Mexico
Watergy – Water and Energy Management

Activity:	Promoting Energy Efficiency In The Developing World Through Policy Development And Project Implementation
Program Area:	Urban Energy
Implementer:	Alliance to Save Energy
Geographic Focus:	Latin America & the Caribbean
Countries:	Mexico
Duration:	September 2000 – September 2005

Officials measuring water flow at a water utility.

Project Background

Mexico faces many development challenges with the increasing demand of its population for water and energy services. These challenges are particularly pressing in the water scarce areas of the north, but also in areas of the south where water is plentiful but water infrastructure aging and investment funds lacking. In response to these challenges, and building upon existing energy efficiency initiatives in Mexico and Watergy efficiency efforts in Brazil and India, USAID in partnership with the Alliance to Save Energy is developing a municipal Watergy initiative tailored to the specific needs of Mexico's urban areas.

Project Activities

USAID and the Alliance are collaborating efforts with two partner utilities in Mexico: SAS (Veracruz state) and ADOSAPACO (Oaxaca state). In 2003 the Alliance organized several capacity building activities with these two water utility partners in order to further develop their institutional and technical capabilities on topics fundamental to energy and water efficiency, including:

- Flow meter technology
- Energy efficiency in pumping systems
- Water recovery techniques to reduce unaccounted for water
- Hydraulic modeling tools for water distribution system analysis

- Demand-side water conservation technologies
- Energy savings in water treatment plants.

Water flow measurement equipment.

Approach and Development Objective:

The program to date has focused upon the following activities:

- Partnering with municipal water utilities to develop case studies of energy efficiency savings potential in Mexico
- Perform workshops on technical topics to demonstrate the potential for savings through energy efficiency measures
- Energy audits of the water treatment and distribution systems
- Recommend low and no-cost energy efficiency measures and work for implementation
- Work with utilities and outside agencies to fund higher capital cost measures
- Collect data on implementation of energy efficiency measures, tracking amount of energy saved, amount of money saved and level of service improvement
- Encourage in-house monitoring and verification of energy efficiency indicators.

Development Impact

The impacts of this work will assist Mexican municipalities in providing high quality affordable water service to residents. As these models are developed and applied by Mexican municipalities, residents will reap the benefits of improved municipal services, while reducing their impacts upon local water and air quality.

Project Partners

The Watergy program has benefited from the participation of key national organizations including CNA (Comisión Nacional del Agua), ANEAS (Asociación Nacional de Empresas de Agua y Saneamiento) and FIDE (Fideicomiso para el Ahorro de Energia). Key to the success of the technical workshops has been the water technology manufacturers and consultants that have partnered with the USAID and Alliance to offer their expertise and equipment including Badger Meters, Grundfos, Goulds, Constructora Cosatla and Ergon Plus.

Project Results

Preliminary analysis of pumping systems was performed during energy efficiency workshops. One well tested at ADOSAPACO showed a very low electromechanical efficiency, well below efficiency levels that could be provided by new pumps which could be up to 50% more efficient. These preliminary studies confirm that there are great opportunities for energy savings within these systems. Future work will seek to ensure that these measures are implemented by municipal partners.

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