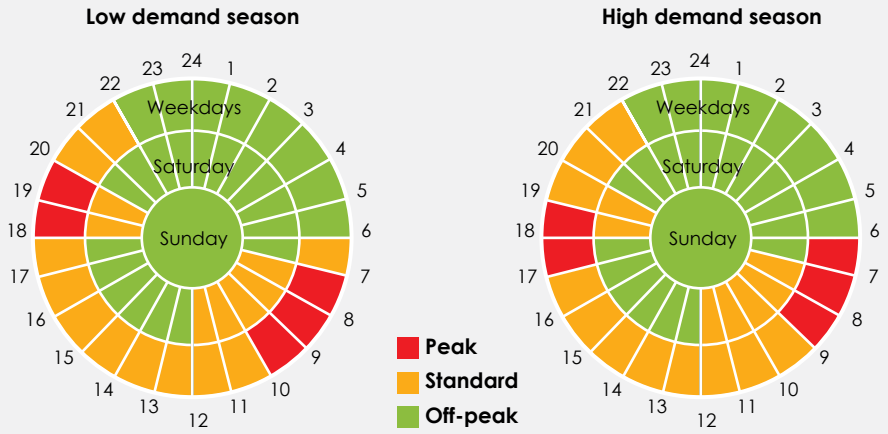
BASIC ENERGY USAGE

This is the base charge for the actual energy you will use. It will probably look something like, "Energy (kWh) Charge". It may be broken down further into peak, standard and off peak charges if you are registered on a TOU tariff.

DIFFERENT RATES FOR DIFFERENT TIMES

Instead of a single flat rate for energy use, TOU rates are higher when electric demand is higher. Therefore, when you use energy is just as important as how much you use.

TOU rates better align the price of energy with the cost of energy at the time it's produced. Lower rates during partial-peak and off-peak hours offer an incentive for customers to shift energy use away from more expensive peak hours. Aligning to these can help you save money and reduce strain on the electric grid.



LOW DEMAND SEASON			
TIME PERIODS	MON-FRI	SAT	SUN
22:00 - 06:00	Off-Peak	Off-Peak	Off-Peak
06:00 - 07:00	Standard	Off-Peak	Off-Peak
07:00 - 10:00	Peak	Standard	Off-Peak
10:00 - 12:00	Standard	Standard	Off-Peak
12:00 - 18:00	Standard	Off-Peak	Off-Peak
18:00 - 20:00	Peak	Standard	Off-Peak
20:00 - 22:00	Standard	Off-Peak	Off-Peak

LOW DEMAND SEASON			
TIME PERIODS	MON-FRI	SAT	SUN
22:00 - 06:00	Off-Peak	Off-Peak	Off-Peak
06:00 - 07:00	Peak	Off-Peak	Off-Peak
07:00 - 09:00	Peak	Standard	Off-Peak
09:00 - 12:00	Standard	Standard	Off-Peak
12:00 0 17:00	Standard	Off-Peak	Off-Peak
17:00 - 18:00	Peak	Off-Peak	Off-Peak
18:00 - 19:00	Peak	Standard	Off-Peak
19:00 - 20:00	Standard	Standard	Off-Peak
20:00 - 22:00	Standard	Off-Peak	Off-Peak

Industrial Time of Use (ITOU)
For customers with Notified Max Demand greater than 100kVA only

Energy Rates (c/kWh)	High Season	June - August
Peak	Standard	Off-peak
260,19	83,85	48,81
Energy Rates (c/kWh)	**Low Season**	**September - May**
Peak	Standard	Off-peak
89,71	64,00	43,23

Network Demand Charge (R/kVA)	Network Access Charge (R/kVA)	Service Charge (R)
Based on Actual Demand	Based on highest demand recorded	Rand per Month
81,70	**25,85**	**3 355,00**

Voltage Surcharge

Voltage	% Surcharge
275 kV	0,00
132 kV	2,25
33 kV	3,00
11 kV	10,50
6,6 kV	12,75
400kV	22,50

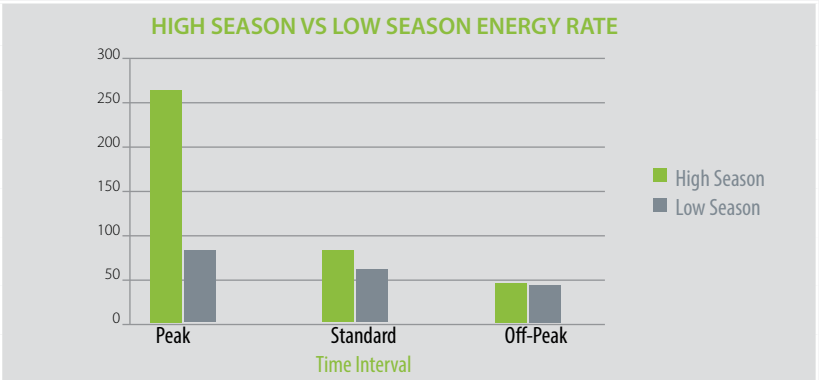


Figure 1: This is an example of rates applicable to the ITOU tariff structure (Source: eThekwini Municipality tariff booklet 2016 -2017).

As illustrated above if your business could utilise energy during standard and off peak times, considerable monetary savings can be achieved.

POWER FACTOR CHARGE[2]

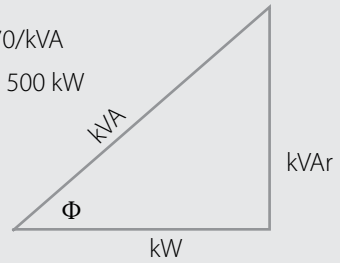
Power factor (PF) is the term used to describe how efficiently a facility utilises all of the electrical power it consumes. Some utilities will penalise a consumer if the power factor is below a certain threshold, if it is 90% for example. To address this, a power factor correction system can be installed on a customer's side of the utility meter, so power factor penalties are eliminated and/or a reduction in billing is achieved.

Power factor correction

The demand components (kVA) within the bulk electricity tariffs are directly affected by the power factor of operation. From a tariff perspective it is in the customers best interest to keep the power factor as close to unity as possible because the kVA of operation increases as the power factor decreases resulting in the customer paying higher network demand charges and higher network access charges. Low power factors are caused by inductive loads such are induction motors, fluorescent lights etc. In order to compensate for these inductive loads, capacitive components have to be introduced into the system and these components are commonly known as power factor correction capacitors. Power factor correction technology has advanced successfully over the years and there are many types of efficient solutions available on the market today. For further advice on power factor correction, please contact specialist firms.

An example (based on ITOU Tariff rates):

BEFORE POWER FACTOR	AFTER POWER FACTOR
Demand charge = R81,70/kVA Assume Max Demand = 500 kW Power factor = 0,7 Cos Φ = kW / kVA kVA = 500/0,7 = 714 Maximum Demand = 714 x 81,70	Demand charge = R81,70/kVA Assume Max Demand = 500 kW Power factor = 0,99 Cos Φ = kW / kVA kVA = 500/0,99 = 505 Maximum Demand = 505 x 81,70
Demand Charge (per month) R58 333,80	**Demand Charge R 41 258,50** **Saving (per month) R 17 075,30**



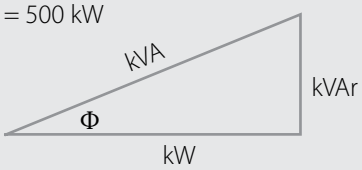


Figure 2: This reflects a power factor comparison by calculation (Source: eThekwini Municipality tariff booklet 2016-2017).

2. eThekwini Municipality electricity tariff booklet 2017 [Online]. Available: http://www.durban.gov.za/Resource_Centre/Services_Tariffs/Electricity%20Tariffs/Forms/AllItems.aspx

IMPROVING YOUR POWER FACTOR CAN REDUCE YOUR OVERALL ENERGY COST IN MULTIPLE WAYS

Reducing peak kW billing demand

Inductive loads which require reactive power are the cause of low power factor. This increase in required reactive power (kVAr) causes an increase in required apparent power (kVA), which is what the utility is supplying. Thus, a facility's low power factor causes the utility to increase its generation and transmission capacity in order to handle this extra demand.

Eliminating the power factor penalty

Utility suppliers usually charge customers an additional fee when their power factor is less than 0.95. In fact, some utilities are not obligated to deliver electricity to their customer at any time the customer's power factor falls below 0.85.

The typical payback period for this type of project is 12 to 24 months, and overall energy savings range from 5 to 30%.

Surcharges and fees

Besides your charges for energy usage, chances are your electric bill includes at least a few extra fees or surcharges. These can cover anything from energy efficiency incentives to electrical grid maintenance.

Sometimes, they're tied to how much energy you use. Other times, they can be a flat fee that everyone pays, no matter how much electricity they use.

Either way, they won't generally make up a significant portion of your energy bill, but they're worth understanding.

HOW TO READ YOUR ELECTRICITY BILL

Systematic approach

By comprehensively understanding your electricity bill, you guarantee that the utility service is effectively managed and thus make your business sustainable.

Always follow these six step when reading your electricity bill:

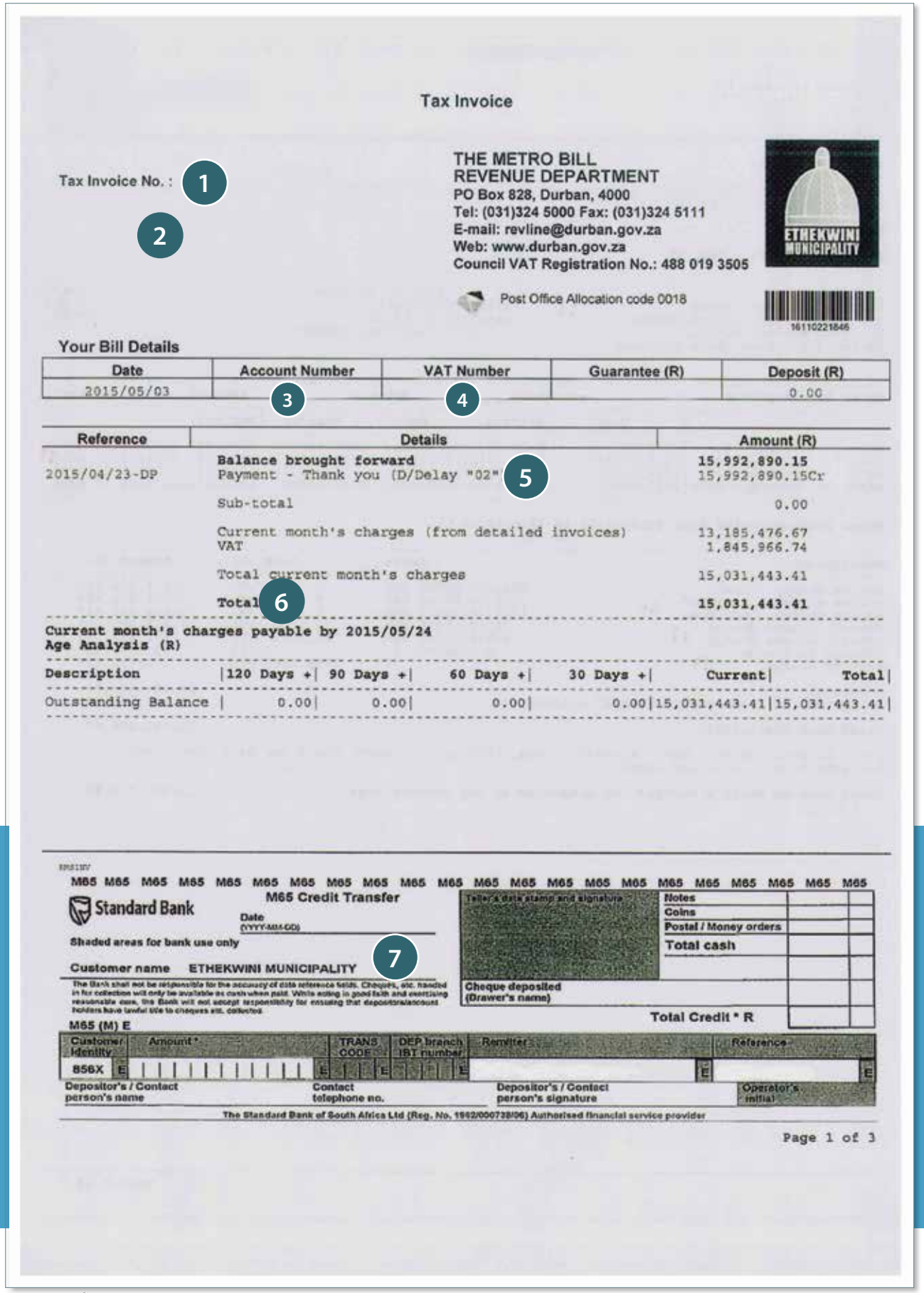
1. Ensure that all account related information is correct.
2. Verify that the electrical meter number matches to the bill received.
3. Ensure you are billed on the correct tariff structure.
4. Analyse previous bills to confirm there are no discrepancies.
5. Install a check meter to verify that the council meter installed has been set up correctly, as well as to assist in effectively managing what you measure.
6. Conduct a tariff analysis to confirm that your organisation is on the correct tariff structure.

An example of an electricity bill

The example that follows describes the consumption data and costs associated with an eThekwini electricity invoice, other retailers such as Eskom and local municipalities have different layouts for their bills but generally exhibit similar data.

LEGEND FOR THE FIGURES TO FOLLOW:

1	Tax invoice number: This is typically used by the accounts department for VAT purposes.
2	Client's address and account details: Confirm that this information is correct for your company.
3	Account number: Use this as reference when making payment or querying a problem on your account.
4	This should reflect your company's VAT number.
5	This is the balance brought forward from the previous month, as well as confirmation that the retailer has received payment from your company.
6	The total payment expected by the retailer for the current consumption.
7	Details for the retailer when making payment.



Tax Invoice

Tax Invoice No. : 1

2

THE METRO BILL
REVENUE DEPARTMENT
PO Box 828, Durban, 4000
Tel: (031)324 5000 Fax: (031)324 5111
E-mail: revline@durban.gov.za
Web: www.durban.gov.za
Council VAT Registration No.: 488 019 3505

Post Office Allocation code 0018

16110221845

Your Bill Details

Date	Account Number	VAT Number	Guarantee (R)	Deposit (R)
2015/05/03	3	4		0.00

Reference	Details	Amount (R)
	Balance brought forward	15,992,890.15
2015/04/23-DP	Payment - Thank you (D/Delay "02" 5	15,992,890.15Cr
	Sub-total	0.00
	Current month's charges (from detailed invoices)	13,185,476.67
	VAT	1,845,966.74
	Total current month's charges	15,031,443.41
	Total 6	15,031,443.41

Current month's charges payable by 2015/05/24
Age Analysis (R)

Description	120 Days +	90 Days +	60 Days +	30 Days +	Current	Total
Outstanding Balance	0.00	0.00	0.00	0.00	15,031,443.41	15,031,443.41

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Standard Bank

M65 Credit Transfer

Date (YYYY-MM-DD)

Shaded areas for bank use only

Customer name ETHEKWINI MUNICIPALITY 7

The Bank shall not be responsible for the accuracy of data reference fields. Cheques, etc. handed in for collection will only be available as cash when paid. While acting in good faith and exercising reasonable care, the Bank will not accept responsibility for ensuring that depositors/account holders have lawful title to cheques etc. collected.

Teller's date stamp and signature

Notes
Coins
Postal / Money orders
Total cash
Cheque deposited (Drawer's name)
Total Credit * R

M65 (M) E

Customer Identity	Amount *	TRANS CODE	DEP branch IBT number	Remitter	Reference
856X E	E	E	E	E	E

Depositor's / Contact person's name | Contact telephone no. | Depositor's / Contact person's signature | Operator's initial

The Standard Bank of South Africa Ltd (Reg. No. 1962/000738/06) Authorised financial service provider

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Detailed Invoice

8

Bulk Electricity

For Bulk Electricity account queries, please contact 031 3111203 and for Meter queries contact 031 3119105 or 031 3119275"

Reference - 9

Bulk Time of Use - TOU 10

Industry Type		Supply Voltage 11	132kV
Notified Maximum Demand	35588.00	CT Ratio	1.00
70% of Notified Maximum Demand 12	24911.60	VT Ratio	1200.00
Notified Minimum Demand	0.00	Installed Capacity	
Exceeded Notified Maximum Demand	-		

Meter No.	Register	Previous Meter Reading Date	Previous Meter Reading Reading	Current Meter Reading Date	Current Meter Reading Reading	Reading Constant	Usage
8634 13	Energy Std	2015/03/31	0.00000	2015/04/30	6054.75000	1200.00	7265700.00 kWh 14
8634	Energy Peak	2015/03/31	0.00000	2015/04/30	2342.91000	1200.00	2811492.00 kWh
8634	Max Demand	2015/03/31	0.00000	2015/04/30	26.76000	1200.00	32112.00 kVA
8634	Energy OffPk	2015/03/31	0.00000	2015/04/30	9396.48000	1200.00	11275776.00 kWh

Meter reading period from 2015/03/31 to 2015/04/30 15

Description	Units	Rate (R)	Amount (R)
Active energy - peak 16	2811492.00000 kWh	0.7280 /kWh	2,046,766.18*
Active energy - standard	7265700.00000 kWh	0.5194 /kWh	3,773,804.58*
Active energy - off-peak	11275776.00000 kWh	0.3562 /kWh	4,016,431.41*
Network Demand charge 17	32112.00000 kVA	70.5000 /kVA	2,263,896.00*
Network Access charge	35588.00000 kVA	22.2500 /kVA	791,833.00*
Voltage Surcharge 18	R 12892731.17	2.25%	290,086.45*
Service charge	-	2659.0500 p.m	2,659.05*
Sub-total			13,185,476.67
VAT raised on items marked with an asterisk (*)			1,845,966.74
Total Bulk Electricity			**13,185,476.67**

kVA = kilovolt ampere; kWh = kilowatt hours, kWh/day = kilowatt hours per day; /kWh = per kilowatt hour; p.m. = per month

Total current month's charges (as displayed on the Summary Page) **13,185,476.67**

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Did you know?

- The tariff structure is dependent on voltage intake; distance from the source; as well as maximum demand, which must be approved by the National Energy Regulator of South Africa (NERSA). In many instances reducing your notified maximum demand can yield monetary savings that can take into consideration future expansions etc.
- If you are on a time of use tariff structure and have large inductive loads such as electrical motors etc., it is imperative that power factor correction (PFC) is installed on your main incomer. Additional monetary savings can be achieved by load shifting, i.e., shift loads to operate during off peak or standard periods where the average weighted R/kWh is relatively cheaper to operate.

8 Clients address and account details: Confirm that this information is correct for your company.

9 Reference: This refers to the actual physical address for your company. Review and confirm if these details are correct.

10 This refers to the type of tariff structure your company is registered with the retailer.

11 The supply voltage that the retailer supplies your company with.

12 Details of the tariff structure your company is billed on.

13 Meter number: Confirm if these details are correct.

14 This is the actual energy consumption and demand for the billing month.

15 Meter reading period notes the date and month.

16 This is active energy broken up into peak, standard and off peak for the ITOU tariff structure.

17 Network demand charge: This is a charge that is variable on a month-to-month basis and is charged on the actual demand measured. Demand charge is the highest actual demand recorded over a 30 minute period during the billing period. Network demand charge is dependent on the power factor of the site and is only applicable to TOU tariffs.

Network access charge is a tariff component that is fixed on an annual basis and is charged as a R/kVA on the greater of the notified maximum demand or the actual demand. The network access charge should be the highest kVA that the customer expects the municipality to be in a position to supply.

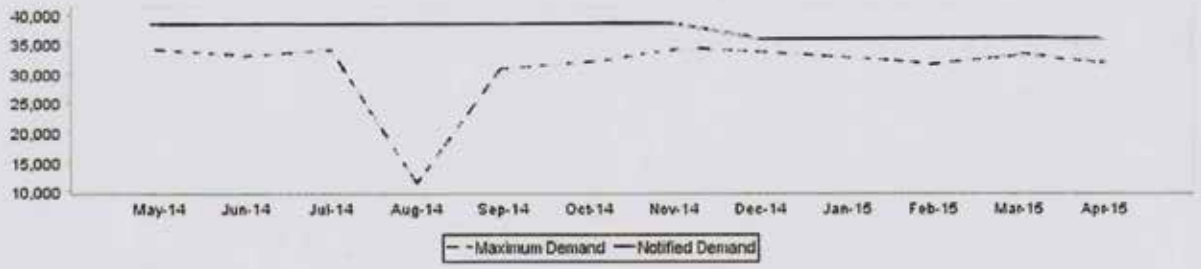
18 Voltage surcharge is dependant on your companies intake voltage.

Detailed Invoice

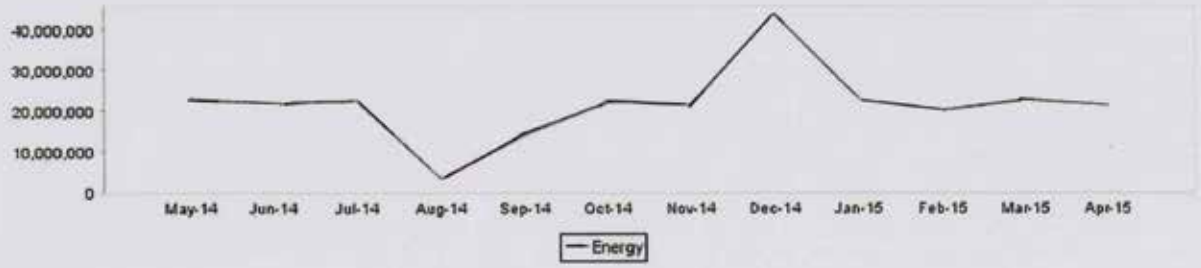
Previous Electricity Metered Services Consumption 19

	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14
Notified demand (kVA)	38088.00	38088.00	38088.00	38088.00	38088.00	38088.00
Maximum demand (kVA)	33840.00	32688.00	33768.00	11016.00	30744.00	31680.00
Energy (kWh)	23196492.00	22094244.00	22745736.00	3095820.00	13764456.00	22098240.00
Rands	10045441.71	15067269.55	17516953.24	2280687.66	6397909.81	10505866.32
	Nov-14	**Dec-14**	**Jan-15**	**Feb-15**	**Mar-15**	**Apr-15**
Notified demand (kVA)	38088.00	35588.00	35588.00	35588.00	35588.00	35588.00
Maximum demand (kVA)	34056.00	33552.00	32400.00	31536.00	33120.00	32112.00
Energy (kWh)	21552588.00	43520186.32	22554396.00	19941480.00	22529916.00	21352968.00
Rands	10042266.80	20134244.71	10536418.47	9403025.96	10590754.15	9837002.17

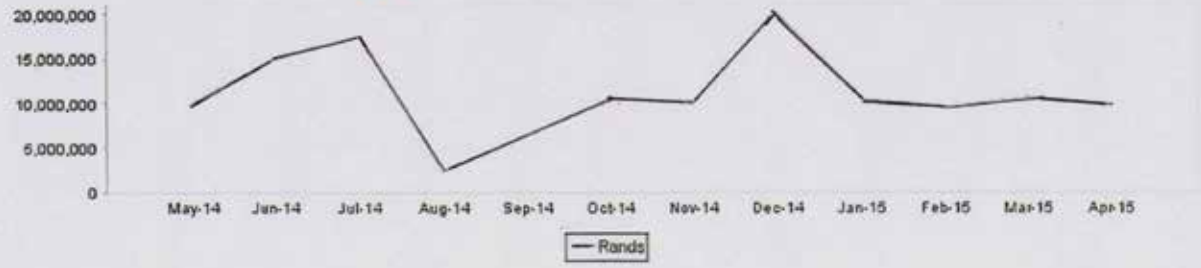
Maximum Demand / Notified Demand 20



ENERGY 21



RANDS 22



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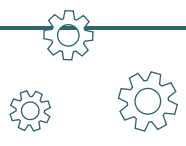
19 Reflects the yearly profile of energy consumption, cost spent and maximum demand on a year to date basis.

20 An illustration of the maximum demand vs. NMD profile on a year to date basis.

21 An illustration of the energy profile on a year to date basis.

22 An illustration of the cost in rands on a year to date basis.

NOTES



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