

Empowering Health Services Facility Energy Efficiency

Graphet Data Mining processed vast amounts of data retrieved from this hospital's building management system's HVAC system. Access to this trend data was provided by the site. The site team is fully engaged in identifying opportunities to save energy. With their support and Graphet's data mining and analysis, it was possible to get an in-depth understanding of typical HVAC operation, specific interior space conditioning requirements, and quantify the major energy-saving opportunities.



Overview of facility & systems

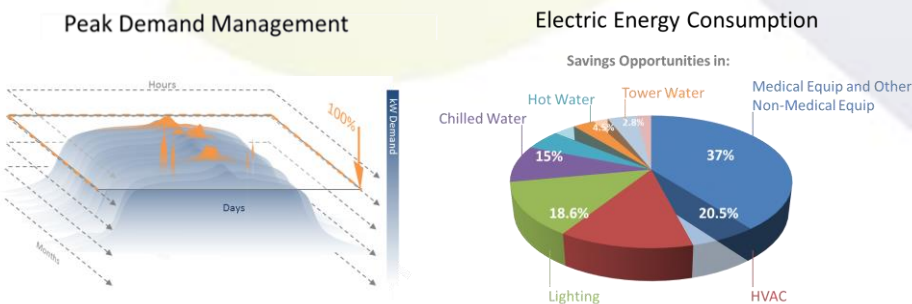
- Metered and Sub-metered utility data analysis for multiple buildings (Total ~1.6 million sq ft)
- Lighting improvements
- Building HVAC, Chilled Water, Tower Water, and Steam Systems analysis & strategies for efficiency (1.2 million sq ft of conditioned space)

About

Graphet Data Mining facilitated process efficiency and energy management for one of the top health care facilities in the Midwest. Each building was analyzed independently and building energy performance was benchmarked as part of the holistic approach for the site.

Graphet Data Mining partnered with local energy providers to facilitate process efficiency, energy management support, and rebate programs.

Total energy usage equaled 39,013,519 kWh in the baseline year. Graphet's modeling and analysis toolset was used for accurate targeting and tracking of savings opportunities. Energy consumption was monitored in each building with savings opportunities identified within systems including HVAC, lighting, tower water, steam, chilled & hot water, and utility.



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 high priority savings opportunities, energy costs could be reduced by almost 10% yielding simple payback after rebates in 1 ½ years.**

Energy Savings Snapshot



• Payback:

- High Priority Projects: **1.5** years
- Mid Priority Projects: **6.6** years
- Low Priority Projects: **11.2** years

• Rebates:

Maximum rebates available across all projects:

\$919,757

• Potential Energy Reduction:

14,825,137 kWh

Potential Carbon Emission Reduction: **10,233** metric tons CO₂⁺⁺

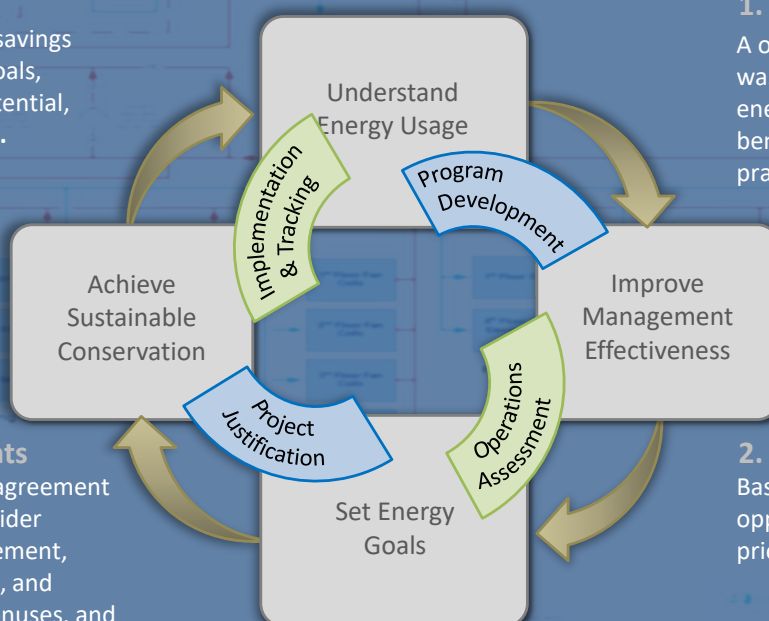
Process for Success »

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.

