

K-12 Benchmarking Study & Audit

400 Locations | WA

In 2007, like many other publicly funded institutions, Washington State school districts were mandated to design and construct facilities according to a sustainable benchmark, known locally as the Washington Sustainable Schools Protocol. Founded on LEED and CHPs (California’s version) criteria, this protocol was implemented with varying levels of success. In working with our 45+ long-term clients, we heard a common concern: post-occupancy performance.

We responded with this study. Our team collected, analyzed and has published energy audits from 25 participating Western Washington school districts, comprising of 400 schools and over 100,000 individual data points. (Figure 1)

Participating districts have used the localized information as a benchmarking tool to help compare the energy performance at their schools, enabling them to take proactive measures to improve performance and reduce costs.

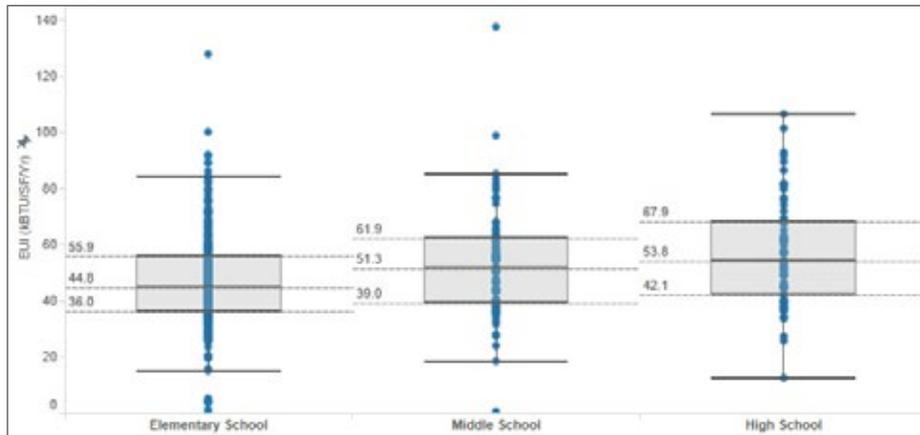


Figure 1 - Benchmarking Performance

HARGIS

Energy Services

- **SNOHOMISH SCHOOL DISTRICT** - Participated in a monthly round-table discussion with multiple consultants to review sub-meter data, EMS trend logs, and utility meter data to identify potential issues, as well as prioritizing resolutions based on feasibility and potential savings. (Figure 2)
- **SEATTLE PUBLIC SCHOOLS** - Completed 20+ energy audits within the district, assisting the district in securing over \$10 million in state energy grants. The benchmark analysis was utilized to identify favorable schools that would benefit most from further analysis.

Measured Results

- **SNOHOMISH SCHOOL DISTRICT** - Districtwide energy cost savings of \$117,000 in the first year, representing a 9% savings as compared to previous years (weather-normalized)
- **SEATTLE PUBLIC SCHOOLS** - Adams Elementary School study projected to save the district \$25,000 per year in operating cost, a 35% energy usage reduction. Energy Conservation Measures including:
 - Convert the existing hydronic heat pump system to geothermal
 - Upgrade the building’s pneumatic controls to full direct digital controls (DDC)
 - Provide variable speed compressors and electrically communicated motors (ECM) for the heat pumps

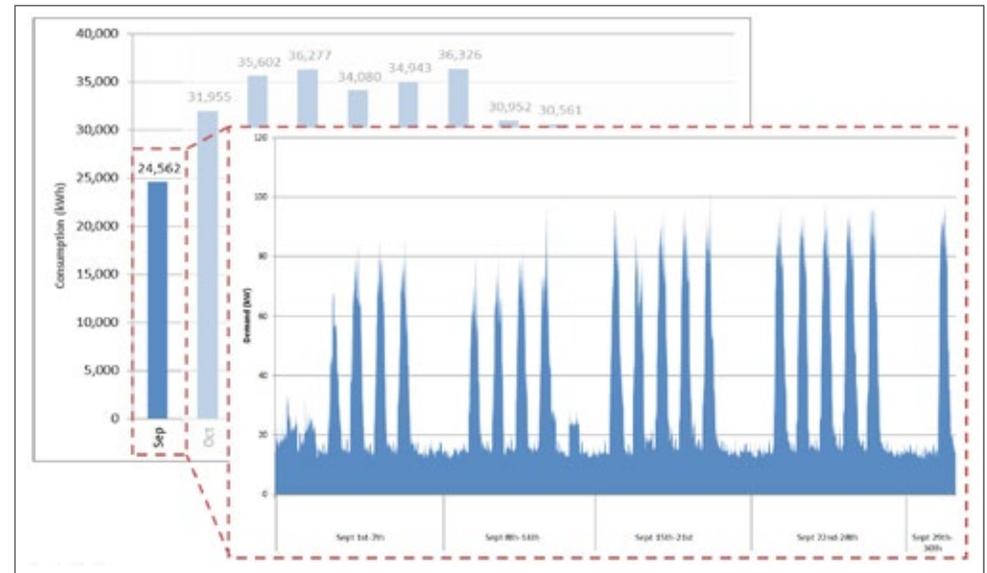


Figure 2 - Monthly Energy Bills vs. 15-Minute Interval Metering