

BacGen

This project promoted the use of process controls that optimize electricity use in small to mid-sized wastewater treatment plants. Appropriately adjusted controls can also deliver other benefits by helping plants comply with water quality regulations and better manage sludge accumulation, chlorination and de-chlorination, effluent ammonia and odors.

The Northwest Energy Efficiency Alliance worked with BacGen Technologies to develop, demonstrate and market the technical approach that significantly reduces the need for mechanical aeration in aerated lagoon and activated sludge facilities. Ultimately, the project hoped to make the approach an industry standard for the region's municipal, industrial and agricultural facilities that process 10 million gallons or less a day.

The wastewater industry accounts for about 5% of the total energy use in the Northwest. Although many larger plants have energy-efficient equipment and controls, energy savings in smaller facilities remains largely untapped. Many of the smaller plants may be able to achieve energy savings from 15% to 75%, according to BacGen research.

BacGen Technologies is improving energy efficiency at a number of sites throughout the region by adding or fine-tuning process controls. These facilities, located across the region, represent a mix of system types, size, load patterns, climate and other parameters. BacGen is also applying its process control strategies to water supply facilities. One of those sites, an aerated lagoon located in Dillon, Montana, has saved at least 40% in energy costs. Participation in the BacGen Project also helped bring the Dillon plant back into compliance with state water quality regulations in only four months.