

HOUSTON OFFICE TOWER

Cutting Energy Costs Through Smart Operations

A prominent commercial office tower in Houston significantly reduced energy costs and improved operational efficiency without costly capital upgrades. By leveraging real-time data, behavioral strategies, and smart analytics, the operations team improved ENERGY STAR scores, earned LEED-EB Gold certification, and delivered measurable results year after year.



Background

This multi-tenant high-rise was challenged to reduce energy expenses through smarter operations and better use of existing equipment. While capital upgrades were implemented where cost-effective, the main focus was on operational changes to maximize savings and minimize environmental impact.

Key Takeaways

- Smart operations drive results without major capital spend
- Real-time data and metering unlock hidden savings
- Continuous benchmarking supports ENERGY STAR and LEED goals
- Daily oversight reduces waste and improves tenant satisfaction

Solutions Implemented

WellStat enabled smarter energy management through real-time data and system-wide visibility.

- **Real-Time Energy Monitoring:** Ongoing benchmarking and baselining of operations to maintain high ENERGY STAR performance and LEED status
- **Operational Adjustments:** Tighter controls on HVAC start settings, free cooling use, and optimal shutdown procedures to eliminate unnecessary equipment run times
- **Submetering Expansion:** Developed a building-wide metering architecture to include central plant equipment, mechanical systems, and select tenant spaces, adding valuable insight and earning points toward sustainability certifications
- **Capital Project Impact Analysis:** Verified savings from improvements such as window film installation, with daily data showing sustained reductions in mid-day energy demand during warm weather
- **Improved Budgeting & Forecasting:** Automated tools improved budget accuracy and reduced administrative time

Results

- **17% Energy Use Reduction:** Lowered energy use and expenses by over 17%, adjusted for weather and occupancy
- **Exceeded Reduction Goals:** Consistently surpassed the target of 5% expense reduction, achieving an average of 8% savings annually
- **Daily Operational Savings:** Operational changes alone delivered daily savings of up to 12% without affecting tenant comfort
- **Enhanced Asset Value:** Lower energy costs improved NOI and the overall asset value

Conclusion

This project demonstrates how actionable analytics and operational focus deliver significant cost savings, higher building performance, and improved sustainability outcomes, all while staying within budget.