

Item -F (16-2022) CM 26/05/2021	MEDIUM-TERM REVENUE AND EXPENDITURE FRAMEWORK (MTREF) FOR 2022/23 TO 2024/25 AND NEW INTEGRATED DEVELOPMENT PLAN (IDP) FOR 2022/23 TO 2026/27
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Resolved:

8. **That** the Medium-term Revenue and Expenditure Framework for 2022/23 to 2024/25 and the new integrated Development Plan for 2022/23 to 2026/27 financial period, inclusive of the tariffs and draft budget-related policies, as contained in the Budget Document **BE**

APPROVED.

POLICIES

- Annexure E1** Medium-term Budget Statement Policy (Reviewed)
- Annexure E2** Pricing Policy Statement (Reviewed)
- Annexure E3** Property Rates Policy (Reviewed)
- Annexure E4.1** Provision of Free Basic Electricity Policy (Reviewed)
- Annexure E4.2** Provision of free Basic Water supply services (Reviewed)
- Annexure E5** Waste Management Tariff Policy (Reviewed)
- Annexure E6** Consumer Deposit Policy (Reviewed)
- Annexure E7** Indigent Support Policy (Reviewed)
- Annexure E8** Credit Control & Debt Collection Policy (Reviewed)
- Annexure E9** Provision for Doubtful Debtor and Debtor Write-Off Policy (Reviewed)
- Annexure E10** Budget Implementation and Monitoring Policy (Reviewed)
- Annexure E11** Municipal Entity Financial Support Policy (Reviewed)
- Annexure E12** Accounting Policy (Reviewed)
- Annexure E13** Electricity Metering for Residential and business Customers (Reviewed)
- Annexure E14** Policy for the vending of pre-paid electricity (Reviewed)
- Annexure E15** Policy for Estimation and Correction of Energy or Demand Meter Reading and Billing Data (Reviewed)
- Annexure E16** Electricity Tariff policy (Reviewed)
- Annexure E17** Virements Policy (Reviewed)
- Annexure E18** Consumer Agreement (Reviewed)
- Annexure E19** Supply Chain Management Policy (Reviewed)
- Annexure E20** Treasury Policy (Reviewed)
- Annexure E21** Funds Transfer Policy (Reviewed)
- Annexure E22** Assets Management Policy (Reviewed)
- Annexure E23** Cost Containment Policy (Reviewed)
- Annexure E24** Policy for the wheeling of Electricity (Reviewed)
- Annexure E25** Policy guideline for Small-scale Embedded generation (Reviewed)
- Annexure E26** Ekurhuleni Community Enterprise Development Fund Policy (Reviewed)
- Annexure E27** Long Term Financial Strategy 2020/21-2029/30

CONTENTS

1. BACKGROUND	3
2. DEFINITIONS	4
3. ADVANCED METERING INFRASTRUCTURE (AMI) – NRS 049 (FUTURE “SMART METERING”)	4
4. PROTECTION OF METERING AND CONSEQUENCE MANAGEMENT	5
5. METERING IN EXISTING AREAS	5
5.1 CATEGORY A: ESTABLISHED AREAS (OR NODES) WITH PAYMENT LEVELS EXCEEDING 90%	7
5.2 CATEGORY B: ESTABLISHED AREAS (OR NODES) WITH PAYMENT LEVELS LOWER THAN 90%	8
5.3 CATEGORY C: EXISTING INDIVIDUALLY METERED FLATS, HOSTELS AND TOWNHOUSES	10
5.4 CATEGORY D: MANUALLY READ EXISTING BULK METERED CONNECTIONS (DEMAND METERS)	12
6. METERING IN NEW RESIDENTIAL AND SMALL BUSINESS AREAS	13
6.1 CATEGORY E: NEW RESIDENTIAL AND BUSINESS AREAS (OR NODES)	13
6.2. CATEGORY F: NEW BULK RESIDENTIAL COMPLEXES AND BUSINESSES (AMR DEMAND METERS)	13
6.3. CATEGORY G: NEW BULK RESIDENTIAL COMPLEXES AND BUSINESSES (MEGA DEVELOPMENTS MIXED WITH SUBSIDISED AND BONDED PROPERTIES)	14
7. DEMAND METER PRINCIPLES	16
8 CREDIT CONTROL MEASURES	16
9. INDIGENT APPROVAL	17
10. DEVIATIONS FROM THE POLICY	17
11. STAKEHOLDER ENGAGEMENT	17

ELECTRICITY METERING FOR RESIDENTIAL AND BUSINESS CUSTOMERS POLICY

1. BACKGROUND

The City of Ekurhuleni created a practical residential and business metering policy covering all aspects related to the future planning, design and installation of residential and business metering systems. The term “systems” encompasses all forms of residential and business metering, whether it is a Ferraris-type credit meter, a prepayment meter, a smart meter as found in Thembisa, AMR demand meter or a future smart meter.

The document has the following section headings:

- ▶ Definitions;
- ▶ Advanced Metering Infrastructure (AMI) - NRS 049 (Future “Smart Metering”);
- ▶ Protection of metering and consequence management;
- ▶ Metering in existing areas;
- ▶ Metering in new residential and small business areas;
- ▶ Demand Meter Principles
- ▶ Indigent Approval
- ▶ Deviations from the policy
- ▶ Credit control measures; and
- ▶ Stakeholder engagement.

The strategy is designed to manage current use of existing metering processes, metering and equipment protection as far as is practically possible and to improve the security of metering in a cost effective manner.

In all cases, reasonable efforts will be made to restore metering integrity through the use of:

- ▶ by-laws and policy, supported by special operations in the application of these;
- ▶ meter audits, guided by non-purchasing patterns or suspect consumption profiles (regular meter audits are essential in order to maintain the integrity of the installed meter base), and
- ▶ the application of reinstatement fees, as contained in the schedule of tariffs.
- ▶ Meter audits, guided by South African standards (SANS)

Further (possibly anticipated), for all connections fitted with a prepayment meter, tampering of metering equipment must lead to placing the split metering element of a prepayment meter inside a medium or heavily constructed meter box/structure on the sidewalk (or pole top) and to include remote tamper monitoring devices.

All new reticulation must be designed:

- ▶ using strengthened meter boxes with no visible hinges or locking arrangements on the outside. These meter boxes are to be secured by methods other than the usual lock and key arrangement (possibly using electronic remote devices, or mechanical locking devices).

For electricity safety reasons only one connection will be permitted to a stand, unless otherwise authorized by the Head of Department: Energy, for individually motivated cases.

All meters must be sealed, using numbered and colour coded seals as per standard specifications and the City’s Meter Seal Standard Operating Procedure. This will allow authorised personnel to establish at a glance whether the meter’s integrity has been breached.

2. DEFINITIONS

kWh – Kilowatt-hour	1 kWh = 1 Unit of Electricity consumed
AMR	Automated Meter Reading (metering method which is mainly associated with demand meters and requires a modem to upload the metering data automatically to a central database for billing purposes)
EWASA	e-Waste Association of South Africa

“Lightly constructed strengthened meter box”	:	Electrical kiosk, constructed from a suitable material that will be able to withstand attempted break-ins, with hidden hinges and opening mechanisms, also adapted for pole top use.
“Medium constructed strengthened meter box”	:	Electrical kiosk, constructed from a suitable material that will be able to withstand relatively serious attempted break-in’s, with hidden hinges and opening mechanisms, also adapted for pole top use.
“Heavily constructed protective structure”	:	Heavy steel and/or concrete structure serving as an electrical kiosk.

The above table excludes all use of unprotected padlocks in future developments. All new designs are to cater for better protected meter boxes and this will only be possible by using more advanced opening mechanisms.

3. ADVANCED METERING INFRASTRUCTURE (AMI) – NRS 049 (FUTURE “SMART METERING”)

It is expected that the introduction of targeted smart metering, will allow better management of various problems related to inaccessible meters, errors due to manual meter reading, creation of an accurate energy balance, meter interference, and so forth.

It is envisaged that the primary application of AMI systems is for metering installations using direct-connected meters. The relevant part of NRS 049 is applicable to residential and commercial customers. The application of AMI systems is in response to the need for demand-side management measures, which will mitigate the effects of a shortage of electricity generation capacity at a national level that might occur from time to time.

The AMI system incorporates an AMI master station, from where the configuration and functionality of the system are controlled. The communication network, the AMI meters, a load switch (disconnect/reconnect/load limiting), the appliance (load) control devices (activated through the meter), a customer interface unit and optional interfaces to communicate with a mobile customer interface and to retrieve water consumption data. The communication media between the AMI master station and the meter are not specified. The choice of communication media will be dependent on a number of factors. The communication media may also be changed during the life of the AMI system.

This is intended to evolve towards the inclusion of an industry-agreed set of open communication standards based on international standards, for communication between the AMI master station and meters and concentrators.

4. PROTECTION OF METERING AND CONSEQUENCE MANAGEMENT

Three types of protective device are to be utilized, ranging from being relatively inexpensive at the one end of the scale to being expensive at the other end of the scale. The lightly constructed meter box will only be suitable for relatively unproblematic areas and will require an immediate tactical and technical team response if used in a more problematic area, when tampering occurs. As part of the future management of meter boxes, there may also be costs related to the installation and maintenance of communication devices with these meter boxes.

CONSEQUENCE MANAGEMENT FOLLOWING METERING THAT WAS INTERFERED WITH

The following factors will lead to meter reinstatement fees being issued:

- Meter found bypassed (as a result of customer initiated interference)
- Meter found tampered in any other way, leading to under-registration of consumption
- Meter found bypassed (as a result of COE own staff correcting a no power situation at some point in history)

A meter reinstatement fee may be waived:

- In the case of individual connections, where a reinstatement fee was levied, motivation may be made in writing by the responsible official, for the reinstatement fee to be reversed based on specific, mitigating factual information. Such reversal shall be approved in writing by the Head of Department: Energy or his delegate.
- The fact that the meter may have been bypassed by COE own staff will not necessarily result in the reinstatement fee being reversed, the customer involved needs proof of this event, or proof that the meter was reported as faulty, especially in the case of prepayment meters that are obviously issuing free units (i.e. bypassed)
- The provisions of the by-laws in relation to back billing remain in place.

5. METERING IN EXISTING AREAS

Existing electricity customers can be categorized as follows:

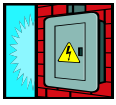
Category A	Established areas with payment levels exceeding 90%
Category B	Established areas with payment levels lower than 90%
Category C	Individually metered flats, hostels and townhouses
Category D	Existing manually read bulk metered connections (demand meters)

The above categories of customer will now be discussed in some detail, taking into account practical aspects and cost limitations.

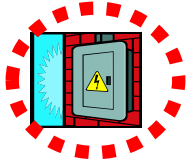
Legend



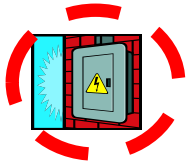
Residence/building



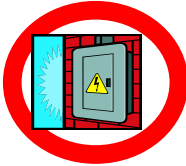
Option acceptable



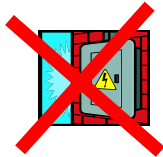
Meter box with light protection



Meter box with medium protection



Meter box with heavy protection



Option unacceptable

5.1 CATEGORY A: ESTABLISHED AREAS (OR NODES) WITH PAYMENT LEVELS EXCEEDING 90%

- ▶ These are established residential and business nodes. Typically, these areas are fully electrified with underground and/or overhead networks, and credit metering and prepayment meters have been successfully used for many years, and
- ▶ Credit meters in these areas are manually read by appointed contractors.

5.1.1 SITUATION:

- (a) Inaccessibility of credit meters due to old reticulation methods (i.e. the meter is situated inside the property or inside the home), and
- (b) manual credit meter readings have inherent quality problems and are very labour intensive,
- (c) interim readings are levied on credit meters, which may lead to audit queries, and
- (d) given that credit meters are no longer procured, only prepayment meters are available to install.

5.1.2 METERING STRATEGY

- (a) The credit metering system currently in use is now becoming outdated and must be replaced (in line with SANS standards) with a prepayment meter, or a smart meter (when these become available);
 - Regular inspections to be executed on customers appearing on the BP421 deviation report for credit meter in terms of no-access (until phased out), no-consumption, stuck meters, possible tampered meters; 90 days' non-purchase and low-purchase exception report for prepayment meter;
 - Any routine maintenance of metering, whether faulty, or as part of the COE capital program, will be done by installing prepayment meters only (technical restrictions excluded, these will be covered with an AMR credit meter);
- (b) Accessibility problems will be addressed as follows:
 - (i) installation of a prepayment meter, at the cost of COE (and subject to available funding);
 - (ii) as part of larger projects, at the discretion of the HOD: Energy, at the cost of COE (and subject to available funding).
 - (iii) the meter must always be placed on the sidewalk, unless major reticulation work is required to effect this move.
- (c) in the pre smart metering phase, resources should be spent on routine inspections, recovery of lost income, legal action and the replacement of credit meters with prepayment meters.
- (d) Any routine maintenance of metering, whether faulty, or as part of the COE capital program, will be done by installing prepayment meters only (technical restrictions excluded).

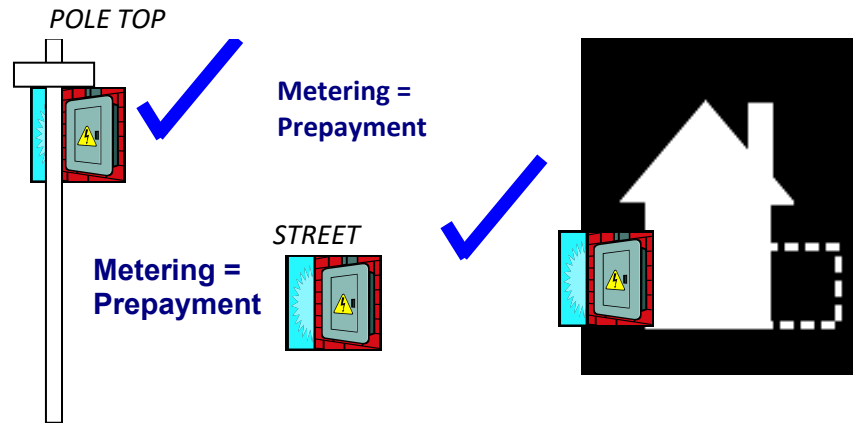


Figure 1: Category A: Established Areas with Payment Levels Exceeding 90%

- (e) Disposal of dilapidated, faulty or damaged replaced meters – All meters that are replaced, shall be evaluated against the Expected Useful Life encapsulated in the Council’s Accounting Policy for Assets. Should the replaced meter prove to be beyond the Expected Useful Life or the meter is damaged to such an extent that it is unserviceable it shall be regarded as scrap equipment. The scrap equipment shall be disposed of in terms of Supply Chain Management Policy and Council’s approval to the HOD: Energy to dispose of the scrap equipment on an as and when required basis subject to an EWASA registered recycler being appointed by Council.

5.2 CATEGORY B: ESTABLISHED AREAS (OR NODES) WITH PAYMENT LEVELS LOWER THAN 90%

- ▶ Established residential and business nodes. Typically, these areas are fully electrified with underground and/or overhead networks, and combinations of credit and prepayment metering have been used with a limited success rate;
- ▶ interference occurs daily on the electrical network and the resultant vandalized network presents a serious safety hazard; and
- ▶ attempts at normalizing the situation had little or no effect.

5.2.1 SITUATION:

- (a) Inaccessibility of meters due to old reticulation methods (i.e. the meter is situated inside the property or inside the home);
- (b) metering infrastructure is not protected by a robust meter box;
- (c) interference with meters is at an unacceptably high level, and
- (d) manual credit meter readings have inherent quality problems and are very labour intensive.
- (e) given that credit meters are no longer procured, only prepayment meters are available to install.

5.2.2 METERING STRATEGY 1

- (a) These areas present a serious problem in COE since revenue losses are too high to allow a sustainable electricity service;
- (b) credit metering shall not be used in these areas unless not practically/technically possible (which will be an AMR credit meter);
- (c) depending on the scale of interference with the network and metering, the following must be considered:

- (i) a prepayment metering system, using split type meters - the metering element to be placed on a pole top and protected by a medium strength meter box, with or without a tamper monitoring device;
 - (ii) a prepayment metering system, using split type meters - the metering element to be placed on the sidewalk and protected by a heavily constructed structure, with or without a tamper monitoring device, and
 - (iii) in the case of items (a) and (b), the prepayment meter will need to have mains-borne communication (power line carrier), Radio Frequency communication or similar, to the customer interface, or alternatively a new service cable containing communication wires may need to be installed. A separate set of pilot wires may also be installed, leaving the current service cable intact.
- (d) further interference must lead to charges according to the provisions made in the Schedule of Tariffs for the Supply of Electricity under “Miscellaneous Charges”;
 - (e) the vandalized network needs to be repaired wherever any work is executed;
 - (f) regular inspections to be executed on customers appearing on the BP421 deviation report for credit meter in terms of no-access (until phased out), no-consumption, stuck meters, possible tampered meters; 90 days’ non-purchase and low-purchase exception report for prepayment meter;
 - (g) any routine maintenance of metering, whether faulty, or as part of the COE capital program, will be done by installing prepayment meters only (technical restrictions excluded, these will be covered with an AMR credit meter);
 - (h) accessibility problems shall be addressed as follows:
 - (i) installation of a prepayment meter, at the cost of COE (and subject to available funding);
 - (ii) as part of larger projects, at the discretion of the HOD: Energy, at the cost of COE (subject to available funding); and
 - (iii) the cost related to a requested change in metering resolving a meter access problem, may be fully funded by COE, subject to funding being available. If the request, by the customer, for a change in metering does not resolve an access or similar problem, the cost may be for the customer.

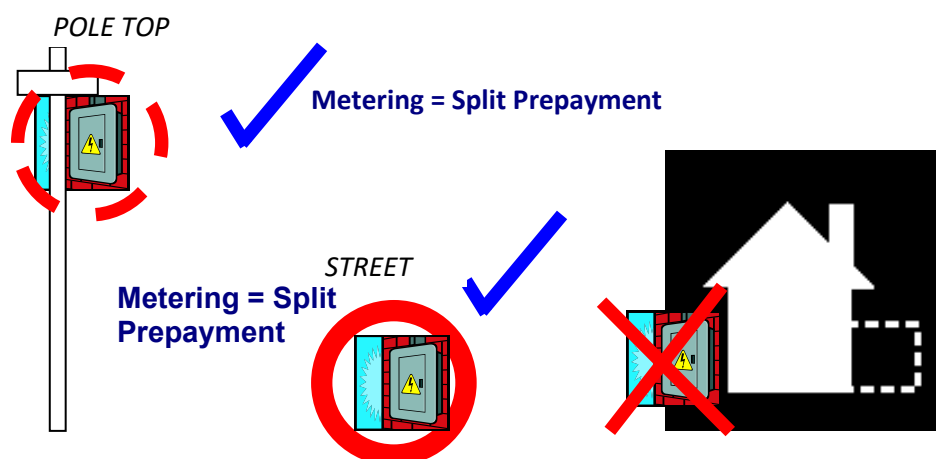


Figure 2: Category B: Established Areas with Payment Levels Lower than 90%

- (i) Disposal of dilapidated, faulty or damaged replaced meters – As per 5.1.2. (e).

5.2.3 METERING STRATEGY 2

- (a) When more advanced forms of metering are available, the following alternative may be considered:
 - (i) a smart metering system - the metering element to be placed on the sidewalk or pole top and protected by a medium or heavily constructed structure with a tamper monitoring device.
- (b) a change of the metering system must be for the account of COE;
- (c) further interference must lead to charges according to the provisions made in the Schedule of Tariffs for the Supply of Electricity under "Miscellaneous Charges"; and
- (d) a vandalized network needs to be repaired wherever any work is executed. Further actions should be in line with Council's Credit Control Policy.

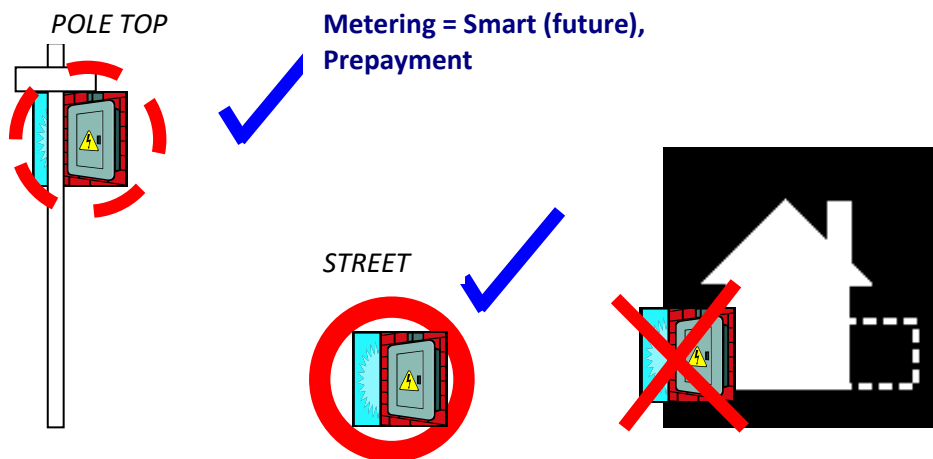


Figure 3: Category B: Established Areas with Payment Levels Lower than 90% - Worst Case Scenario

5.3 CATEGORY C: EXISTING INDIVIDUALLY METERED FLATS, HOSTELS AND TOWNHOUSES

These are defined as all the existing high density residential complexes, which are metered individually. Typically, these complexes are fully electrified with underground and internal networks, and credit and/or prepayment metering have been used with varying degrees of success, for a period.

5.3.1 METERING STRATEGY

- (a) The risk associated with each installation to be assessed by the HOD: Energy;
- (b) Block of flats –
 - (b) 1. Based on the risk assessment the preferred metering strategy is to convert the individually metered units to one bulk AMR metering installation. Should the Energy Department be in a position through funding to convert the individually metered units to one bulk AMR metering installation, the Flat or complex owner be afforded the opportunity to purchase from Council the individual meters for sub-metering purposes on a "voetstoots" basis and the owner will indemnify Council from any defects/inaccuracy of the individual meters. The old meter shall be offered to the complex owner at 20% of a new meter's price. The rationale for selling the meter "voetstoots" to the complex owner is to mitigate the additional capital outlay to council to remove all the meters and to reconnect the service connections. Also when Council installs

a bulk meter it is creating a new point of control/connection/metering point, thereby removing the individual metering, and changing the electrical installation, which will require a Certificate of Compliance (COC) to be issued by Council adding additional accountability and cost to Council. The Department will ensure that each individual meter is removed from the billing system with the correct closing reading. Where the individual meter has a plate which indicate that it is the property of Council, the Department will oversee that the individual meters are defaced or the nameplate removed.

(b) 2. The second option should it not be technically feasible or funds do not permit to follow point b1 above is for split prepayment meters to be installed with metering elements in a meter room/s or protective structure/s installed at Council's cost and keypads wired to individual flats by a private contractor at the owner's cost. Alternatively, mains-borne communication (power line carrier) or Radio Frequency communication may be used;

NOTE: COE no longer install (or procure) electromechanically credit meters. These old meters, in relation to strategy, are therefore worthless to COE.

NOTE: COE will not install individual meters at any new privately owned townhouse complex, or block of flats.

- (c) Hostels or similar– split prepayment metering and cut-off elements away from building and placed outside in protective structures/meter boxes. Interface units to be wired to each individual unit, or via mains borne communication ~~or via Radio Frequency communication~~, and
- (d) Townhouse complexes with existing individual metering–as per paragraphs (a), (b) and (c) above.

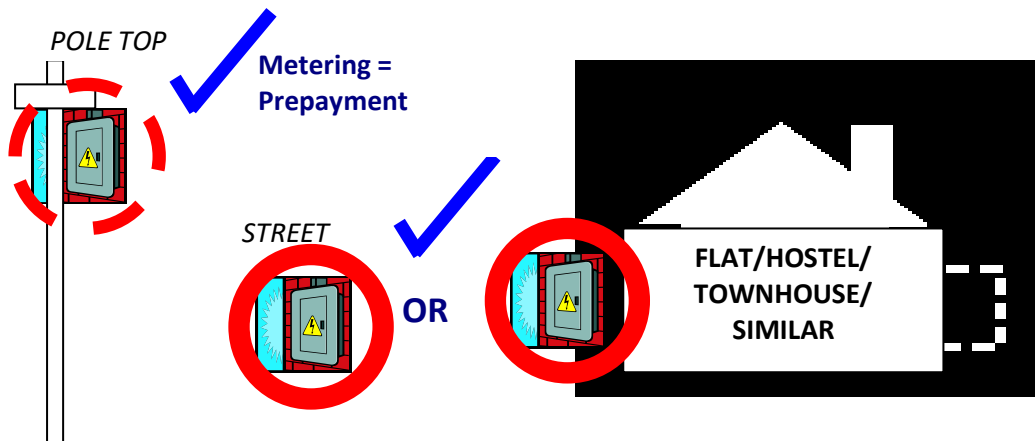


Figure 4: Category C: Individually Metered Flats, Hostels and Townhouses

- (e) Disposal of dilapidated, faulty or damaged replaced meters – As per 5.1.2. (e).
- (f) MIXED USE RESIDENTIAL AND BUSINESS

Existing stands with mixed residential and business use, will be allowed to receive their electricity supply by means of multiple bulk meters (mostly only 2 meters).

To comply with the Electricity by-laws and for the sake of standardisation, the following technical requirements shall apply:

- One main switch for the property only, isolating the entire property when switched off
- From this main switch, the two (or more) meters may be supplied, one for the business part, and one for the residential part

Note: Cost associated with the service connections to the individual metering shall be for the owner's account

- The meters may be on separate accounts and have separate tariffs
- Credit control will be effected at the main switch only, and not at one of the sub-switches.

5.4 CATEGORY D: MANUALLY READ EXISTING BULK METERED CONNECTIONS (DEMAND METERS)

- ▶ Established residential, mixed residential/business and small business nodes. Typically, these areas are fully electrified with underground and/or overhead networks, with manual read demand metering with a limited success rate in obtaining monthly readings;

5.4.1 SITUATION:

- (a) Inaccessibility of meters due to old reticulation methods (i.e. the meter is situated inside the property, in a substation or in a basement of a flat complex);
- (b) interference with meters may occur without the City's knowledge;
- (c) manual meter readings have inherent quality problems and are very labour intensive; and
- (d) the manual reading of demand meters is considered practically impossible.

5.4.2 METERING STRATEGY

- (a) Reading demand meters manually is impossible and may cause high revenue losses, threatening a sustainable electricity service;
- (b) manually read demand meters must be phased out completely and replaced with automated meter reading (AMR) meters;
- (c) where technically possible, only direct connect AMR meters must be used, negating the need for current transformers (and factor calculations);
- (d) regular monitoring of the correctness of the meter readings obtained from the AMR meter installation shall be carried out and corrective action shall be taken where necessary.
- (e) Disposal of dilapidated, faulty or damaged replaced meters – As per 5.1.2. (e).

6. METERING IN NEW RESIDENTIAL AND SMALL BUSINESS AREAS

New residential and small business electricity customers can be categorized as follows:

Category E	New residential and small to medium business areas (or nodes)
Category F	New bulk residential complexes and large businesses (AMR demand meters)

6.1 CATEGORY E: NEW RESIDENTIAL AND BUSINESS AREAS (OR NODES)

- Typically, these areas are or will be fully electrified with underground or overhead networks, or a combination of the two systems. Metering will be installed as soon as connections are made.

6.1.1 METERING STRATEGY

- A prepayment metering system, using split type meters - the metering element to be placed in a medium or high strength meter box mounted on the sidewalk or pole top;
- interference with the electricity network must lead to fees being charged according to the provisions made in the Schedule of Tariffs for the Supply of Electricity under "Miscellaneous Charges". Further actions should be in line with Council's Credit Control policy; and

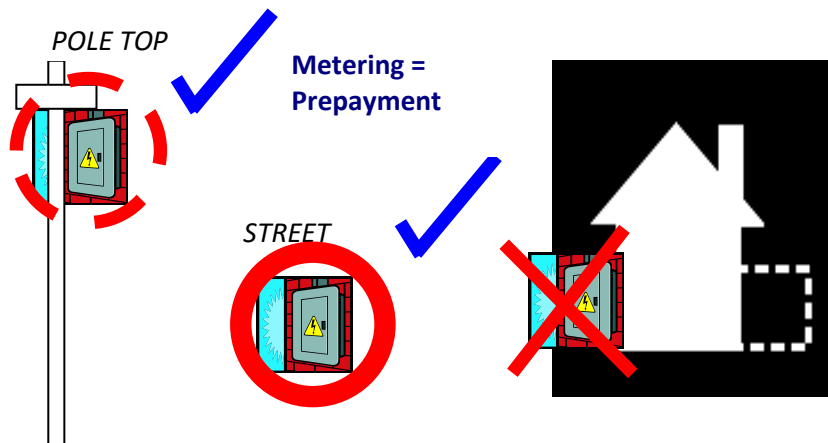


Figure 6: New Residential and Business Areas

* AMR Direct driven credit meters only where technically impossible to install prepayment meters

6.2. CATEGORY F: NEW BULK RESIDENTIAL COMPLEXES AND BUSINESSES (AMR DEMAND METERS)

- These are defined as new residential complexes and businesses which require a bulk AMR demand meter installation.

6.2.1 METERING STRATEGY

- (a) An Automated Meter Reading (AMR) demand meter will be installed at these premises:
- ▶ to completely eliminate manual reading of these meters;
 - ▶ where technically possible, only direct connect AMR meters must be used, negating the need for current transformers (and factor calculations);
 - ▶ ensure accurate and timeous data for monthly meter readings are obtained remotely; and
 - ▶ regular monitoring of the correctness of the meter readings obtained from the AMR meter installation shall be carried out and corrective action shall be taken where necessary.

6.3. CATEGORY G: NEW BULK RESIDENTIAL COMPLEXES AND BUSINESSES (MEGA DEVELOPMENTS MIXED WITH SUBSIDISED AND BONDED PROPERTIES)

- ▶ These are defined as new mega mixed subsidised and bonded residential units (full title and complexes) and businesses which require a mixed electricity meter strategy.
- ▶ Any decisions made by the HOD: Energy to deal with matters not covered, or that may be ambiguous in this policy will be final.

6.3.1 METERING STRATEGY

All meters will be inside a COE approved protective structure, or if built into the building, it will have a COE specification protective structure door and locking mechanism.

Detailed management of each zoning will be dealt with as follows:

#	Zoning	Method
1	Residential 1 (bonded)	<p>The owner of the house pays CoE a standard fee for the connection to the grid, which includes a meter. In the event that USDG grant approve this category to be funded through its grants the same principle as per point 3 will apply. Copy of COC is required and will form part of the developer responsibility. The service cable will be connected to the meter by CoE. The developer provides a service cable from a protective metering kiosk up to a junction box 1m into the stand or up to a point of control (budgie box) and further to the customer DB.</p> <p>The Installation electrician shall complete with the owner/developer Annexure 4 (OHS Act 85 EIR 2009) and submit with application form to the City prior to any installation work commencing.</p> <p>The developer will provide a fully equipped and labeled protective structure as part of the electrical network electrification (fully equipped = correctly rated and toggle circuit breakers completely wired), space to be left for the meters. Meters will be 1 phase PLC Dinrail meters. Capacity will be limited to 60 Ampere.</p>
2	Residential 1 (FLISP semi-subsidized)	<p>The owner of the house pays CoE a standard fee for the connection to the grid, which includes a meter. In the event that USDG grant approve this category to be funded through its grants the same principle as per point 3 will apply. Copy of COC is required and will form part of the developer responsibility. The service cable will be connected to the meter by CoE. The developer provides a service cable from a protective</p>

		<p>metering kiosk up to a junction box 1m into the stand or up to the customer DB.</p> <p>The Installation electrician shall complete with the owner/developer Annexure 4 (OHS Act 85 EIR 2009) and submit with application form to the City prior to any installation work commencing.</p> <p>The developer will provide a fully equipped and labeled protective structure as part of the electrical network electrification (fully equipped = correctly rated and toggle circuit breakers completely wired), space to be left for the meters. Meters will be 1 phase PLC Dinrail meters. Capacity will be limited to 60 Ampere.</p>
3	Residential 1 (subsidized)	<p>COE will register the meter and supply and install the meter with service cable to the house and absorb this from USDG grant. The developer will be responsible for installation of the of the network up to the protective metering kiosk structure. The developer will provide a COC for the house electrical wiring.</p> <p>The developer will provide a fully equipped and labeled protective structure as part of the electrical network electrification (fully equipped = correctly rated and toggle circuit breakers completely wired), space to be left for the meters. Meters will be 1 phase PLC Dinrail meters. Capacity will be limited to 60 Ampere.</p>
4	Residential 4 (subsidized high density)	<p>CoE will register, supply and install a meter to each unit (including keypad) and absorb this cost from the USDG grant. The supply and installation of the service cable with communication wires from the protective metering structure to the Unit DB does not form part of the CoE scope of works as this will form part of the developer construction costs. The developer will provide a COC for the Unit's electrical wiring.</p> <p>The developer will provide a fully equipped and labeled protective structure (or protected distribution board) or, if the walk ups (flats) are below 18 family units per block, then outside metering protective structures as part of the electrical network electrification (fully equipped = correctly rated and toggle circuit breakers completely wired), space to be left for the meters. Meters will be 1 phase pilot wire Dinrail meters, until the existing COE stock levels are depleted. Capacity will be limited to 60 Ampere.</p>
5	Residential 4 (social high density)	<p>The owner (CoE or Province) of the unit pays CoE a standard fee for the connection to the grid, which includes a meter. CoE will register, supply and install a meter to each unit (including keypad). The supply and installation of the service cable with communication wires from the protective metering structure to the Unit DB does not form part of the CoE scope of works as this will form part of the developer construction costs. The developer will provide a COC for the Unit's electrical wiring. The Installation electrician of the owner shall complete with the owner/developer Annexure 4 (OHS Act 85 EIR 2009) and submit with application form to the City prior to any installation work commencing.</p> <p>The developer will provide a fully equipped and labeled protective structure (or protected distribution board) or, if the walk ups (flats) are below 18 family units per block, then outside metering protective structures as part of the electrical network electrification (fully equipped = correctly rated and toggle circuit breakers completely wired), space to be left for the meters. Meters will be 1 phase pilot wire Dinrail meters, until</p>

		the existing COE stock levels are depleted. Capacity will be limited to 60 Ampere. Copy of COC is required and will form part of the developer responsibility.
6	Residential 4 (bonded/FLISP high density)	Bulk metering will be provided for the Body Corporate by developer. If the demand is up to 630 kVA, the metering will be in the mini-sub. If the demand is above 630 kVA bulk metering will be provided at 11kV by means of a Bulk Metering Kiosk.
7	Other zoning	ALL other zoning will be metered by automated meter reading. Service cables with meters will be supplied and installed by CoE up to and at the bulk metering point. In all cases the Installation electrician shall complete with the owner Annexure 4 (OHS Act 85 EIR 2009) and submit with application form to the City prior to any installation work commencing. The owner of the house will pay to CoE the quoted cost for the installation of the AMR/ prepayment meter and registration and any other network/service connection extensions/upgrades/provisions. The owner installation electrician provides a service cable from a bulk metering point (quoted to be installed by the City) to the DB. A copy of a COC to be supplied which will form part of the owner/ applicant appointed installation electrician responsibilities. The service cable will be connected to the meter by CoE at the bulk metering point.

7. DEMAND METER PRINCIPLES

➤ The following principles shall be adhered to:

- No demand meter older than 3 years shall be installed (inclusive of shelf life) at installations > 150kVA.
- No modem, which is not approved by the HOD: Energy, shall be installed.
- To comply with the NRS057/ SANS474 for metering and for calibration of meters at 5 years (>10MVA) or 10 years (<10MVA) intervals, COE will replace these meters with new meters.
- This is done to ensure that the meter is used within its lifecycle specification.
- Replacement meters, and where required CTs/ VTs, shall be the appropriate accuracy class component as required in NRS057/ SANS474.
- Protection CTs shall not be used to perform metering functions.
- Where metering systems are upgraded, all summation CTs will be removed and metering performed with a separate meter per feeder and the summation performed on the AMR system.

8 CREDIT CONTROL MEASURES

The metering and protective devices mentioned above are to be used in conjunction with Council's Credit Control and Debt Collection policy. This is to aid revenue protection and credit control measures of the City by creating an environment that is not conducive to people electing to tamper with the electricity meter installations of COE.

In most of the existing areas, credit control and corrective measures will still be the most cost effective method of dealing with interference, since the capital outlay to protect metering is very high. The current operational costs involved in repairing damage, purchasing locks, disconnecting and reconnecting defaulters must be taken into account when determining a course of action in any area.

9. INDIGENT APPROVAL

A prepayment meter will be installed at the indigent's property (if a full title property) at no cost to the indigent applicant.

Indigents residing in private owned security complexes which is metered through a bulk meter will not be eligible to an individual Council prepayment meter.

10. DEVIATIONS FROM THE POLICY

Complex technical and social conditions may require that deviations from the policy be allowed. Examples, listed below (not exhaustively), requires a case-by-case decision by the HOD: Energy, based on practical aspects:

- Replacing all credit meters in an area or as part of a project, with prepayment metering (as per this policy). During these special projects, amnesty may be required in terms of levying the reinstatement fee for bypassed meters. Such amnesty shall be approved in writing by the HOD: Energy or his delegate and will have specific time duration. A motivation will be made to the GCFO to put a stay on credit control for a predetermined period of time, so that the project can be completed successfully.
- In the case where a severely mismatched load factor leads to exceptionally high active energy charges to a customer, a retrospective correction in the tariff applied may be recommended to Finance, in writing by the HOD: Energy or his delegate.

11. STAKEHOLDER ENGAGEMENT

Continuous engagement with stakeholders is required to ensure a sustainable provision of the electricity service.

NOTE: The reference to "they" in the above sentences is a reference to the Department concerned and its personnel

The term "shall" is used throughout this document to indicate those provisions which, are considered to be mandatory.

The term "should" is used to indicate those provisions which, although not mandatory, are provided as a recognized means of meeting the requirements.

The term "may" is used to indicate something which is permitted.

The term "can" is used to indicate a possibility or a capability.

