

Wringing the revenue from NRW

Water loss reduction has become a profitable business in Asia. Companies are looking for a slice of this \$7 billion-a-year pie.

If just half the current volume of non-revenue water in Asia could be billed to customers at \$0.30/m³, it would generate \$6.7 billion in annual revenues. Utilities in the region are starting to take an interest in capturing this revenue stream, and Miya, Vitens-Evides International and Manila Water are all lining up to help them.

Until recently, NRW reduction had merely been one of many performance indicators in concession and O&M contracts, or else a small technical assistance component in major capex programmes funded by the World Bank and other donors. Now it is taking on a life of its own.

Israeli company Miya has been at the forefront of this trend. Since its establishment in 2008 with the specific goal of providing urban water efficiency services, Miya has built up scale and access to multiple markets through acquisitions: BBL in Brazil, Veritec in North America and WRP for the South African and Australian markets.

Miya's ongoing NRW project for Maynilad in western Manila is the largest of its kind in the world. When the project started in 2008, physical and commercial losses stood at 1.5 million m³/d, equivalent to over 60% of water supplied to the distribution system. Miya's approach has focused on the technical side, improving the utility's ability to spot and repair leaks quickly through collection and management of data and with the use of specialist detection equipment, combined with a major capital investment programme by Maynilad itself.

Miya's Director Roland Liemberger says they will meet their goal of reducing NRW by 500,000m³/d by the end of 2011 and will be able to make further gains under a contract extension that runs until 2014.

On the other side of the city is another NRW success story, that of Manila Water. Having reduced its own loss rates dramatically, the company won a 5-year service contract to reduce leakage at SAWACO, Ho Chi Minh City's water utility. Under the contract, Manila Water receives performance payments for each cubic metre of water saved, with funds coming from a World Bank loan.

Manila Water bid aggressively, and found itself in a challenging operating environment. Blueprints of the network were incomplete and getting excavation permits to carry out repair works was difficult, according to Ronnie Lim, head of new

business development at Manila Water. However, they have managed to reduce NRW from 60% to below 40% in the service zones covered in the contract, he says.

Convinced of the opportunities in the Vietnamese market, Manila Water submitted a follow-up proposal to SAWACO in October along with Mitsubishi and locally listed manufacturing and construction company REE Corporation.

Performance-based service contracts can give rise to disputes between the utility and the private company over pipe replacement and investments in other infrastructure and equipment – assets that will last well beyond the end of the contract period. Responsibility for investment usually stays with the utility, but delays in procurement or lack of funds can make it difficult for the private company to deliver the promised reduction in leaks.

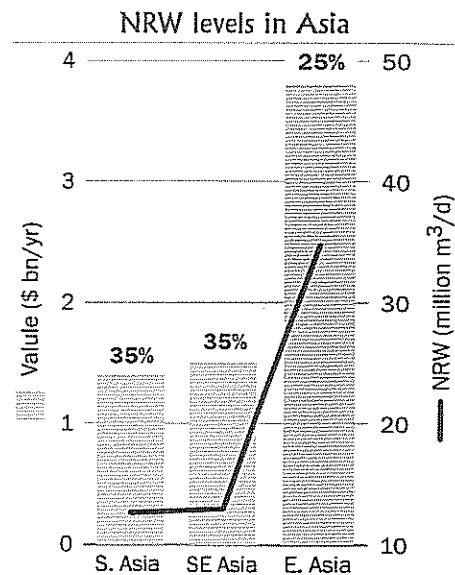
Manila Water's proposal gets around this by committing the consortium to make considerable investments, says Lim. Manila Water believes the contract can be carried out on a commercial basis and there has been no involvement from the World Bank or other international financial institutions.

The transition from a donor-funded to a commercial business is echoed by Gerhard van den Top, CEO of Vitens-Evides International. "Asia is no longer just an aid environment," he says. "There is strong demand for water utility management services."

VEI is the international arm of the two largest Dutch water companies. Currently, their international activities are conducted on a not-for-profit basis as part of their corporate social responsibility programme. Engaging in opportunities of a regular commercial nature, initially on a technical assistance basis and with local partners, would allow VEI to take on a wider range of projects.

Van den Top agrees that the contracts with the most potential are those in which the private party is also an investor. "Without an investment component, there is less opportunity for rapid progress and you have less leverage to make often necessary changes in the institutional context and tariffs," he observes.

"India is a huge playing field with very specific characteristics," continues van den Top. In India, some service contracts



have been preceded by heavy investment in repairing and replacing networks before the contract begins, which radically reduces the risks to the private party. In Nagpur, where Veolia and Vishvaraj Infrastructure began a 25-year lease contract in 2010, the city is investing INR4 billion (\$76 million) in the network.

Others see the Indian market in less favourable terms. "Much remains to be improved in the way projects and tenders are designed," says Liemberger. Some contracts require the private operator to do the impossible – reduce NRW at the same time as increasing service delivery under '24/7' programmes.

As Liemberger explains, "A utility reporting 30% NRW and supplying water only six hours per day will see its NRW jump to 60% if it moves to constant supply without fixing the network." Intermittent supply is itself part of the reason NRW is so high – switching the water on and off places enormous stress on the pipes and dramatically increases the number of bursts.

Stating NRW in percentage terms is also part of the problem. Systems with low pressure and intermittent supply show lower NRW numbers when it is quoted as a percentage. NRW rates then appear to jump up dramatically if the pressure is increased or service delivery time is extended. Volumetric measures – litres per connection per day adjusted for pressure and supply time – give a better idea of how much work there is to do to reduce losses – and how much can be gained.