

JAMESTOWN IMPROVES PORTFOLIO ENERGY PERFORMANCE USING AN EMIS CHECKLIST

SOLUTION OVERVIEW

Jamestown is a national real estate investment and management company that invests in high quality properties in major markets throughout the United States. Jamestown expanded its energy management information systems (EMIS) installations to 13 properties with the goal of monitoring and tracking building energy performance using real-time system diagnostics and optimization. With design support from the Smart Energy Analytics (SEA) Campaign, Jamestown implemented a checklist for setting up dashboards and reviewing weekly reports to better manage the advanced EMIS platform and maximize energy savings potential. The new EMIS platform coupled with the checklist resulted in a first-year site-level savings average of 4%, with 5 properties achieving savings from 16%-21%.

CHALLENGE

Maximizing the effectiveness of an advanced energy management information systems (EMIS) platform

SOLUTION

Jamestown partnered with the Smart Energy Analytics Campaign to implement a checklist to assess and review dashboard metrics from their EMIS at a portfolio- and building-level view.

OUTCOME

Many Jamestown properties saw sizeable reductions in energy use through the EMIS platform and checklist. Jamestown was recognized by the Smart Energy Analytics Campaign in Spring 2019 for exemplary energy performance using an energy information system in a portfolio.

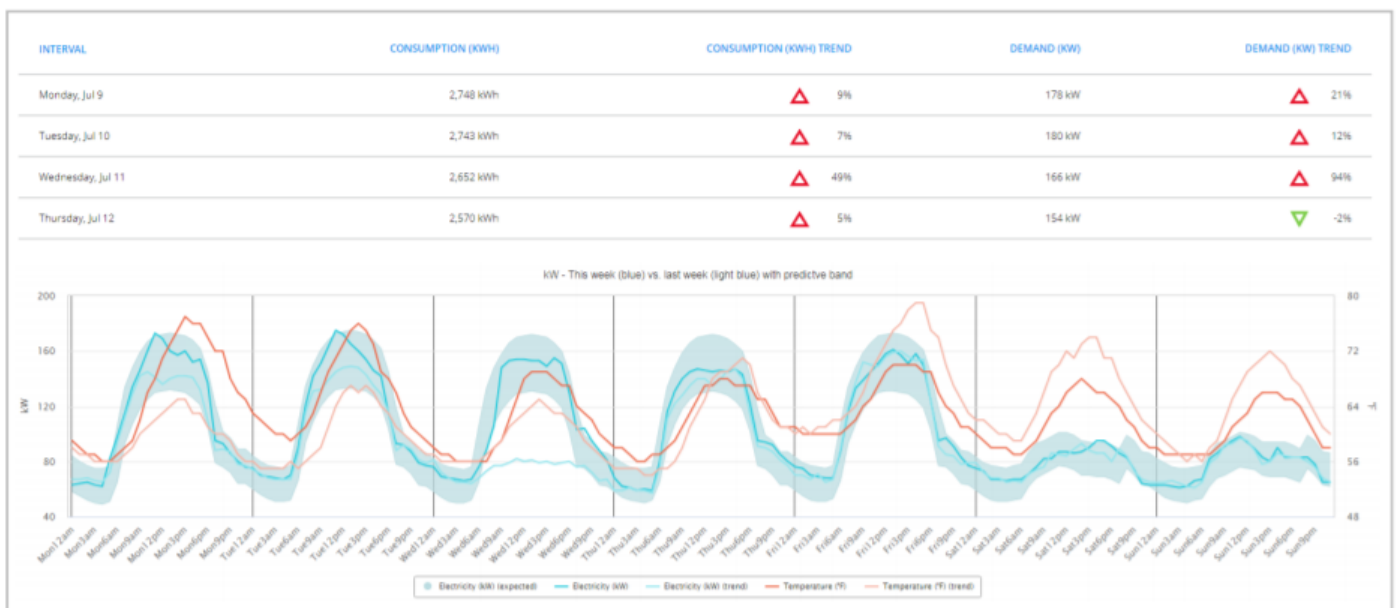
PROCESS

Jamestown standardized benchmarking across its portfolio using ENERGY STAR[®] Portfolio Manager and has used EMIS technology since 2013, though the EMIS was limited to a few properties. Jamestown sought to make their energy data more transparent and easier to analyze, and it was introduced to Aquicore through a joint venture with Lincoln Property Company called Jamestown Urban Management. In 2017, Jamestown successfully integrated a new and expanded EMIS platform at 13 office and mixed-use buildings, covering 2.5 million square feet.

The EMIS platform offers a high degree of flexibility in what information can be displayed and features critical functions including the ability to track meters and equipment. In order to make the platform most effective for its users, Jamestown needed to configure simple data dashboards and decide which key metrics would be used and tracked. With technical assistance from Lawrence Berkeley National Laboratory (LBNL), Jamestown chose to track actual costs vs. budgeted costs, receive email and/or text alerts based on predicted demand, and configure reports such as current week vs. prior week, base load report for weekday unoccupied hours, and peak demand compared to target.

Once the dashboards were established in the platform, Jamestown felt their team needed additional guidance to best use and analyze the data. In coordination with the U.S. Department of Energy’s SEA Campaign, the team created a checklist intended to answer the question “*If I am a manager or engineer, how do I use this tool?*”, and it covers, in detail, the setup process for new properties and steps to review building-level and overall portfolio dashboards. The checklist is the “go-to” document for any questions about how to use the platform and is the starting point in standardized use of the dashboards across all of Jamestown’s portfolio. Property teams were trained on the checklist and given a step by step overview from Aquicore staff on how to set targets and customize their dashboards. Engineers that want further customizations are encouraged to speak with Aquicore staff on setting up additional functionality.

Building engineers are encouraged to log in weekly to review performance, and reports from the platform push out automatically to national engineering and corporate sustainability staff. The teams can also use regular email reports and a mobile application to view their daily dashboard and any open issues. As anomalies are found, engineering staff investigate and consult with their supervisors and consultants as needed. Where possible, efforts are made to recognize staff efforts to save energy and quantify savings using the EMIS.



Jamestown’s building engineers review trends in energy use and investigate when energy use exceeds the predicted band.
 This week’s energy use (blue line); last week’s energy use (light blue line); model-predicted energy use (light blue band); this week’s outdoor air temperature (red line); last week’s outdoor air temperature (orange line)

PARTNERSHIPS

The Smart Energy Analytics Campaign (SEA) is a program led by the U.S. Department of Energy that encourages and provides technical assistance for the use of a wide variety of commercially available EMIS technologies and ongoing monitoring practices to help uncover those energy-saving opportunities and improve building performance in the long run. Joining the campaign allows participants to:

- Leverage campaign resources and technical expertise in evaluating savings opportunities
- Stay informed on innovative EMIS technologies and resources produced through the campaign
- Gain recognition, receive achievement awards, and participate in case studies

To learn more about the program, visit: <https://smart-energy-analytics.org/>

OUTCOMES

The new EMIS platform and checklist have led to significant reductions in energy use at the 13 properties where the system is operating. Building engineers and operators are now empowered to proactively manage energy use through easily accessible data and dashboards instead of having to rely on monthly utility bills and monitor the real-time results of any operational improvements or equipment upgrades. Additionally, building engineers and operators have more time available to focus on other aspects of building operations and better serve the tenants. New hires can be easily brought up to speed on the platform and how they should use it from day one, and existing staff is able to increase their skill level as it relates to the use of energy management platforms, all maximizing the value of the program.

In 2019, the U.S. Department of Energy's SEA Campaign nationally recognized Jamestown for exemplary energy performance using an EMIS for a portfolio. Having better high-level oversight of site level performance has helped Jamestown to focus their efforts and celebrate their achievements.

MEASURING SUCCESS

With visibility into how their buildings are operating, Jamestown averaged 4% savings in their first year with 5 properties achieving savings from 16%-21%. The checklist can now be applied to new EMIS systems in Jamestown's larger mixed-used facilities, which will help them progress through their larger Better Buildings energy goals.