



HIGH SCHOOL CAMPUS

The high school campus contains 19 buildings served by a central utility plant. Originally designed as a college, the facility features a state-of-the-art performing arts center, cafeteria, computer and media labs, culinary and trade labs, and a sports stadium. Student and civic groups use the facilities during evenings, weekends, and summer break when school is not in session.

The high school first participated in Power TakeOff's Virtual Commissioning® (VCx®) program in 2021, successfully eliminating 193,114 kWh in wasted consumption. Building on this success, the school enrolled in the Virtual Strategic Energy Management® (vSEM®) program in 2024, a decision that reduced electricity consumption by an additional 541,286 kWh, lowered energy costs by 13%, and saved an additional \$43,290 annually.



\$43,290
Saved Annually

The Opportunity

The campus's single electric meter posed a unique challenge: usage patterns could be analyzed only at the campus level, not at the building level. The extensive facilities, complex occupancy schedules, and rotating uses of spaces by teachers, students, and civic groups limited opportunities for scheduling adjustments. Maintaining the comfort of the school's learning environment was identified as a key priority.

Throughout a full year of engagement, the following observations were made:

- Peak demand exceeded historical baselines, with usage increasing year over year.
- Baseload consumption remained high during unoccupied periods, despite favorable building envelope quality and well-maintained mechanical systems.
- Equipment operated at full capacity even during the shoulder seasons with mild temperatures.



541,286 kWh
Saved



13% Lower
Energy Costs

The Action Plan

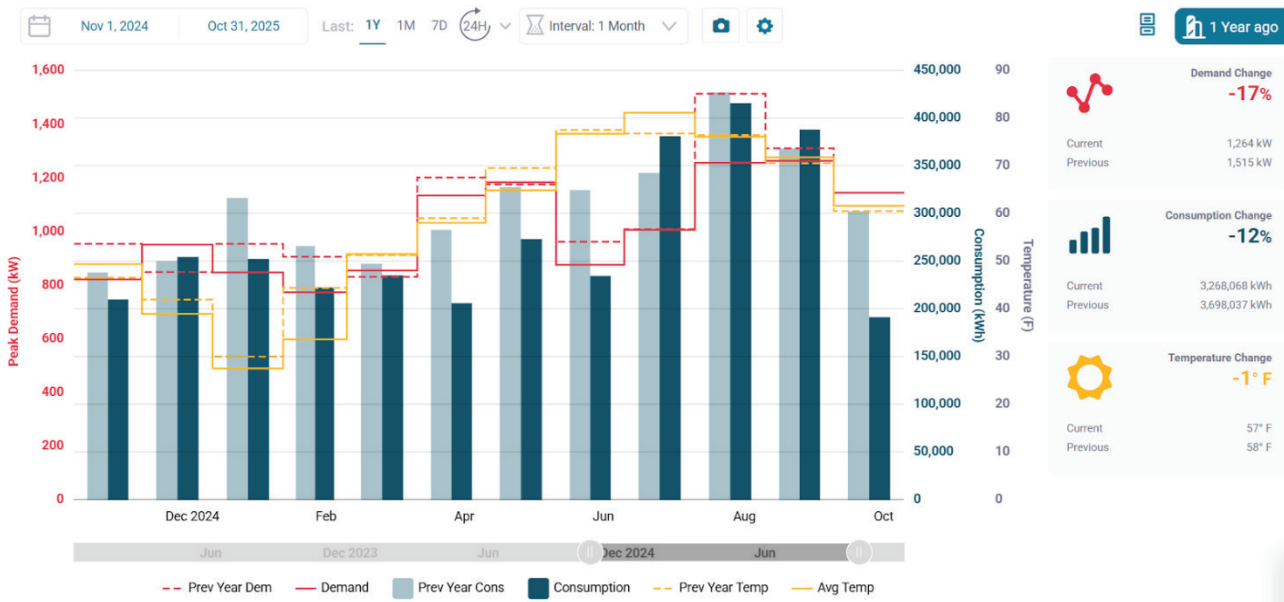
Twelve months of participation with Power Takeoff's energy coaches yielded an improved energy management program, which included the following aspects:

- Collaboration with the district superintendent to create an energy policy that outlined clear standards for occupant comfort, energy consumption, and methods of improving energy performance.
- Daily optimization of HVAC systems during fall and spring shoulder seasons to leverage energy savings through active intervention corresponding with outside air temperature, humidity, and occupancy.
- Deeper understanding of maximizing value from building automation systems, monitoring, and optimization techniques.
- Partnership between the facilities teams of various buildings throughout the district, improving knowledge sharing and fostering in-person collaboration to identify energy-saving opportunities.
- Special focus on peak demand reduction by monitoring equipment trends using interval electric meter data, followed by the creation of action plans to adjust operations.

The Outcome

The high school experienced measurable and sustained improvements in energy efficiency following these adjustments:

- **541,286 kWh** annual energy reduction
- **\$43,290** in annual cost savings (13% reduction)
- **17% reduction** in peak demand, lowering utility costs
- Energy management program with a district-wide policy framework and renewed dedication to a continuous improvement of energy performance.



Since 2007, Power TakeOff has been an industry leader in data-first, virtual utility products and efficiency programs. Specializing in Energy Information Software, Power TakeOff transforms complex utility AMI data into personalized energy efficiency recommendations with proven measurement and verification results. Utilities across North America rely on Power TakeOff to enhance customer experiences, increase revenue, meet efficiency goals, and reduce greenhouse gas emissions. Learn more at www.PowerTakeOff.com.