

SARPA presentation Tamperers & prosecutions

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Meter Tampering – is it worth it?

- If you tamper with your meter or someone tampers with your meter for you – what are the consequences?
 - You will be charged a remedial charge/ tamper fee up to a maximum of R100 000 for a first offence.
 - Eskom will recover lost (unbilled as a result of tamper) revenue from you
 - You can be charged criminally and received a be found guilty of a crime (conviction)
 - You can receive a jail sentence or hefty fine
 - Your deposit will be increased

- **Losses/ Leakage occur through**
 - **Meter tamper – It is bigger than we think!**
 - **Illegal connections**
 - **Ghost Vending**
 - **Illegal Vending**
 - **Meter failure**
 - **Meter error – incorrect CT ratios etc.**
 - **Data not billed/ Data corrections not done**
 - **Incorrect billing/ unbilled Revenue**
 - **Ineffective management of debt and collection thereof**
 - **Inadequate securities etc..**
 - **Movement on terminated supplies**
 - **.....**

- Meters are tampered and manipulated in a number of different ways
 - >130 different modus operandi
- It increases business risk to document and communicate these in any great detail
- It is more important to teach on how to
 - Identify and correct
 - Take appropriate action legally/ criminally
 - Recover Revenue
 - Manage going forward

- Obtain information relating to tamper (photo's, test results, reports etc.)
- Decide if risk of multiple accounts – (No continue; Yes – wait)
- Conduct a review of linked accounts – search by
 - Linked accounts/ Phone numbers/ Id numbers etc..
- Data/ account analysis will enable risk assessment these linked accounts
- Perform Audits on risk accounts
- Decide on internal vs Criminal
- Include problems in Revenue Recovery Process
- We need to preserve status of installations to review (no self fix)
- We want to deal with all installations of a customer at once

- **There must be a CAUSE/ Reason**
- **The customer must be legally liable either**
 - contractually – Agreement, or
 - based on common law - unjust enrichment (used power but not paid for it)
- Meter non-function (tamper or failure) will be liable for calculation and recovery of lost revenue
- Calculation of lost revenue must be based on standardised process
- Charges must be raised to the customer's account (billed)
- Application of prescription and associated risks must be taken into consideration.
- Once-off settlement process as approved by GCS MANCO must be applied for errors.
- Treatment of all customers must be on a fair and consistent basis
- A meter error may in actual fact be a tamper

- Common Law:

Unjust enrichment -The customer has utilised electricity and in turn is liable to ESKOM in compensation thereof. If the customer has tampered with the meter or it was tampered with by the previous owner, the current customer has utilised the electricity that was not recorded as a result of the tamper. The customer is therefore in debt to ESKOM simply due to the fact that they have utilised the supply. If the customer has been underpaying due to a fault in the meter, the same logic applies. The exception is that the fault lies with the ESKOM equipment and that the customer is therefore limited in their liability.

- Contractual:

STANDARD CONDITIONS OF SUPPLY FOR SMALL SUPPLIES WITH CONVENTIONAL METERING

16.2 ESKOM shall have the right to test any of the meters at any time and if any such test shall show any inaccuracy in excess of the percentage accuracy as specified in NRS 057, the same shall be deemed to have existed since the date the error or fault can be reasonably shown to have occurred, and the account shall be adjusted accordingly in the first account rendered after the inaccuracy has been ascertained.

- The new law came into effect in December 2015. According to the new law persons convicted of cable and/or theft as well as meter tampering will now receive harsher sentences.
- Offenders convicted of copper or cable theft under the Criminal Matters Amendment Act will receive minimum sentences of up to three years for first-time offenders and a maximum 30 years for those involved in instigating or causing damage to infrastructure.
- Furthermore the law makes specific reference to meter tampering and makes provision for people to be charged with tampering of "basic service" infrastructure. A conviction for tampering (or colluding to tamper) will now be subject to a imprisonment not exceeding 30 years or a fine not exceeding R100 million in certain circumstances.

- Electricity Theft – in terms of Criminal matters bill amendment
- Interference with electrical infrastructure
- Fraud
- MDP
- Racketeering
- Corruption

What is really needed is a highly skilled and dedicated investigative and prosecution team

- Disconnect without notice i.t.o. NERSA approved RSA Distribution System Operating Code (para 16)

- ⇒ Definition: A person commits theft if he/she unlawfully and intentionally is in the possession of another's property / asset.
- ⇒ Use company telephone excessively for private matters.
- ⇒ Private use of fax machines & photocopy machine.
- ⇒ Use of company petrol cards in private vehicles.

What is meant by “fraud”?

- Legal definition: “unlawfully making, with intent to defraud, a misrepresentation which causes actual prejudice or which is potentially prejudicial to another”
- Ethical core:
 - A form of deception
 - Dishonesty
 - Uses false representations
 - To obtain an unjust advantage /
 - Injure the rights of others

A person who directly or indirectly accepts, agrees, or offers to accept any gratification from any other person to benefit himself or another person is guilty of the crime of corruption.

- At the outset of the identification of a meter/ installation tamper a decision needs to be made on whether a criminal process will be followed as this has additional specific requirements from a SAPS and primarily an evidence perspective

Evidence collection and protection of meter:

- Eskom requests assistance from SAPS and undertakes a joint search and seizure operation (Warrants if necessary)

SPU:

- Meter removal and replacement and collection of all relevant evidence (SAPS presence and participation to undertake photographs, finger prints, DNA, documentation of findings etc.)
- At the same time when the old meter is removed, Eskom will install a new meter
- As part of the chain of evidence the old meter is then placed into a sealed evidence bag by the SAPS official immediately after removal, meter, pole and customer details recorded on the evidence bag and this is then taken to the relevant police station to be recorded into the SAP13 for safekeeping.

- Warning Statements and information gathering
- SAPS requests, and personally takes, these meters to a South African National Accreditation System (SANAS) approved independent calibration laboratory for testing.
- Never change a meters status if in criminal process
- When the new meter is installed it will require testing to indicate that it is functioning and measuring correctly

LPU:

- Collection of evidence is even more critical for LPU's as the meter is seldom removed
- Saps will take detailed photographs under the direction of an Eskom official, a detailed assessment and recording the nature and impact of the tamper must also be completed

- Develop a profile of suspect/ syndicate
- Modus Operandi
- What method/s used
- Unique seals
- Customers/ area targeted
- Information from informant
- Information from customers
- Liaise with SAPS
- Develop strategies to arrest and convict

- Information received from informant re syndicate tampering
- Set up Sting operation with Organised Crime
- 2 Suspects arrested Dec 08
- Fee – R10 00 per installation
- 2 Installations tampered – 30 minutes
- Video surveillance
- Keys
- 39% slowed down/ 44% slowed down
- Both manipulated by internal meter adjustment
- Bragged that they tampered across SA all types of meters (full time job)

After tamper

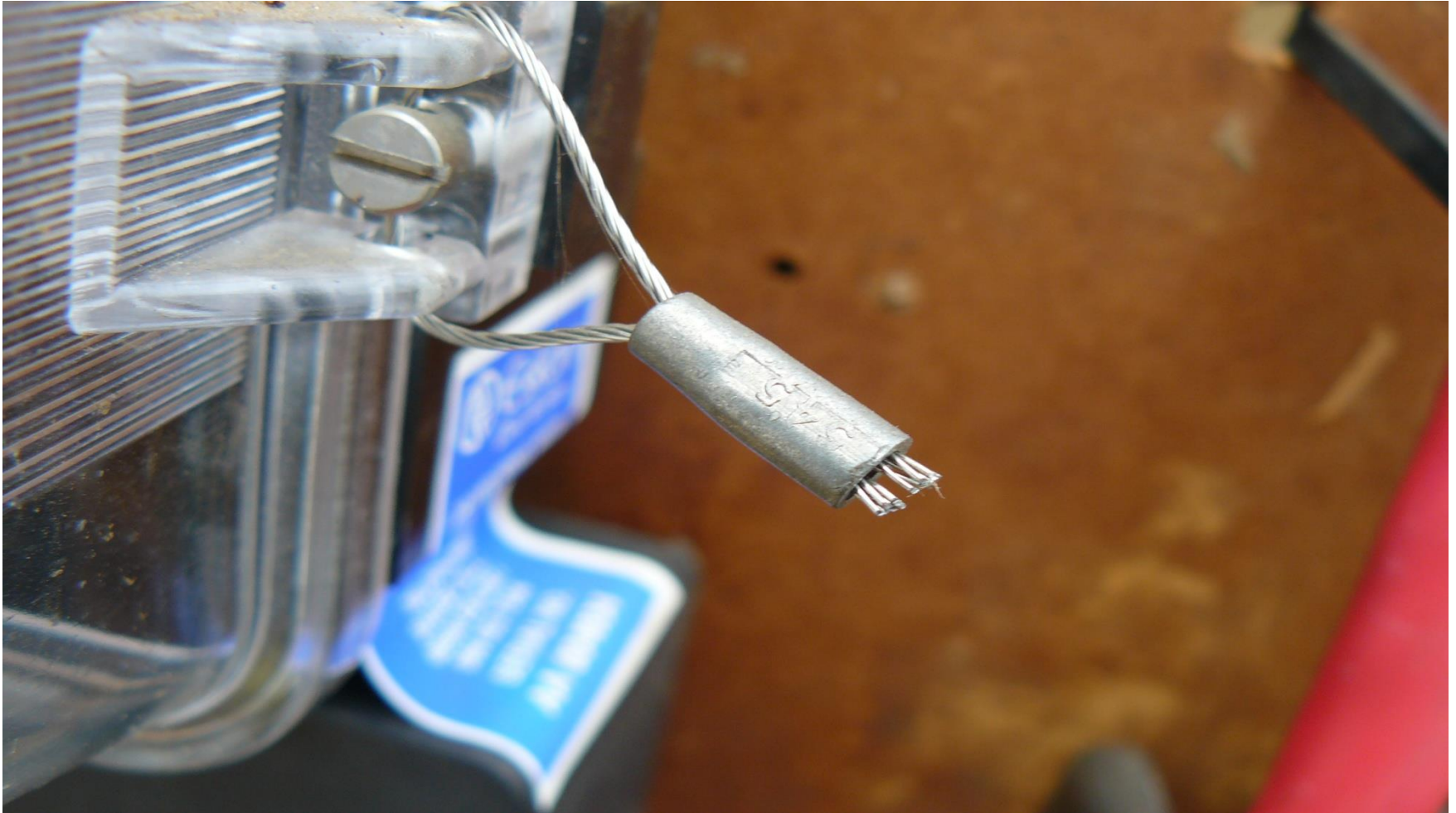


Meter Seal





Seals before tamper



Seal after tamper



Case 2 – Shopping Mall

Summary of Findings & impact

- **Tamper 1**

- Metering Wires cut – Red and White phase
- Unmetered/ unbilled consumption/ usage

- **Tamper 2**

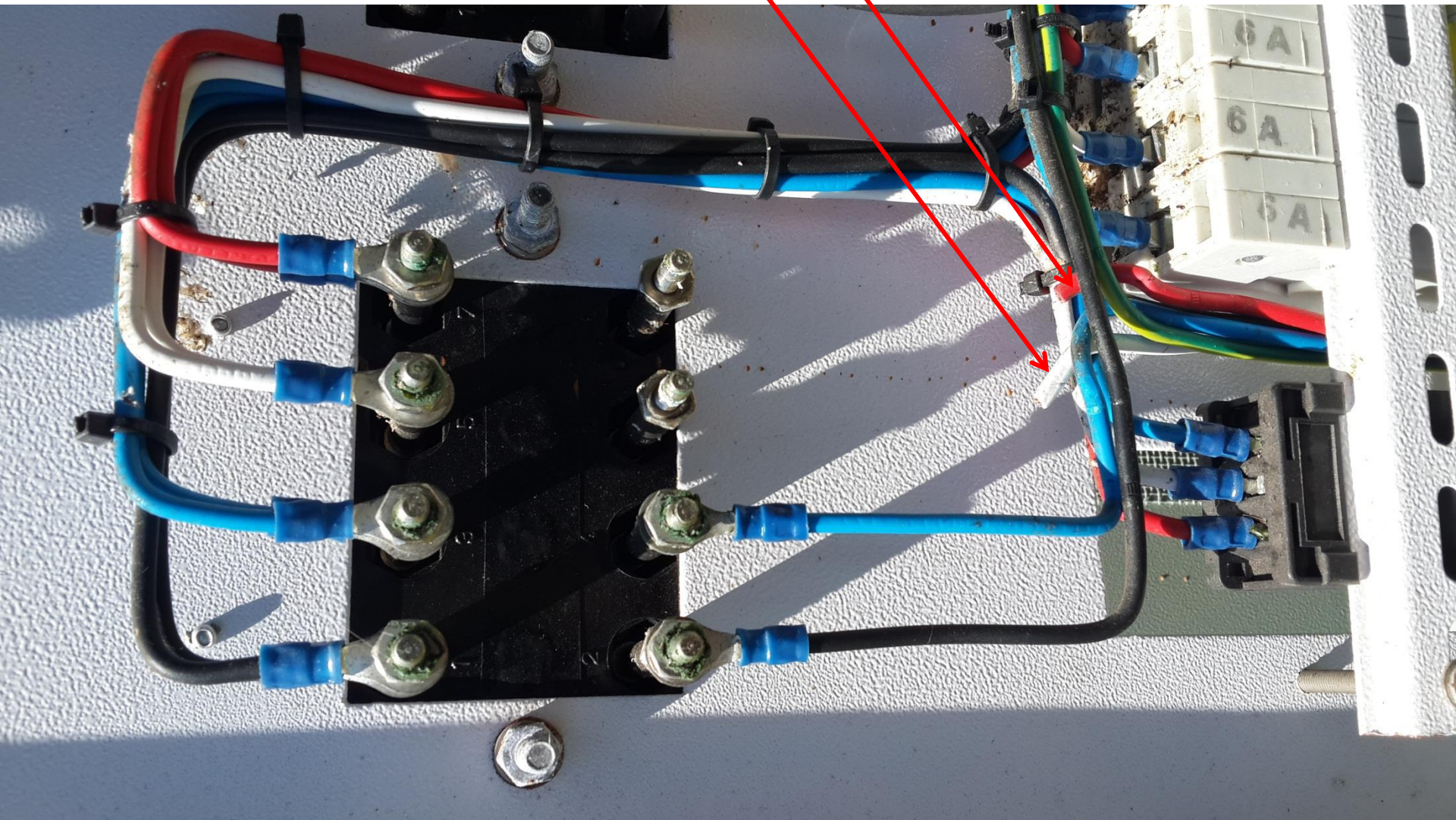
- Shorting on meter and on wiring
- Unmetered/ unbilled consumption/ usage
- Blue phase CT appears damaged 62% slow – further lost consumption (short that was placed on the blue phase between S1 and the neutral)

- **Tamper 3**

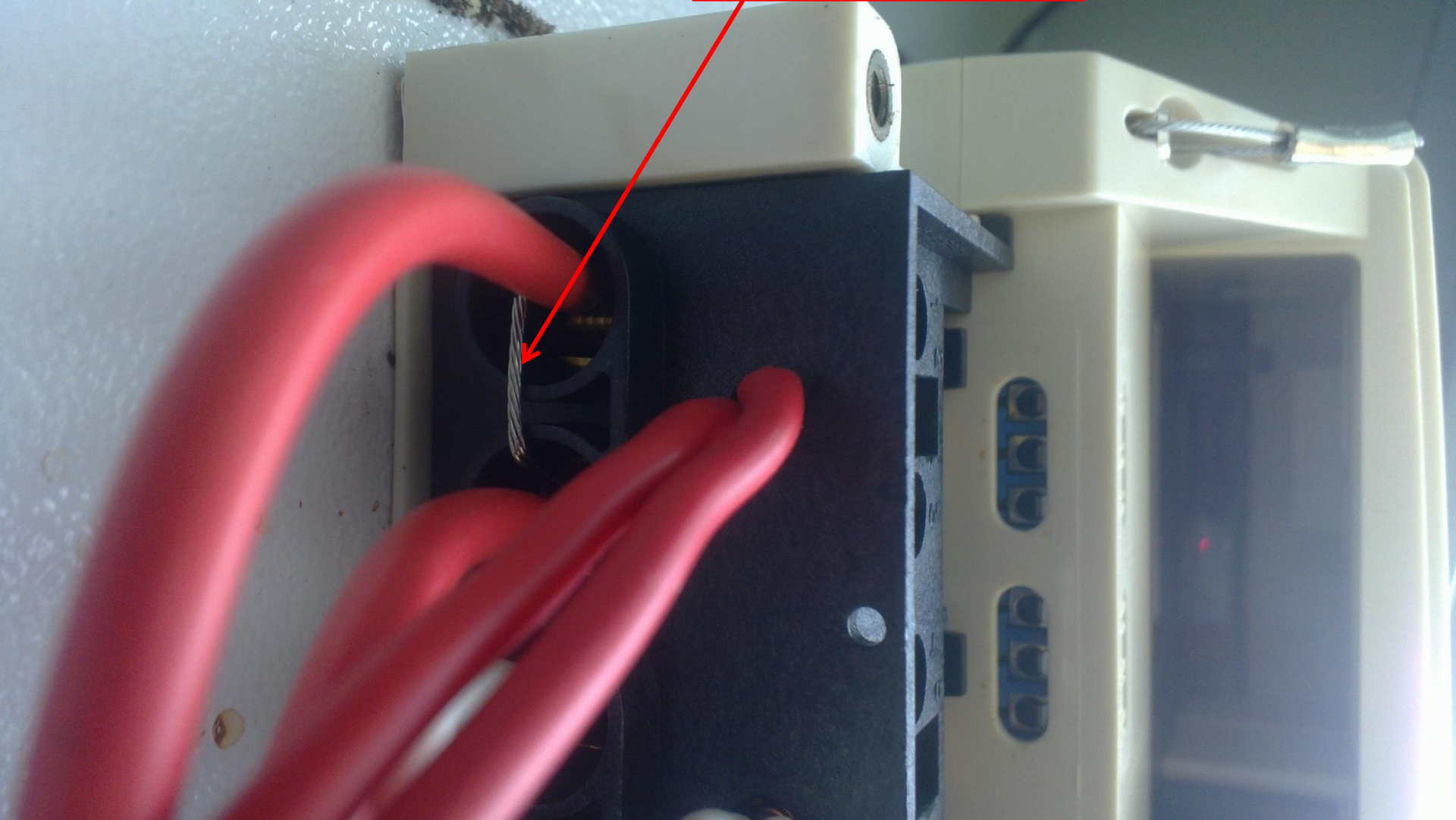
- Shorting on junction box etc. - Very low consumption recorded
- Unmetered/ unbilled consumption/ usage

Tamper 1

Voltage Wires Cut

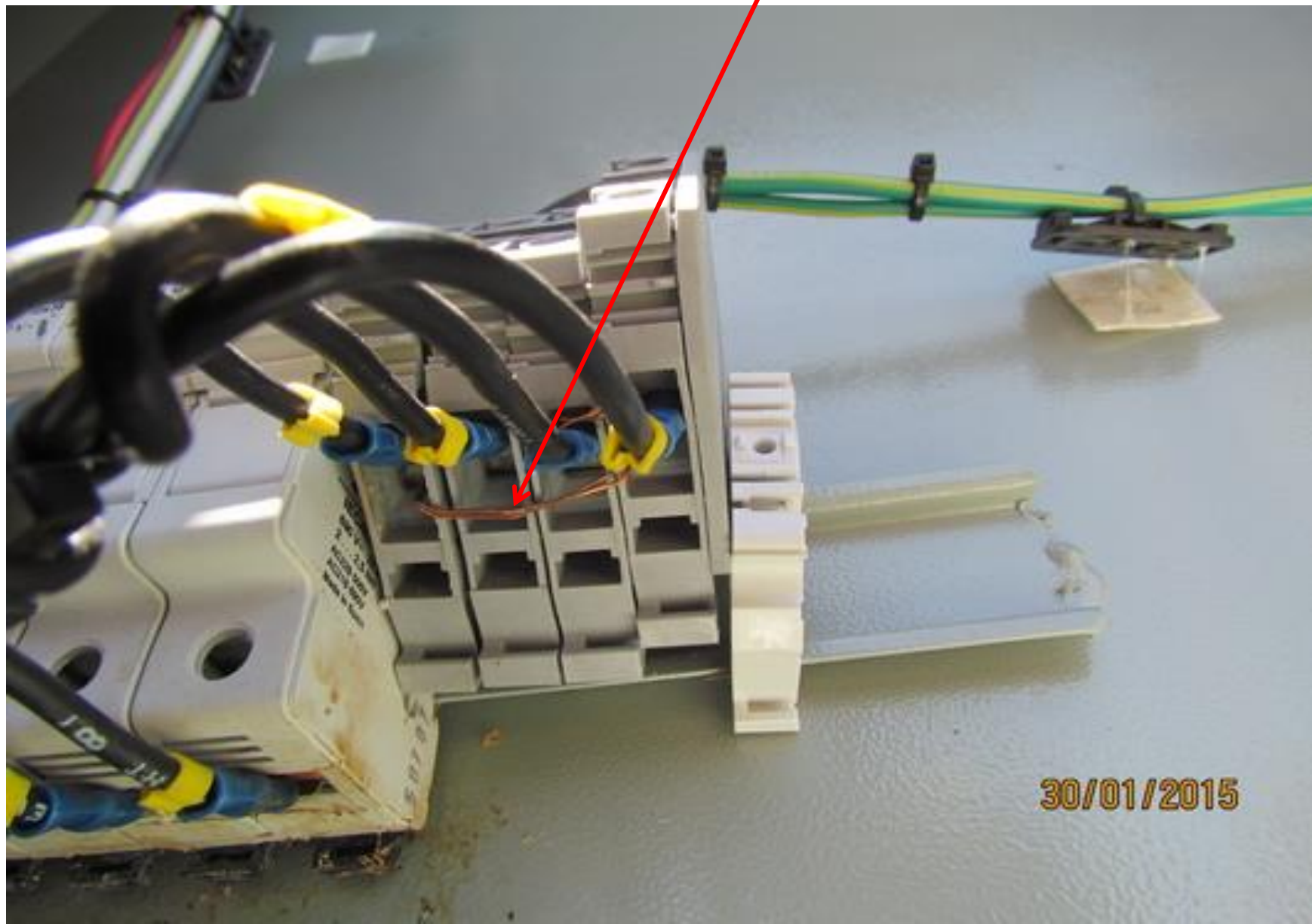


Shorting on meter



Tamper 2

Shorting strips in
meter box



30/01/2015

Tamper 2/3



The disconnection of the CT/VT wiring at the terminal box was done by the CNC.

When the metering technicians arrived there these photos were taken to illustrate what they found.

- The insulation on the 12 core cable on cores numbered 1, 2, 3 & 4 had been cut and 1 & 2 bound together with copper wire (this is the S1's for the Red & White phase CT circuit) & cores 3 & 4 bound together (this is the S1 for the Blue Phase (3) and the neutral path of the CT, core 4)
- This is not an effective short which results in only the Blue phase been totally shorted out.

This possibly occurred 16/11

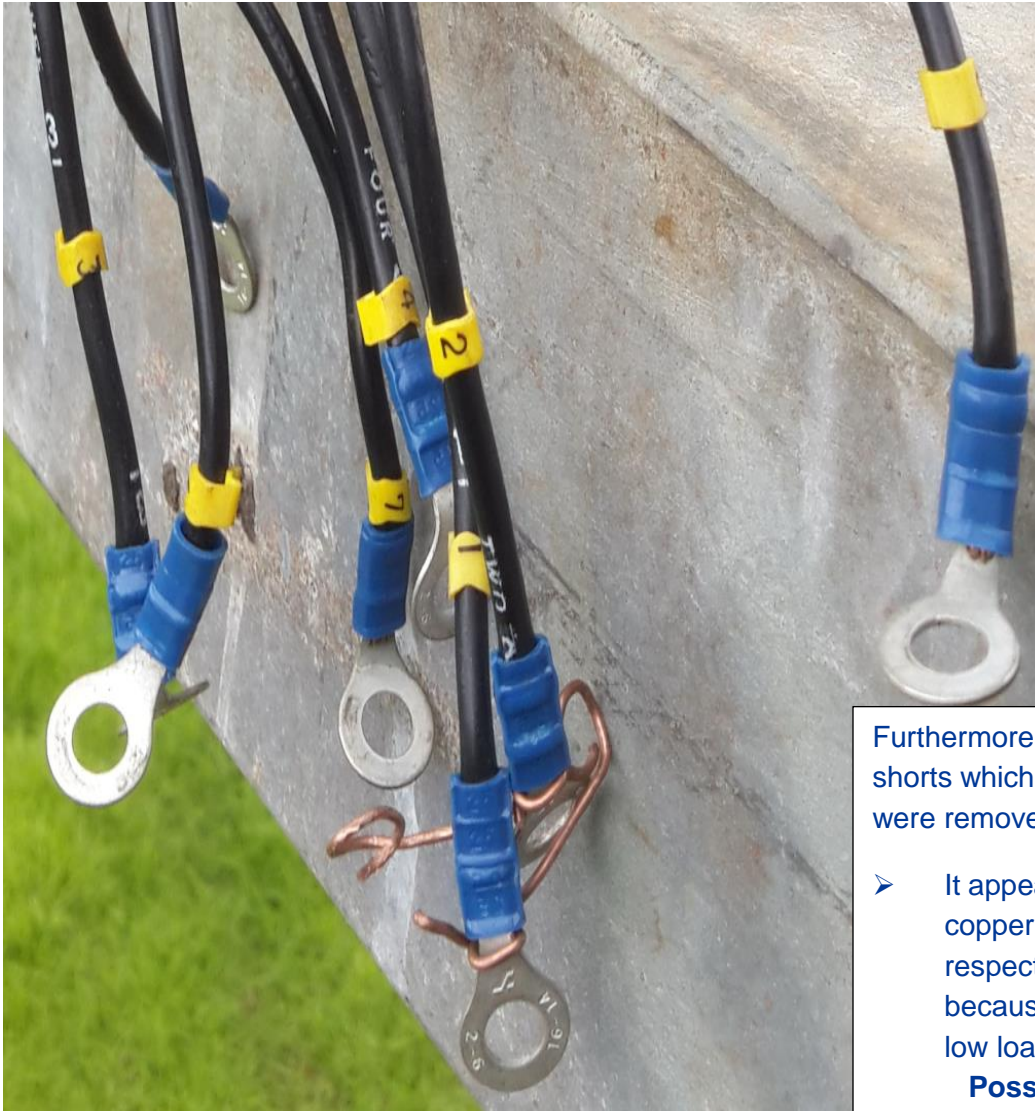


Tamper – serious criminal issue



Tamper – serious criminal issue

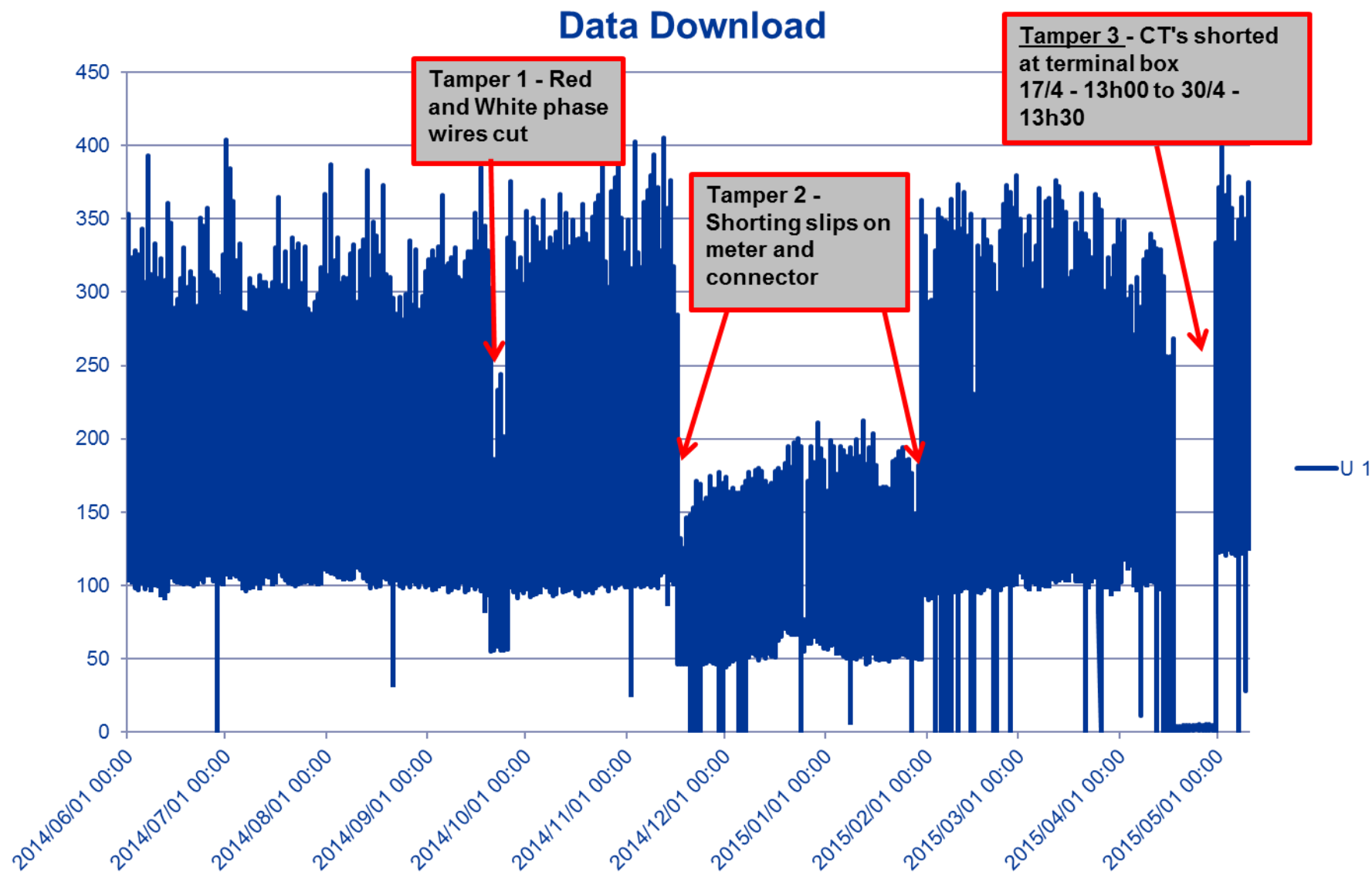




Furthermore the metering technician took these photos of additional shorts which were discovered on the CT circuit – some of these were removed by the CNC.

- It appears from this photo that core 1 & 2 had individual copper wire shorts which shorted out to core 3 & 4 respectively which thus shorted out all 3 phase CT cores because of the shorts on figure 1 – This will result in a very low load indicated on the meter.

Possibly occurred 17/04 – 13H00



- Ghost Vending – High Court JHB – Conviction Racketeering
- Individual Tamper – Mpumalanga – Conviction Fraud (Suspended – pay)
- Tampering Farms – NW - Conviction Fraud (Suspended – Pay)
- Numerous in progress in various OU's – but can be very slow process
 - Mpumalanga – Suspects + 30 Farmers
 - Limpopo – Suspects + 40 Farmers
 - Gauteng - Residence
 - Eastern Cape – syndicate + farmers and other customers (BCM & Eskom)
 - Etc...

- There are certain signs that indicate that an installation has been tampered with:
 - The meter seals are broken.
 - No or non standard seals on cover.
 - The PT links have been opened.
 - The meter disk has been dropped/ lifted onto the magnets.
 - Marks on the upper or lower side of disk.
 - Physical damage to meter including drilling of holes on meter cover.
 - Scratch marks on the PT links accompanied by trend deviations.
 - Meter by-passed.
 - Line and load jumpers swopped around.
 - Connection direct off circuit breaker.
 - Secondary cable not metered
 - Crimping on insulation
 - Wires cut
 - Metering c/b switched off
 - CT polarity switched
 - Neutral disengaged.
 - Etc..

Meter test device - KOCOS METES 32.1



- **Effective inspection/ audit process**
- **Lock all meter boxes – restrict access**
- **Effective Management and timeous resolution of issues (control sheet with escalation)**
- **Timeous actioning of exception reports**
- **Effective Energy feeder balancing to Identify hotspots**
- **Utilise “tamper proof” meters – internals cannot be accessed from outside**
- **Ensure meters and MCB are sealed – Use hi-tech meter seals**
- **Ensure there is consequence of action**
 - **Penalties and remedial charges**
 - **Recovery of unbilled Revenue**
 - **Criminal process**
- **Identification of tamper syndicates and appropriate strategies to deal with them**

- **Customer data and profile analysis – trend and graphical analysis**
 - **Regular actioning of No and Low consumption reports**
 - **Continuous Meter read analysis**
 - **Comparison of actual demand profile to NMD**
 - **More comprehensive meter read process and actioning of exceptions**
 - **Hold staff accountable**
 - **Implementation of meter read and billing quality review process**
 - **Reduction in process delays (log all problems ID and track fix and recovery – escalation)**
 - **Phased meter replacement strategy**
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- **Ensure you have the RIGHT people to do the job**

- Structured and well defined process – use new technology
- Ongoing data analysis – exception reports
- Effective early identification of leakage
- Timeous correction - Stop leakage
- End to end tracking and management of issue to resolution
- Timeous Recovery of lost Revenue (tamper & failure)
- Remedial charges
- Identification of perpetrators
- Criminal action where possible and customers and perpetrators
- Effective KPI's – DON'T WINDOWDRESS

- How do you eat an elephant?
- **Bit by Bit!**
- **Soccer Field**
 - Need to bend and pick up the money
- **Orchard of Fruit**
 - We are not building the ladders to harvest the ripening fruit let alone picking the low hanging fruit that is ripening and falling to the ground
- Only **YOU** can make it happen!

Thank you