

# Building Analytics Success Story

## Clise Properties



Clise Properties owns and manages multiple buildings in the Seattle area, and in 2017 they decided to install energy information system (EIS) and fault detection and diagnostics (FDD) at their largest building to see how well the HVAC systems were functioning. Even with an ENERGY STAR benchmark score of 90, they found opportunities for improvement. With the support of Trane, their monitoring-based commissioning (MBCx) provider, Clise Properties is identifying areas of energy waste, and with the added visibility into their operations, they are now able to test and tune controls approaches based on their energy impacts.

### What is 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).

Within the past few years, peak electric demand charges have almost doubled for Clise Properties. Using their EIS, they are able to see exactly when they are setting their demand peak each day, and with some controls modifications, have been able to reduce their peak demand during morning warm-up. Peak demand, time of peak, and total energy usage are now being closely tracked and analyzed.

They have contracted with their MBCx service provider to perform automated FDD analysis and provide periodic reports that included identification of faults such as VAV operation during unoccupied periods, short cycling supply fans, and potential for adding reset schedules to reduce air handler energy use.



*Now that I have the data at my fingertips I can review the hourly building load and manage peak demand*

*- Josh Taylor, Facility Manager*

### Quick Facts

**Location:** Seattle, WA

**Building type:** Multi-tenant office

**Floor area with EMIS:** 500,000 sq ft

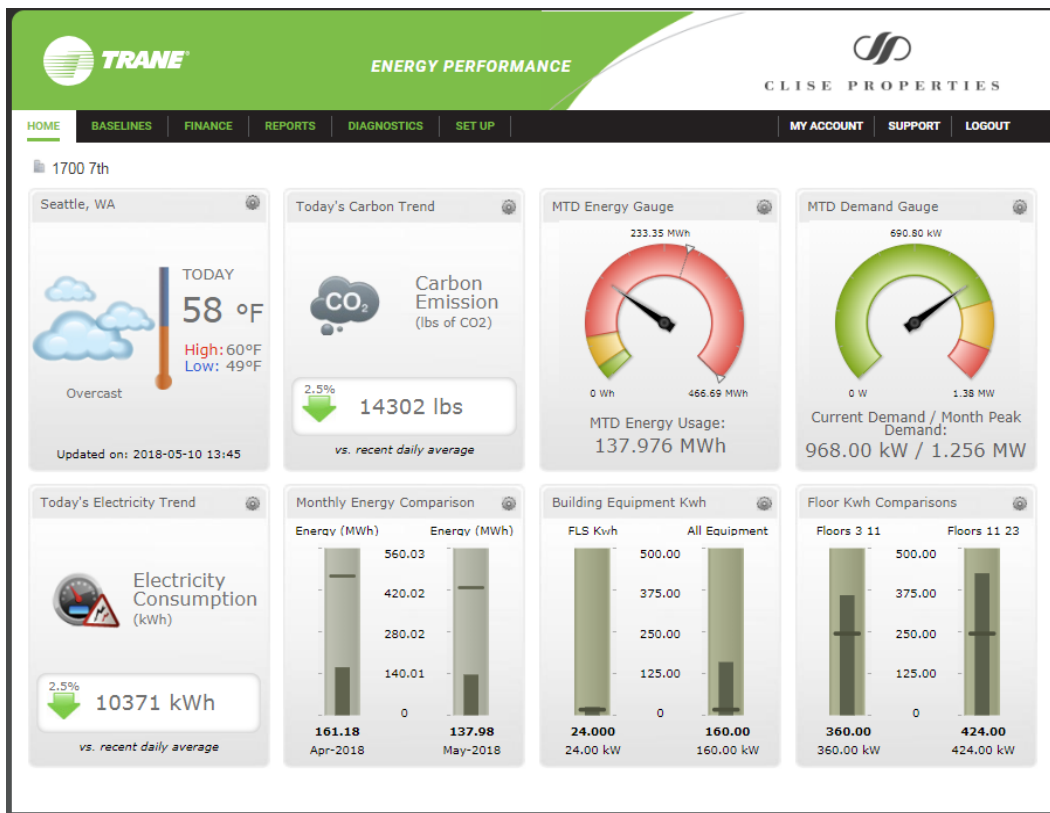
**MBCx Service provider:** Trane

**EMIS Tool:** Trane Energy Performance (EIS) and Building Performance (FDD)

**Energy Cost Savings:** \$17,000 savings in Q1 2018

### Smart Energy Analytics Campaign: Recognition for New Installation of EIS in a single site

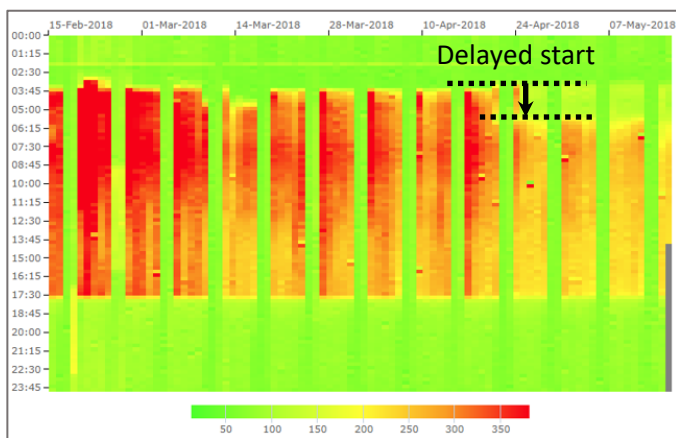
Clise Properties was recognized by Lawrence Berkeley National Laboratory and the U.S. Dept. of Energy during the Building Commissioning Association conference in October 2018 for their new installation of EIS at their site.



Clise Properties' EIS dashboard helps operations staff track the results of energy-saving actions

## Optimal Start

Clise Properties' EIS includes a 'heat map' that displays energy intensity at the whole building level over multiple weeks (figure below). It shows a substantial reduction in power consumption beginning when schedules were reconfigured to include optimal start programming, which delayed start time by two hours.



## Measuring Energy Savings

While Clise Properties corrects system issues and tests new controls strategies, they are using their EIS to measure savings and determine the impact of the new strategies. In the first quarter of 2018, they realized \$17,000 in energy cost savings.

With the regression model generated by the EIS to normalize for weather variations, operations staff can observe electric energy consumption changes per day against the baseline energy use. No longer does the operations team wait a month or more for the utility bills; they now have access to real-time feedback on changes or adjustments that have been made to the systems.

Building on their initial success, Clise is constantly looking for ways to improve. Whether looking to reduce demand charges and energy use or improve tenant comfort, Clise has a suite of tools to help them see what was previously invisible.

**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.