



## Woolworths embarks on a water management project using Meteringonline with immediate savings

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Founded in Cape Town in 1931, Woolworths is recognised as one of South Africa's leading retail brands and has become a household name throughout southern Africa. Woolworths sells a wide range of products including food, clothing, beauty, home ware and more under its own label in some 270 stores nationwide as well as through franchise partners in Africa and the Middle East.

Following their highly successful use of Meteringonline to manage electricity costs in the group, Woolworths decided to expand the system implementation to include water metering in every one of their more than 270 stores country wide.

Implementation of the system required upgrading or installing new water meter to the incoming water main to each store and connecting each meter to an AquaGecko water meter GPRS terminal.

The AquaGecko terminal has been specifically designed to operate in environments where no power supply is readily available. The device operates entirely on a lithium ion battery with a guaranteed operation life of more than 3 years.

Implementation of Meteringonline for managing water consumption has already reaped significant benefits for the group. Serious leakage problems have been identified which were not apparent until a

flow graph was created because the leaks were associated with air handling equipment located in inaccessible areas.

A flow graph is one of the simplest and yet most powerful tools available for use when analysing water consumption trends. A flow graph is analogous to an electrical load profile graph but instead of plotting kW demand collated into demand periods against time, a flow graph depicts rate of flow in  $kl$  or  $m^3$  per hour, collated into flow demand periods (*usually 30 or 60 minutes*).

The flow graph shown on the next page from a store in Johannesburg clearly indicates that water was being consumed continuously. Since the store only operates for approximately 9 hours per day, there should not have been any consumption of water after hours and this pointed to a probable leak which was traced to a faulty ball valve on the rooftop reservoir for the building's air-conditioning unit.

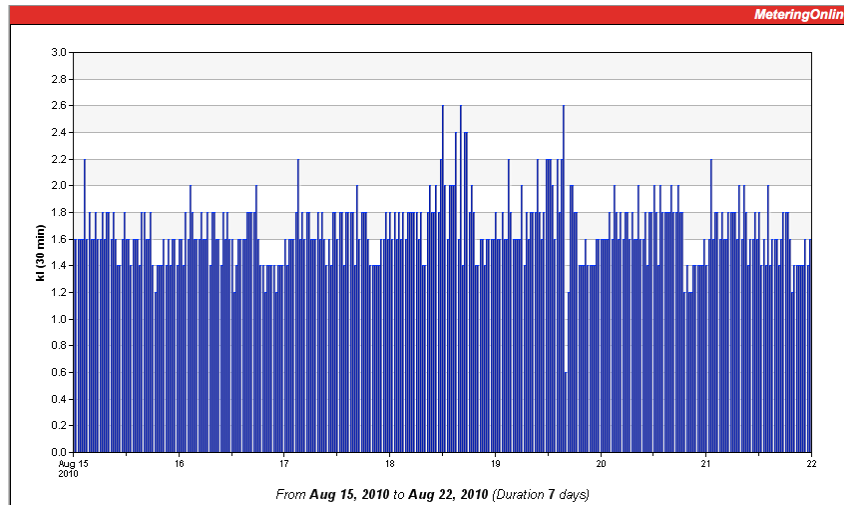


Figure 1: Flow graph showing leak

As a direct result of this leak, the store was consuming in excess of 1120 kl of potable water per day at a cost of more than R32 000 per month. After the leak was repaired, the water consumption dropped to less than 420kl per month resulting in a saving of more than R20 000 per month for this store alone.

The flow graph below shows the water consumption for the store after the leak was repaired.

Although there is still a small consumption of water after hours, this is due to normal operation of the air-conditioning unit.

