



Operating An Efficient Convention Center Has Challenges

The George R Brown is a 1.8 Million square feet LEED Silver Certified Convention Center located in downtown Houston. Houston First - a local government corporation - manages the facility, and TD Industries operates the facility for the customer.

The Convention Center is an event-driven facility, and any given day, the in-use square footage ranges from 500 square feet to 1.8 million square feet. Other considerations include foot traffic, exhibits exchanges through-out the day and night, and Houston's dramatic changes in climate are additional load variations the facility faces on a day to day basis.

The Personalized Energy Solution

utiliVisor, as a strategic partner to TDIndustries, was dispatched to collaboratively work towards implementing a system that would accomplish the following goals:

- 1.Reduce the cost of chilled water production by maximizing the effective dispatch and use of the plant's assets holistically through our Operations Center.
- 2.Provide insight into the effectiveness of the building automation system and make recommendations on how to improve sequences.
- 3.Prevent drift in the system, identify deficiencies, and ensure corrective measures were addressed effectively.
- 4.Track and validate the improvements in the system efficiency through our platform.
- 5.Train, support, and enhance the TD Operations Team on how to dispatch the resources to meet load and save energy through our Operations Center.



utiliVisor dispatched energy engineers onsite to evaluate the system, collect trend data, identify existing deficiencies, and understand the complexity of the operations at the George R. Brown Convention Center.

Upon completion of the site visit, we collaborated with TDIndustries to create a scope of work that would make the implementation and continued operations as efficient as possible.

PARTNERSHIP CREATES AWARENESS AND DATA TRANSPARENCY

To monitor the energy consumption of the chiller plant and reduce overall energy usage, utiliVisor and TDIndustries implemented a platform of energy tracking services, that allowed for the reviewing, testing, and validating of plant operations.

Building this system allowed all energy data from the plant to be displayed in real-time on utiliVisor's platform engineered specifically for the George R. Brown Convention Center. utiliVisor established a baseline, and in the first two months of implementation, they began making optimization recommendations to the on-site operators.

"utiliVisor takes a stand that the capability of being more effective and efficient - is within the system. If we can get our operations and analytics around it, we can gain significant efficiency without having to go to a proprietary solution where you really have no insight and no ability to understand what the net benefit was."

- Shannon McAuliffe

Validating Data Leads to Results and Decision-Making Reassurance

utiliVisor's platform established a baseline and captured the granular data providing TDIndustries and the utiliVisor Operation Center the ability to look at a multitude of variables, trend performance of equipment, and graph data.

The real-time insights and expert analysis ultimately allowed the team to make significant recommendations to the adjustment of the control's logic.

"We would have our team implement what utiliVisor was recommending, and we could watch it improve our operations through the platform.

The collaboration between our operators, utiliVisor staff, and seeing it in real-time, provided the operators with a greater understanding of why the change was requested. This process enhances our operators' understanding of the complexity of our system.

One of the things I think is great is that we're able to talk about the realities of implementing a change, and utiliVisor makes sure they fully understand what we're doing versus what they want. They care about our day-to-day challenges." - TJ Shiflet
TDIndustries



utiliVisor's platform and staff enhance the operator's ability to understand holistic operations instead of just setpoint strategies. On-site operators can be more effective and understand the broader impact their actions have on the overall efficiency of the system. Plus, the system accounted for the savings acquired through enacting utiliVisor recommendations.

"The expected savings was \$80,000 a year. The total attained savings is \$154,429... We estimate additional savings opportunities will be \$119,546."