



Distributed Control System Honored for Energy Savings

September 1987 - ESCOR was among eight organizations honored by Wisconsin Governor Tommy Thompson for achievements in developing or introducing energy innovations. ESCOR received recognition as part of the 1987 Governor's Awards for Energy Innovation. This is an annual statewide competition with energy conservation and renewable energy projects eligible for the award.

"The 1987 Energy Award winners provide a challenge to energy consumers throughout the state to adopt similar programs, and to examine new technologies that can make them winners in future years." the Gov. Thompson said.

ESCOR was organized in 1984 specifically to provide automatic controls to small wastewater treatment plants. The award was given to ESCOR "... for designing and installing a special computerized control system for the Saukville Wastewater Treatment Plant ... which saves the Village more than \$8,000 annually in energy costs."

There are two treatment plants in Wisconsin that have similar ESCOR systems: Saukville, the first to be operational, and the Walworth County Metropolitan Sewerage District (WALCOMET). The controls will pay for themselves within five years through energy cost reductions alone.

Plant operators Gene Hueppchen and Glenn McCarty were instrumental in optimizing the system for Saukville. At WALCOMET, Manager Joe Cannestra and Chief Operator Steve Miller were the keys to a successful design. The ESCOR systems at both WWTPs were part of ongoing conservation programs.

Although new technology has made computer controls practical for wastewater treatment, their implementation has not been widespread. This is due to a history of problems with older technology and the difficulty of providing economic justification for the systems, especially in small treatment plants. Consequently, ESCOR designed a system **specifically for retro-fitting small facilities**. Because of their background in wastewater treatment, the engineers were able to develop strategies that adapted energy savings to process requirements.

Included in the additions made to the Saukville plant were dissolved oxygen and blower control, HVAC optimization and the scheduling of industrial waste pumping. The control is performed by a central industrial computer with operator access through a conventional personal computer. This allows operators to use spreadsheets and other programs without disturbing process controls. Remote I/O panels are scattered throughout the plant.

The WALCOMET system is similar, but adds control of trickling filter pumps and sand filter backwash pumps, including several methane fueled engines. Anaerobic digesters are tied into the system to optimize use of the methane generated and for automatic control of supernatant pumping. The DO control at WALCOMET includes air flow balancing and multiple DO probes in each basin. ESCOR also designed a special belt drive system to reduce excess blower capacity. ■

For additional information contact the Village of Saukville WWTP at (414) 284-3185 or WALCOMET at (414) 728-4140. If you would like more information about ESCOR contact Tom Jenkins.