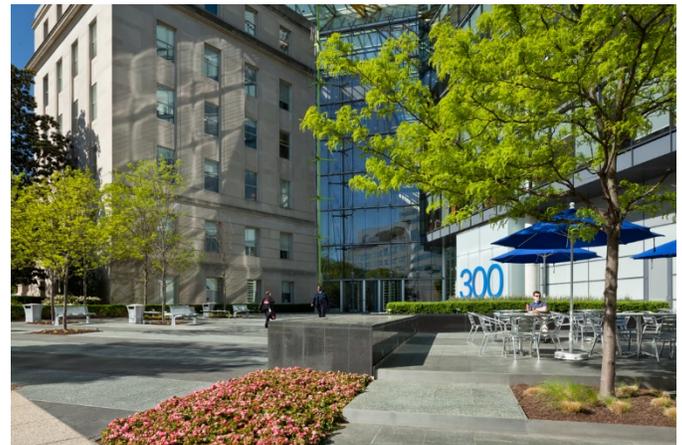


Building Analytics Success Story

Jamestown



Managing a multi-state portfolio of buildings to achieve aggressive sustainability goals is simply not possible without having a good handle on data. In 2017 Jamestown, in partnership with Jamestown Urban Management, embarked on an effort to make their energy data more transparent and easier to analyze. They chose to implement energy information systems (EIS) that allow their operations and sustainability teams and building engineers to view hourly energy data in real time.



What is an EIS?

An EIS is a combination of software, data acquisition, and communication systems used to store, analyze, and display building energy meter data on an hourly or more frequent basis. EIS is one type of energy management and information system (EMIS).

Bringing all electric meters into their EIS took time, but with the help of their EIS vendors, Jamestown now has centrally managed interval meter data. The next step was to configure user-friendly dashboards to meet their needs. With so much flexibility in what information could be displayed, they had to decide which key metrics they would use and track. With technical assistance from Lawrence Berkeley National Laboratory, Jamestown selected metrics for both a portfolio-level view and a building-level view. They also created a checklist for weekly review by the operations staff. Charts and metrics include:

- Actual costs vs. budget
- Alerts based on deviation from predicted demand
- Base load report for weekday unoccupied hours
- Peak demand compared to target

Making each building's energy budget vs. current consumption readily visible has brought a new level of awareness to our energy cost in day-to-day operations.

- Becca Rushin, VP Sustainability and Corporate Social Responsibility, Jamestown

Quick Facts

Location: Building portfolio across 8 states

Building type: Commercial real estate

Floor area with EMIS: 2.5 million square feet

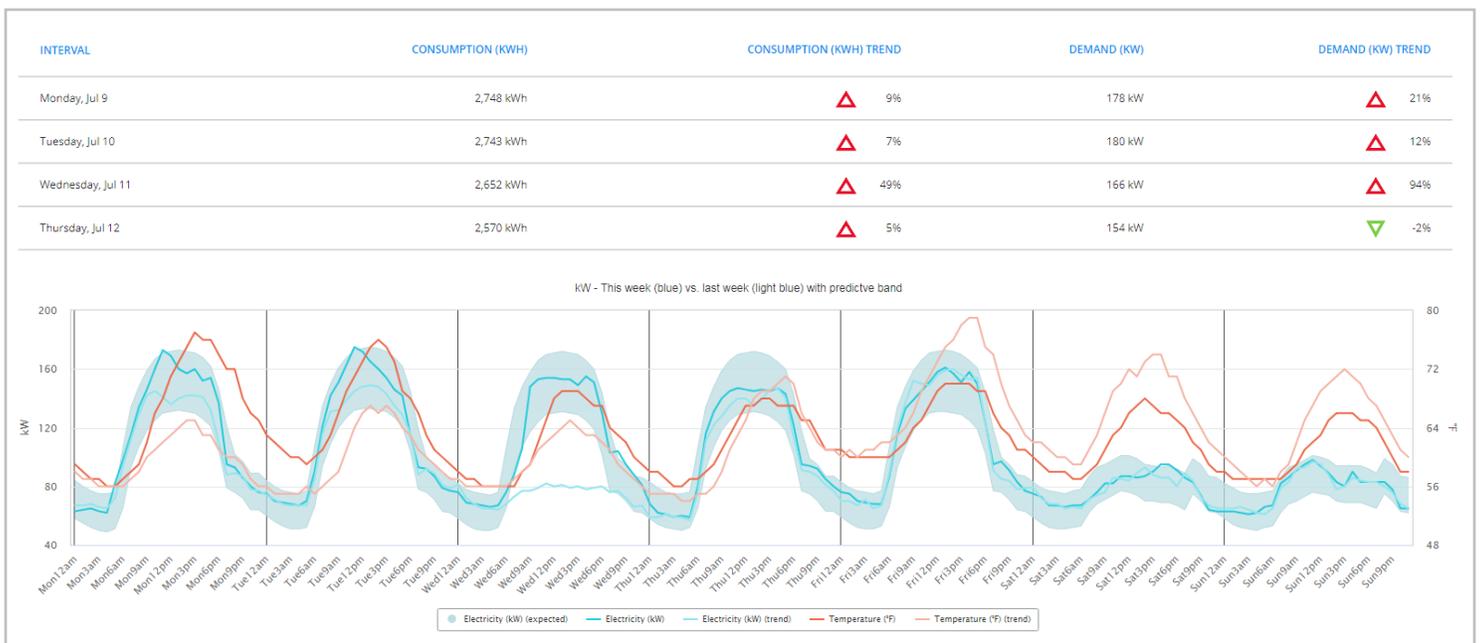
Total buildings with EMIS: 13 buildings

Energy savings: 4% first year energy savings

Energy Information Systems: Aquicore and Enel X (formerly EnerNOC)

Smart Energy Analytics Campaign: Recognition for Energy Performance Using an EIS in a Portfolio

Jamestown was recognized by Lawrence Berkeley National Laboratory and the U.S. Dept. of Energy in May 2019 for their exemplary work to save energy using an energy information system.



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)

Energy Savings Results

With visibility into how the buildings are operating, Jamestown averaged 4% savings in the first year, and five properties achieved savings from 16% to 21%. Building engineers are encouraged to log in to the EIS weekly to review energy performance and are empowered to make improvements. The teams can also use regular email reports and a mobile app to view their daily dashboard and any open issues. Now building engineers have a powerful tool for finding operational issues and seeing the positive impacts of the improvements they make. Often, corrective action is related to equipment schedules or set points. In other instances, corrective action may involve a capital expenditure. The most common energy efficiency measures implemented include improvements to:

- HVAC schedules
- Equipment staging
- Space temperature occupied/unoccupied setpoints
- Temperature resets for chilled water and supply air

While EIS does not always pinpoint specific operational improvements, the ability to see shifts in energy

Providing easily accessible data to our building engineers is key. They can see immediately if energy use exceeds expected levels, which helps us proactively manage energy rather than waiting for the utility bills.

- Ed Bassford, Director of Operations, Jamestown Urban Management

consumption in real time can help to narrow down possible causes. Further, being able to benchmark their portfolio of buildings helps prioritize efforts.

Looking to the Future

At the end of 2017, Jamestown was about halfway to achieving their energy reduction goal of 20% by 2024, and they are making steady progress that can be seen in the data. In this diversified portfolio of office, mixed use, and retail assets, Jamestown takes a customized approach for achieving savings at each building. Where feasible they target annual ENERGY STAR certification for all properties through ongoing operational improvements and retrofits.

The Smart Energy Analytics Campaign is a public-private sector partnership program focused on commercially available Energy Management and Information Systems (EMIS) and monitoring-based commissioning practices. The campaign couples technical assistance with qualitative and quantitative data collection to inform research, development, and field study priorities. Partnering participants are encouraged to share their progress and may receive national recognition for implementations that demonstrate exemplary practices.