



Connecting tenant behavior to building performance to improve operations.

Overview

With a building boom continuing across the Seattle area, monitoring resource usage in real-time can benefit building owners and residents alike. For building owners, resource monitoring helps to control costs, increase property value and provide a point of difference in a competitive property market. For residents, resource monitoring is a service that delivers environmental and comfort benefits. Highly suitable for residential apartment buildings, the Buddy Ohm quickly provided benefits for building owners and residents.

In this building sensors were installed to monitor electrical panels in each apartment, and consumption (such as lighting) in shared spaces like the laundry facility. Sensors were also installed to monitor energy used by the hot water tanks and the washing machines in the laundry room. Wireless, battery operated Ohm Sense units to measure temperature and humidity were placed throughout the facility to ensure resident comfort and HVAC efficiency throughout common spaces.

[Learn more >](#)

Goals

Starting with key objectives:

- Ensure and improve comfort for residents
- Learn more about energy consumption behind the meter
- Reduce waste and associated costs
- Identify inefficiencies, and optimize systems
- Baseline energy use of in-unit laundry systems
- Explore the opportunities to use sustainability practices as a marketable differentiator.

Solution

Simple, non-invasive installation:

- Ohm Sense units placed in individual dwellings
- Ohm installed in community laundry facility electrical panel to:
 - Total electrical load for laundry facility
 - Electrical load for coin-operated laundry
 - Temperature and humidity for the laundry room and shared spaces.

Advantages

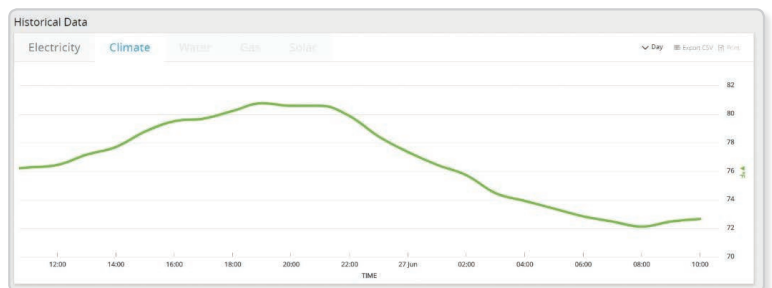
- Ohm's on-board cellular connection to the Buddy Cloud and internal radio frequency (RF) wireless network capabilities allowed the solution to be installed and operated completely separate from the apartment's internal networks
- Easily installed without any modification to the facility or interruption of any tenants' activities, and with no utility downtime
- No new cabling was required, eliminating installation time and expense
- Intuitive Ohm management portal and tenant-facing dashboards made gaining and sharing new insights for internal and external stakeholders easy.

Initial Findings

Within 24 hours of the installation of Buddy Ohm system:



Vampire energy discovered when machines not in use.



Apartment unit interior temperature closely followed the external air temperature.

Outcomes

- Detected vampire power on coin operated laundry equipment
- Data driven ROI and correlation for vending laundry machine electrical usage, versus revenue
- Determined optimal scheduling for exterior lighting
 - Directly saves energy consumption and related cost for tenant
- Found apartment unit interior temperature closely matched temperature outside.
 - Tenants can keep interior temperatures down by ensuring shades are drawn and windows closed as temperature increases during late morning to early afternoon

What's Next?

- Measuring benefits of transitioning to LED lights
- Installation of sensors to determine water usage per unit
- Baseline laundry resources to determine ROI of switching to either electric or gas in-unit laundry machines.