

BITOU LOCAL MUNICIPALITY

CASE STUDY: CONVERTING KNOWLEDGE INTO PRACTICE



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Introducing Bitou

- Bitou Municipality (WC047) is a category B municipality located within the Eden District Municipal jurisdiction in the Southern Cape of the Western Cape
- Bitou is the gateway into the Western Cape from the Eastern part of South Africa

Population 2011
= 49 162 and
growing at 1.2%



Introducing Bitou



Overview of network



Ferdinand 11kV



Brakkloof 66kV
Sub



Kwano 66kV Sub
in progress



10035 Credit
Meters



7895 Prepaid
Meters



111 Large Power
Users

18 041 Total



Problem Statement:

High Energy Losses

- In 2017/18 the electrical technical and non-technical losses was at 13.16%
- This amounts to R 13 837 016 of our actual Eskom Bulk Purchases
- NERSA's acceptable technical and non-technical losses is below 12%.
- The latest benchmarks carried out by the World Bank put the best performing utilities at 10% and below.



Challenges contributing to losses

Chaotic approach to Revenue Protection

No Meter Management System

No effective working relations between finance department and electricity

Meters are not registered after hours

No seals system was in place

Illegal Connections

Tampering

Incorrect Meter Readings

Access to credit meters

Steps taken to reduce losses

Step 1

- Basic Revenue protection training



Step 2

- Set up a proper revenue protection team



Step 3

- Initiated a few projects



Resulted in reduced losses

Basic Revenue Protection Training

REVENUE PROTECTION BASIC COURSE

Rens Bindeman was the course facilitator

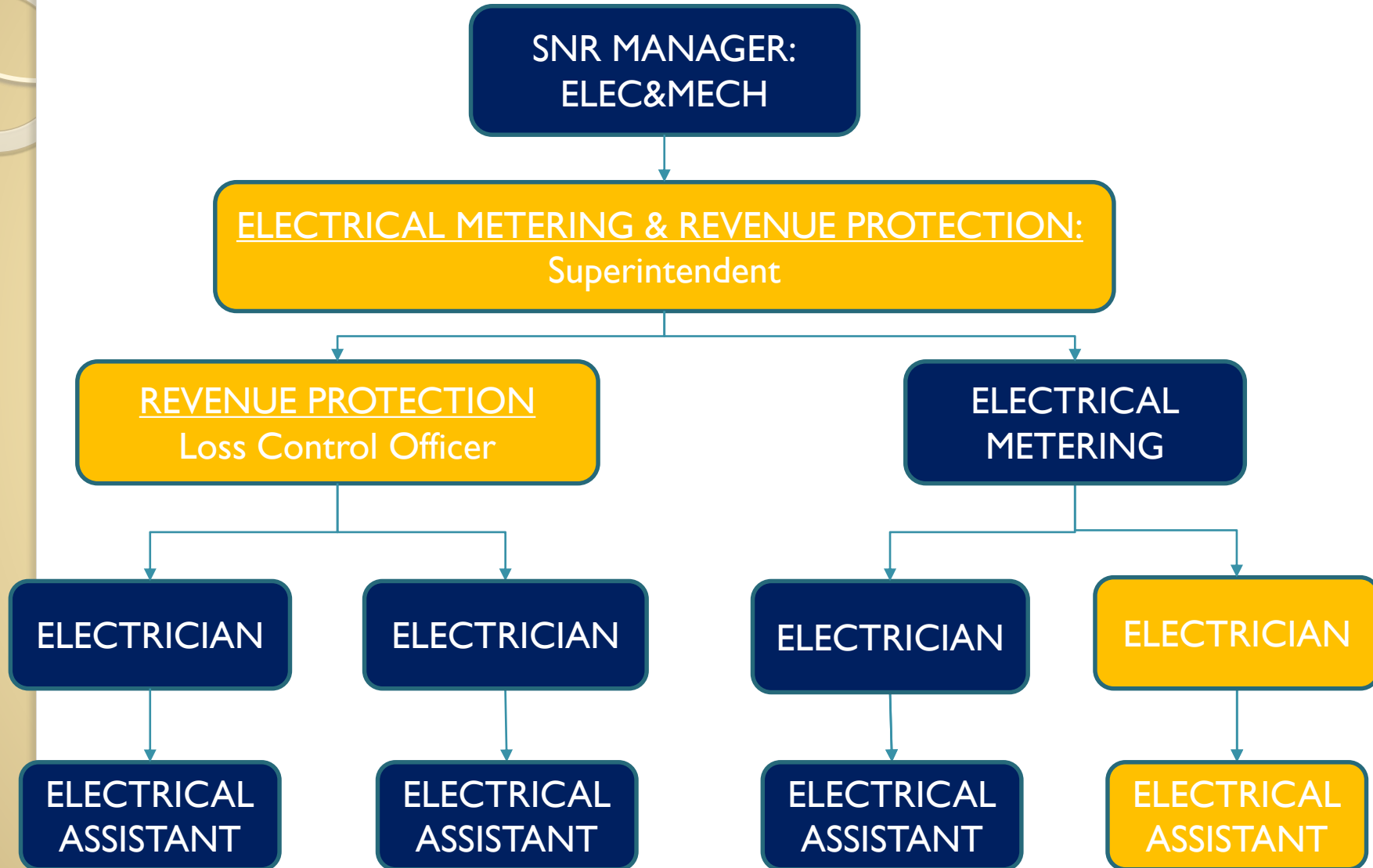
2 day course which was free (SnT)

We also invited our neighboring municipalities

We are currently working on a follow up training session since the Finance department was not present



Setup a RP section

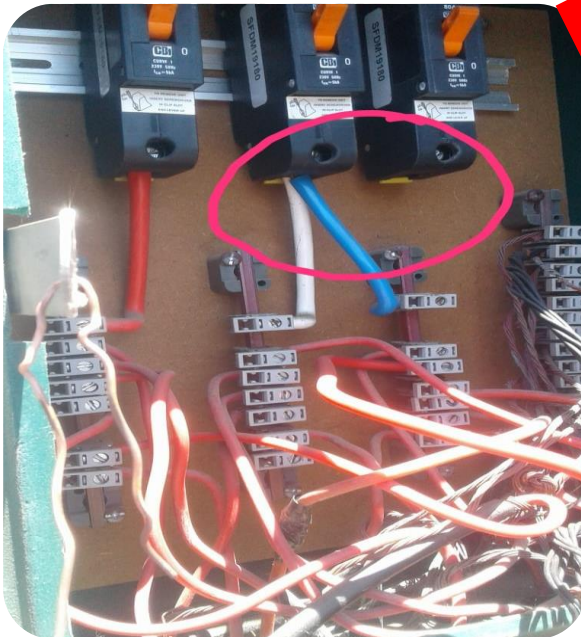


Setup a RP section

- There was a chaotic approach to metering:
 - Anyone could draw meters from stores!
 - All electricians responded to metering queries, with no one accounting if faulty meters are bypassed
 - The Loss control officer was involved with planning for new service connections - not focused on RP
 - No registrations after hours – faulty meters bypassed
- Separating Planning from metering and Revenue Protection to improve our internal operations. Better controls
- Only metering electricians to respond to queries
- SOP was developed for Meter Management
- Created dummy meters already registered for standby purposes – STOPPED ALL BYPASSES!!
- Busy with setting up a seals system....

Projects - Audits in informal settlements

- *First initiated and RP Community Meeting through ward councilors*
- *Communities think that it is accepted to connect illegally*
- *I Pointed out the dangers of illegal connections*



Kurland Informal Settlement	Bossiesgif Informal Settlement	Qolweni Informal Settlement	New Horizons Formal Housing
250 meters checked	250 meters checked	200 not registered (Bypassed)	240 connections checked
5 illegal connections	Illegal connections		
72 tampered	66 tampered		50 tampered
	10 bypasses		

Installed AP2 pole boxes with split meters, which mitigate access to meters

Projects - Changing Proprietary Meters

Replace Prop Meters

655 Proprietary Meters were replaced with split prepaid

Picked up many tampers

Bypassed Meters

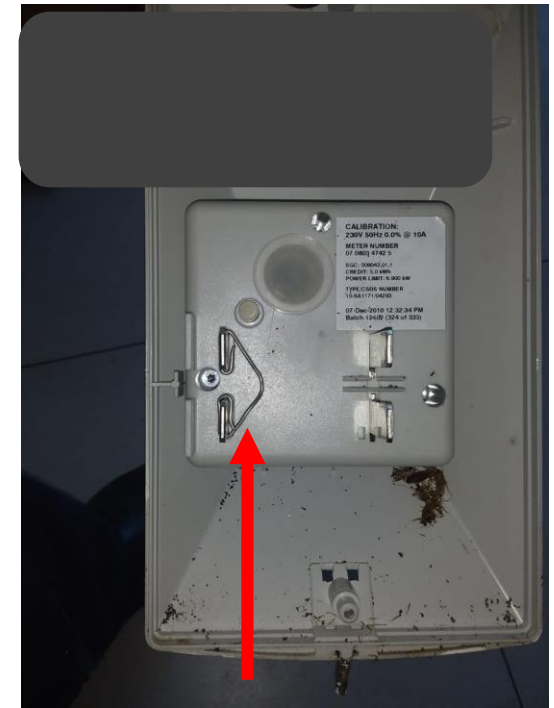
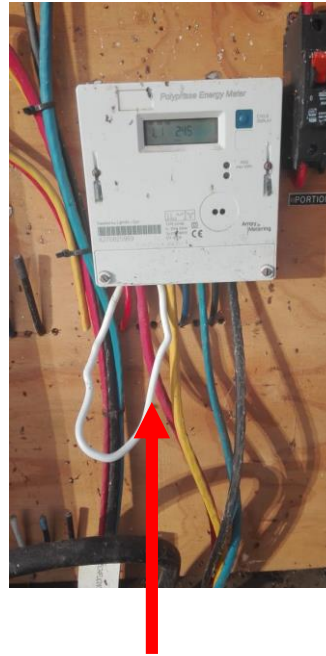
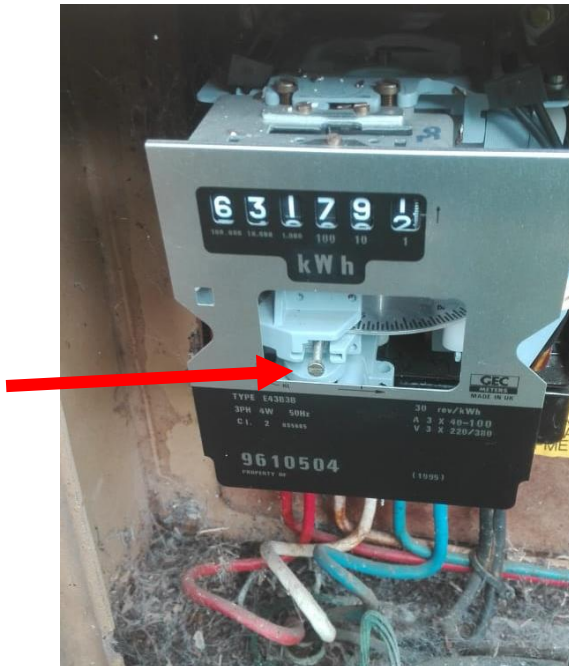
100 meters must still be converted to split meters



We are currently in a disciplinary process, as there were cases where our own staff was allegedly responsible for bypassing these meter!!!

Tampers during normal operations

- Tampers are now being discovered during normal operations
- We found that customers started phoning to inform us of possible tampering with meters
- By issuing penalties for tampering, the word is spreading which helps the cause



The way forward...

- We established a task team where we include, water, electricity, IT, finance
 - Follow up RP training to be arranged for all
- We need to strengthen our reporting - Zero and low consumption reports not frequent enough
- Next step is to convert the credit meters to smart meters together with AMI and remove meters to outside
- Install meters in 21 out of our 70 pump stations
- Need to install AMR, We ran a pilot and are now ready to draw up a specification

The way forward...

- We have found possible Rogue Meters - still need to be addressed
- We will set up a hotline for reporting illegal connections

Conclusion

- After the Basic RP Training, Bitou's Electricity department embarked on a journey to reduce the losses of 13.16%, by:
- Setting up a RP section with effective controls
- Conducted audits where we replaced tampered and bypassed meters with split meters
- Removed illegal connections
- Issued penalties which spread awareness
- Relations with Finance and Electricity has been strengthened
- This we have done even with very little resources!

And as a result....

Conclusion

- Bitou's Energy losses at 2018/19 was....

9,55%

Translating into savings of
R 3 697 192



Thank

- Questions...