

ALEXANDRA PREPAID METERING PROJECT

Alexandra Township is situated on the North-Eastern outskirts of Johannesburg. Established in 1905 after being acquired from a farmer, it is one of Gauteng's most densely populated townships, with about +/-2 million residents. Just like many other Black townships during apartheid years, the residents were deprived basic services like housing, electricity and water, which were provided to only a few privileged ones and government institutions like the Municipality, schools and clinics.



This is a panoramic overview of Alexandra township, a tale of 2 cities. You see the most affluent houses on one side and at the same time there are shacks where people live in abject poverty

Electrification Project

In 1990 Eskom and the government embarked on the electrification programme in rural areas and Black townships that did not have electricity, and prepaid meters were installed in such areas.



Non-Payment

Due to the culture of non-payment and other problems like crime, some residents learnt how to by-pass the prepaid meters and consumed electricity without paying for it. The problem became very big when most of the residents began paying these criminals a fee to have their meter also by-passed, and Municipalities began to suffer financially.

What worsened the situation was that the utility did not have a way of establishing immediately when a consumer has by-passed or tampered with the meter in any way. They depended entirely on tip-offs from honest consumers, members of the Community Policing Forum and random audits. Unfortunately, not many community members would provide information, obviously for fear of their own safety. At the same time, the municipality came under a lot of pressure from the government to collect revenue for basic services, and electricity especially (because electricity is the municipality's

cash-cow).

The municipality therefore had to look for a more effective way to collect revenue, identify those who stole electricity and punish them and their "clients". Unfortunately, though, as soon as these thieves learnt that the municipality was busy with the audits, they would quickly reverse the by-pass and when the municipality arrived at their places, they would find no by-pass.

The Johannesburg Metropolitan Council approached Grinpal, a then 50-50 joint venture between Palace Engineering Services (trading as Palace Technologies) and Saab Grintek, to supply the council with meters that are more difficult (almost impossible) to tamper with, and which could prove a tamper or bypass even after it was reversed, so that they could bring the transgressors to book.

Pilot Project in Smart Metering

This pilot project was launched in 2002, with only a few sections of Alexandra Township installed with these prepaid meters.

AT THE BEGINNING OF THE PROJECT, OUT OF 60 000 HOUSEHOLDS ON PREPAID, JOHANNESBURG CITY POWER, THE MUNICIPALITY'S SUPPLIER OF ELECTRICAL SERVICES, WAS COLLECTING ONLY R250 000 PER MONTH FOR ELECTRICITY CONSUMPTION.

Grinpal installed smart meters into clients' households where tampering/bypassing had been established, and in houses that did not have electricity before, 20 000 households in total. The aim of this pilot project was to improve revenue collection, detect tampering and improve customer services. After installation of the meters by Grinpal, payment levels increased gradually.

PRESENTLY THE UTILITY RECEIVES NO LESS THAN R1.6 MILLION MONTHLY FROM THOSE 20 000 HOUSEHOLDS. 48 000 HOUSEHOLDS STILL NEED TO BE ELECTRIFIED, AND ONE CAN IMAGINE HOW GREATLY REVENUE WILL IMPROVE IN ALEXANDRA.





**ADVANTAGES OF PREPAID ELECTRICITY THEN WERE
(AND STILL ARE NOW):**

- ◆ Consumers can buy electricity before consuming it. This alleviates unpleasant surprises that come with electricity bills after a certain consumption period, and helps consumers to manage their electricity usage.
- ◆ The token that is loaded with electricity or number printed on the slip can be used by the specific consumer only, so no one can steal your electricity.
- ◆ The problem of meter reading, which has always been debatable, is automatically solved.
- ◆ The utility does not have to send out bills every month, and this is a saving on their side.
- ◆ The utility does not have to spend so much time, as they used to in the past, to cut off customers who did not pay their electricity bills.

To learn more about our smart metering technology and our other smart energy solutions, visit <http://www.palacegroup.co.za/grinpal>