

USA 1: Efficient Use of Energy and Water in Municipal Water Utilities in South Africa

In order to...	Promote the efficient use of energy and water in municipal water utilities
...one policy option or practical measure that has worked is:	Understanding the linkage between water and energy in municipal water systems and working to increase water and energy efficiency through such measures as improving pressure management reducing leakage and optimizing system operations.
Case Study Title	Efficient Use of Energy and Water in Municipal Water Utilities in South Africa
3 sentence summary of Case Study	An innovative pressure management technology applied in the water system supplying Sebokeng and Evaton, two previously disadvantaged residential areas located in the Emfuleni Local Municipality, South Africa. A BOTT (Build Operate Train and Transfer) approach and shared-savings performance contract were used in which the contractor will be paid from water savings to provide a basket of services including financing of capital, design, implementation, commissioning, operation and maintenance over the contract period as well as training of municipal staff in operations prior to handover of the installation. Water savings from this project are expected to be at least 7 billion liters per year (equivalent to about \$3.5 million/year), which will translate into energy savings of more than 14 million kWh per year.
Internet Link	http://www.usaid.gov/our_work/economic_growth_and_trade/energy/urban_energy/pubs/ps/safrica_watergy.pdf
Other information (optional)	<ul style="list-style-type: none"> • <i>Lead institution:</i> Alliance to Save Energy • <i>Other stakeholders involved:</i> Metsi-a-Lekoa, the water and sanitation business unit, within Emfuleni Municipality • <i>Key challenges/objectives:</i> To improve the management of energy and water resources in municipal water systems. • <i>Key features of programme/initiative:</i> Local capacity-building, support for policy measures, development of innovative financial approaches for project development and application of technologies for improving water and energy efficiency. • <i>When started/finished:</i> Started in 2003 and is still underway. (Global program launched in 2000.) • <i>Results achieved and known impacts:</i> Innovative project financing solution; Payback period less than 3 months; Annual projected cost savings: US\$ 3.8 million; Annual energy savings: 14 TWh; Annual projected water savings: 7 billion liters (equivalent to about \$3.5 million/year); Annual potential GHG emissions avoided: 12,000 tonnes; Innovative application of pressure management technology. • <i>Main obstacles faced:</i> Municipality's lack of capacity and its limited ability to access capital. • <i>Sustainability, scalability and transferability:</i> This project is part of a larger global program, entitled 'Watergy', which aims to promote water and energy efficiency in water utilities around the world. Country programs are active in Mexico, Brazil, the Philippines, Sri Lanka, India, and South Africa. Transfer of lessons occurs between countries; Program attracts significant cost-share from local partners; Sustainability is very likely as benefits from projects and capacity building continue to accrue; Program is easily scalable given overwhelming need of utilities to address high water and energy wastage in municipal water systems. • <i>Key lessons learned:</i> Large water and energy savings can accrue from relatively low cost investments. Where local capacity and access to capital is limited, new financial mechanisms can be successfully adapted. • <i>Other relevant websites:</i> http://www.ase.org/section/program/watergy/; www.watergy.org