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Meeting Building Energy Performance Standards with Monitoring Based Commissioning (MBCx):

The US Chamber of Commerce Success Story

Across the country, state and local governments are implementing Building Energy Performance Standards (BEPS) programs, pushing building owners to enhance the energy efficiency of their facilities. For many, especially those managing historic facilities, meeting these stringent standards can seem like an insurmountable challenge. This was the initial concern for the U.S. Chamber of Commerce (USCC), whose historic building, and unique operating demands created significant hurdles to overcome.

U.S. Chamber of Commerce. (2024, January 18). Trade is essential to America's prosperity. LinkedIn. https://www.linkedin.com/posts/u-s--chamber-of-commerce_trade-is-essential-to-americas-prosperity-activity-7153807387898880000-lEJD

The USCC's Energy Challenge

The United States Chamber of Commerce is the world's largest business organization. Its headquarters, strategically located directly across from the White House in Washington, D.C. (DC), has hosted world and business leaders and witnessed history for over 100 years. Built in 1922, the facility nearly predates the advent of air conditioning and has been retrofitted multiple times over the years to meet the needs of modernization while retaining its historic nature. This balance was top of mind when considering how the facility would meet the District of Columbia Building Energy Performance Standard (DC BEPS).

U. S. Chamber of Commerce, Washington, D. C. [Card]. (1930). Retrieved from https://ark.digitalcommonwealth.org/ark:/50959/r781wg25f

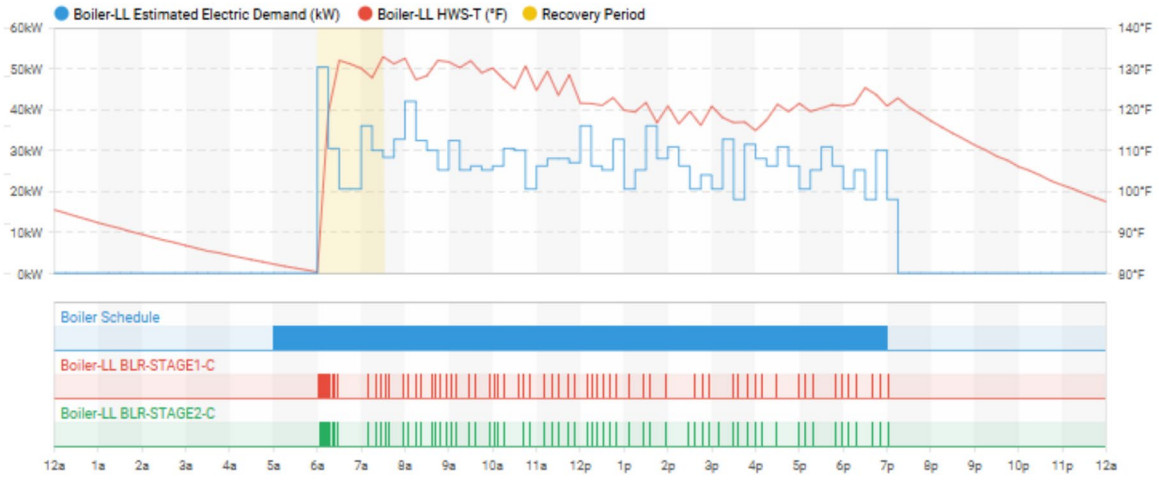
The DC BEPS is based on Energy Star Portfolio Manager's building efficiency rating system. The minimum acceptable efficiency score is set by averaging the score of all DC buildings with similar primary use types. Given the concentration of new and high performing office buildings in DC, the average score for office buildings at the time of this study was 71. The USCC building had an Energy Star score of 64, which was higher than the national average of 50, but far short of the required 71. The facility had already implemented multiple energy efficiency improvements and was beginning to question if this old building could be as efficient as the modern buildings it was being compared to. With all the limitations imposed by maintaining the historic features of the facility and meeting the demands of the organization's mission, the task seemed insurmountable and a request for exemption seemed inevitable.

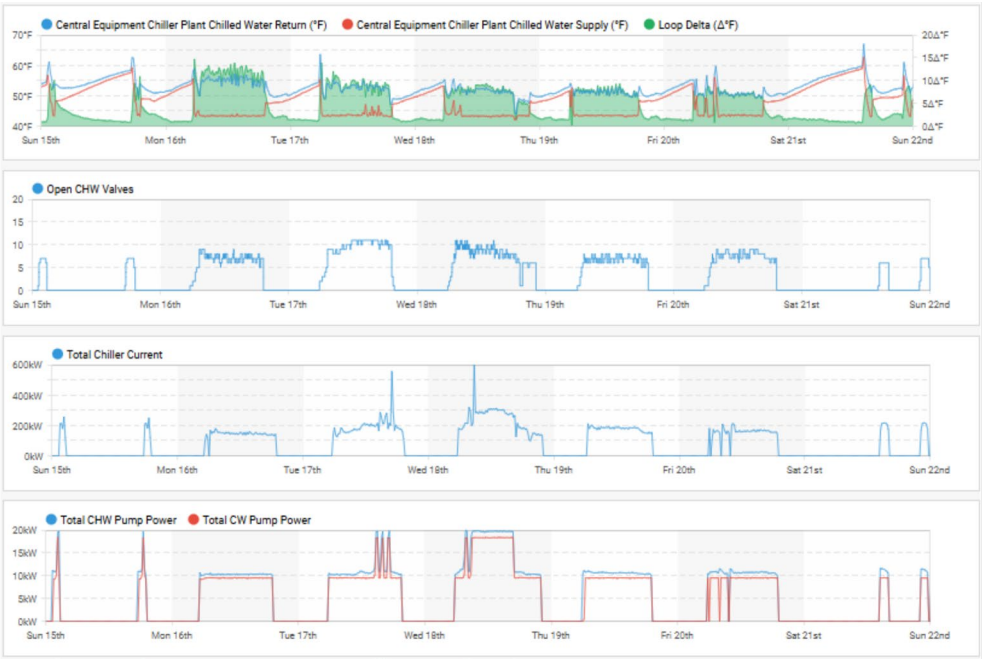
The MBCx Approach: A Collaborative Solution

In Fall 2021, the USCC partnered with ABI Advantage (ABI) to implement a Monitoring Based Commissioning (MBCx) program. This initiative was characterized by a collaborative, team-based approach, involving the USCC Facilities team, their Building Automation System (BAS) Contractor, and ABI. Utilizing the SkySpark® analytics platform, ongoing data streams were established to the facility's:

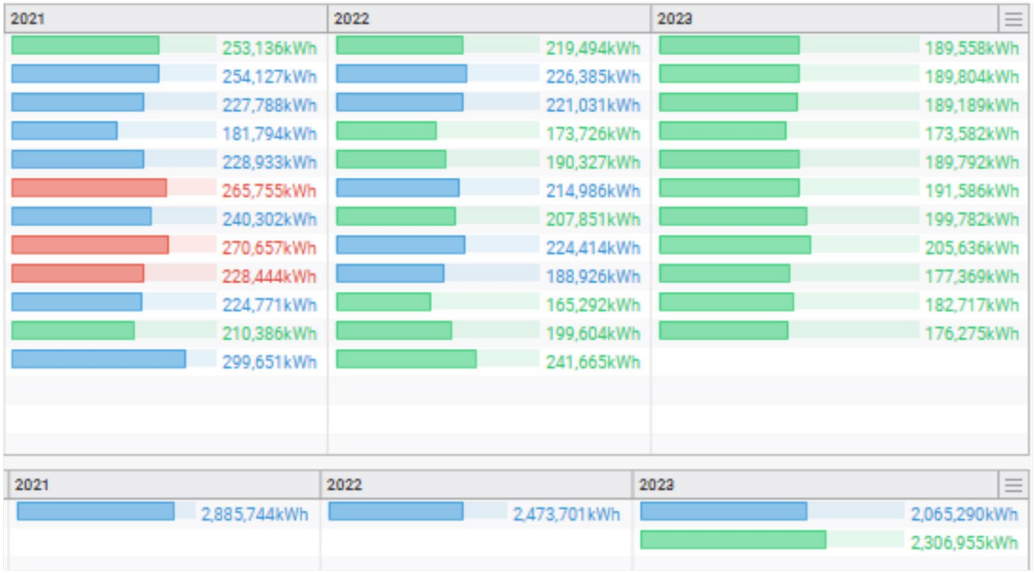
- Building Automation System
- Utility provider
- Energy Star Portfolio Manager

The team then met monthly to review the facilities performance and identify opportunities for improvement. Because of the way the facility had been retrofitted and modernized in many phases over the years, its mechanical systems were more complex and diverse than similar facilities. This meant some standard operating sequences did not perform as well or were less applicable than they would be in a more typical facility. However, utilizing reporting from SkySpark® the team was able to identify what sequences were working well and which needed further refinement. Evaluating system wide performance and the cascading impacts of interconnected systems is challenging and can be nearly impossible without a powerful analytics platform like SkySpark® to turn the vast amounts of data into useful information. Through these tools, inefficiencies in unoccupied sequences within VAV systems were identified. This led to changes that greatly reduced unoccupied runtime and after-hours energy usage by the VAV systems and the plants that supplied them.





In a similar fashion, SkySpark® analytics was utilized to evaluate and tune static pressure optimization sequences, temperature resets, and optimum start sequences. It was also quick to identify valves or dampers that failed to close, manually overridden equipment, or other day-to-day issues that often go unnoticed for far too long. In addition to equipment operation, the facilities energy use and Energy Star score was tracked and reviewed regularly.



Remarkable Results and BEPS Compliance

The implementation of the MBCx program yielded significant and impressive results for the USCC:

- **Dramatic Energy Star Score Improvement**: The building's ENERGY STAR score saw a substantial increase, going from 66 to a whopping 82; the facility even earned the recognition of being a 2024 ENERGY STAR Certified Building![1]
- **Unquestionable Improvement**: The change was so significant that the District of Columbia's Department of Energy & Environment (DOEE) even questioned if there was an error in the benchmarking submission, a testament to the remarkable turnaround.
- **Significant Utility Cost Savings**: The optimized energy performance translated into 30% reduction in energy usage.
- **Sustained Performance**: Through the MBCx program performance will continue to be tracked to ensure that the achieved energy efficiency improvements are maintained over time.

This success story underscores the power of a proactive, data-driven approach like MBCx in addressing complex energy performance challenges. The U.S. Chamber of Commerce has not only achieved its BEPS compliance goals, but it has also set a compelling example for other building owners facing similar challenges, demonstrating that even historic and complex facilities can achieve significant energy efficiency gains through strategic partnerships and innovative solutions.

1 ENERGY STAR, "Registry of Energy Star Certified Buildings & Plants", September 2025, https://www.energystar.gov/buildings/certified_buildings_and_plants/b_3281658

ABI Advantage LLC

ABI Advantage provides mechanical, electrical, and plumbing technology systems and consulting services, delivering innovative, sustainable solutions that optimize energy efficiency, enhance performance, and reduce environmental impact for commercial and industrial facilities. With a skilled team and advanced tools, we help organizations achieve operational, performance, and ESG goals—whether through energy and water use evaluation, fault detection, monitoring, M&V, or securing rebates and financial incentives. **www.abiadvantage.com**

U.S. Chamber of Commerce

The United States Chamber of Commerce (USCC) is the world's largest business organization. Our members range from small businesses and local chambers that support their communities, to leading industry groups and global companies that innovate and solve global challenges, to fast-growing industries shaping the future. For all the people in the businesses we represent, the USCC is a trusted advocate, partner, and network, helping them improve society and lives. **www.uschamber.com**

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SkySpark® – Analytics for a World of Smart Device Data

The past decade has seen dramatic advances in automation systems and smart devices. From IP connected systems using a variety of standard protocols, to support for web services and xml data schemas, it is now possible to get the data produced by the wide range of devices found in today's buildings and equipment systems.

Access to this data opens up new opportunities for the creation of value-added services to help businesses reduce energy consumption and cost, and to identify opportunities to enhance operations through improved control, and replacement or repair of capital equipment. Access to the data is just the first step in that journey, however. The new challenge is how to manage and derive value from the exploding amount of data available from these smart and connected devices. SkyFoundry's SkySpark directly addresses this challenge.

SkyFoundry

About SkyFoundry

SkyFoundry's mission is to provide software solutions for the "Internet of Things". Areas of focus include:

- Building automation and facility management
- Energy management, utility data analytics
- Remote device and equipment monitoring
- Asset management

SkyFoundry's software helps customers derive value from their investments in smart systems. Learn more and request a demonstration at **www.skyfoundry.com**.