# WaterTrac discovers water utility savings

## The Challenge:

Retrofit water meters in high-rise buildings without turning off the water supply or altering approved building structures so apartment owners could pay only for the water that they used.

## The Solution:

Install WaterTrac® intelligent wireless water meters to measure the volume of cold water consumed by each apartment to generate user-pays water billing system.

## The Result:

Within the first few months WaterTrac discovered more than $190,000 of overpaid water charges and proved that a water utility mains supply meter was faulty.

## The Task:

1. Design an innovative water meter retrofit solution to retrofit 184 water meters over 48 floor levels of the buildings.

2. Deal with many layers of overlapping state and local legislation and regulation all of which had acted as a barrier in the past to prevent retro-fit of water meters and user-pays water billing.

3. Take meter readings every 15 minutes and automatically report them to a remote computer data centre for analysis, Supply meter readings for all apartments over the cloud to a third party for production of tenant and owner water bills for payment only for of the actual water actually consumed by them.

"Not everything that counts can be measured.

Not everything that can be measured counts"

Albert Einstein

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intelligent water metering
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## The Outcomes:

The apartments retrofitted by OzGreen Energy with WaterTrac cold water meters were constructed in 2008 in accordance with the building regulations of the time. The apartments are located in a complex consisting of two high-rise buildings and a commercial retail precinct. One building contains 27 levels and the other 21 levels.

Occupancy consists of a typical mix of occupants in an urban coastal location in South East Queensland - permanent residents, long-term absentees and crowded units filled with tertiary students Some particular local water cost/supply issues triggered the Body corporate to take action on the rapidly increasing cost of water which had risen by more than 20% in the previous year.

The seemingly simple act of retrofitting cold water meters to enable fair water billing presented structural challenges and regulatory obstacles. The first big problem was that there were no cold water meter connections in place on each level.

OzGreen Energy designed an innovative water metering solution to retrofit 184 water meters over 48 floor levels of the buildings. Other complicating issues included dealing with layers of overlapping state and local legislation and regulation all of which acted to prevent anything like a straight-forward retro-fit of water meters.

Despite this by taking control of the project, driving every outcome, meeting the cost and regulatory imposts placed on the project by authorities, OzGreen Energy managed to achieve an excellent outcome. The installed cost of each wirelessly-enabled intelligent WaterTrac water meter compared favourably with the industry average costs for traditional AMR water meters and external reading points. Installation of water meters took 10 days and the complete WaterTrac wireless network was installed and commissioned in just 3 days.

The WaterTrac system is a real-time wireless water meter reading system which automatically reads all meters every 15 minutes and then sends the meter reading data off site every 90 minutes to a special data processing center. The high accuracy of the data stream means that WaterTrac is able to detect meter tampering, water leaks and send water meter reading information directly to agencies to automate water billing processes.

## The results speak for themselves.

- Within 90 days of installation WaterTrac:
- identified more than $190,000 of overpaid utility charges
- proved that the existing water utility mains supply meter was faulty
- identified that a brand new new replacement mains supply water meter was incorrectly installed and not working at all
- required the water utility to replace the mains water meter twice in 4 weeks
- identified a number of minor water leaks inside the property boundary which the owners have repaired
- identified faulty water meters fitted to the building's central hot systems cold water feed inputs

New wireless intelligent mains water meters have since been fitted to the hot water distribution systems in the buildings and to the HVAC cooling towers and these meters are also joined into the WaterTrac data system.

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## The Outcomes:

Other positive aspects to the WaterTrac installation include the fact that all apartment owners now pay for water on a more equitable "user pays" basis rather than a user shared proportion of the whole property water bill.

Initial analysis shows that 2/3 of all unit owners pay less for water than they did before installation of WaterTrac while the remaining 1/3 of high water users now be pay for the water that they use or waste.

## Water Leak Detection

The WaterTrac system utilises a series of special algorithms for automatically detecting consumption patterns that could be leaks. The system can be configured to automatically notify the Building Manager via email, who can then cooperate with the apartment owner or occupants to determine where the leak is, or what the water-related issues are.

The greatest value in OzGreen Energy's WaterTrac technology is the transformation of simple data into information that improves existing systems and saves money. Leak detection is a specific example of WaterTrac's specialised analytics that saves money for apartment owners, and ultimately for water utilities

**About WaterTrac**

Established in 2010, OzGreen Energy Pty Ltd revolutionised retrofitting of water meters into existing high-rise buildings with release of the WaterTrac system.

WaterTrac is the first cloud-based wireless water meter system tied to a predictive data engine.

For more than thirty years, the owners of OzGreen Energy have continued to revolutionise industry sectors with innovative products, services and unbeatable support for the best overall value available.

Visit www.ozgreenenergy.com.au for more information

## Intelligent Analytics

WaterTrac's intelligent and automated analytics capabilities has attracted the attention of water supply utilities. The application of WaterTrac analytics is only limited by imagination. It provides accurate, high level intelligence that is unprecedented for Australian water utility providers, let alone for an apartment owner.

WaterTrac analytics are constantly re-defined algorithms that monitor received data, apply analytical functions and identify anomalies or notable events based on a comparison of the result of the analysis compared against baseline or target behaviour. It takes considerable human capacity and leading edge computational resources to be able to execute these algorithms in real-time, across copious data points and along myriad rows of data.

OzGreen Energy can empower building and facility managers with more up to the minute water consumption information than the water utility has at its disposal (or that it can possibly obtain).

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