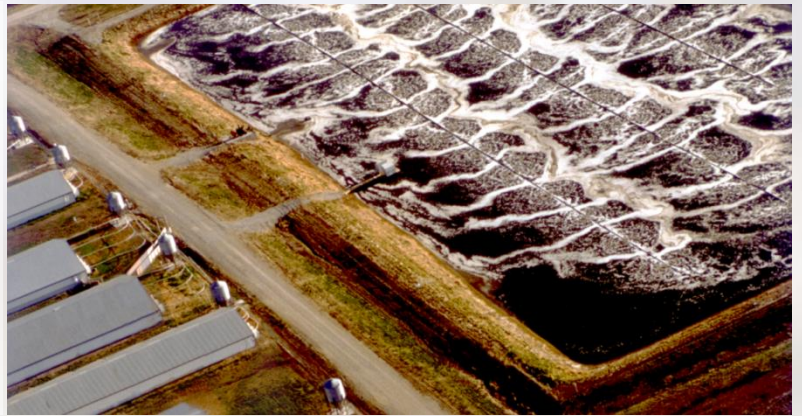


# Empowering Waste Water Treatment Plant Energy Efficiency

Graphet Data Mining's comprehensive approach to energy management success is illustrated by the scope of systems impacted – trended data on chillers, compressors, pumps, blowers, grinders, centrifuges, washers and mixers were all included in the analysis. The site team realized greater value from this comprehensive approach than the previous performance contracting process. The strategic energy management plan included short, mid and long term goals and all the short term goals are implemented at the site.

## Overview of systems and equipment impacted

- Pumping controls optimization
- Cogeneration strategy
- VFDs for Blowers
- Tank Covers
- Compressed Air system opportunities
- Digesters

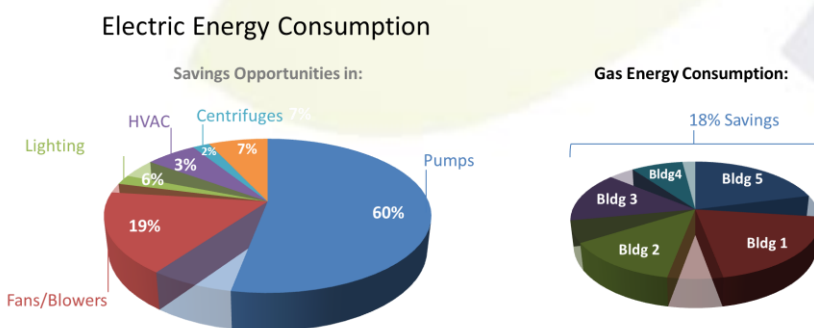


## About

Graphet Data Mining facilitated process efficiency and energy management for a wastewater treatment plant that services residents of eight sanitation districts. With the help of Graphet Data Mining, wasteful energy expenses were reduced and a plan was implemented to improve energy management practices.

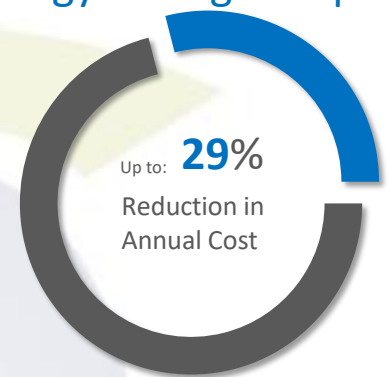
The site management team's active participation in sharing site trend data and operational information was key to a comprehensive energy planning process. This helped set aggressive and achievable targets for energy savings that covered all areas of energy use by identifying critical system inefficiencies.

Total energy usage totaled 27,254,354 kWh in the baseline year. Graphet's modeling and analysis toolset was used for accurate targeting and tracking of savings opportunities.



An energy plan was developed establishing low, medium, and high priority energy conservation opportunities carefully selected to generate the biggest savings margins. **By investing in the savings opportunities outlined by Graphet, energy costs could be reduced by almost 29% yielding simple payback after rebates in less than one and a half years.**

## Energy Savings Snapshot



### • Payback:

- High Priority Projects: **1.3** years
- Long Term Priority Projects: **4.3** years

### • Rebates:

Maximum rebates available across all projects:

**\$290,208**

### • Potential Energy Reduction:

**7,380,878 kWh**

Potential Carbon Emission Reduction  
**5,089**  
metric tons CO<sub>2</sub><sup>++</sup>

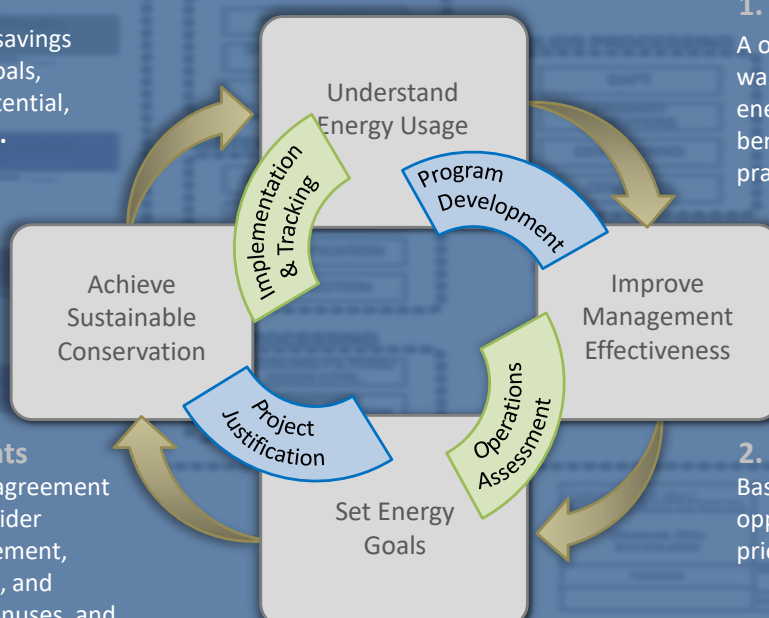
## Process for Success »

### 4. Empower Sustainability

Graphet identified up to 38% in savings potential. High priority energy goals, accounting for nearly the full potential, would yield payback in 1 ½ years.

### 3. Implement Improvements

With Graphet's energy plan, an agreement was signed with the energy provider outlining improvements to implement, setting a timeline for installation, and detailing customized rebates, bonuses, and support.



### 1. Identify Opportunities

A one-day energy management session was performed on site to evaluate energy-intensive processes and benchmark energy management practices.

### 2. Develop Action Plan

Based on energy usage patterns, savings opportunities were identified and prioritized.

