

FROM HAVOC TO HARMONY

Achieving Accurate Billing in a Complex, Multi-utility Research Facility

LOCATION

360 Longwood
Boston, MA

UTILITIES INVOLVED

Electricity, steam, water,
BTU, airflow

GOALS

Audit metering and validate & simplify a complex, proprietary (Siemens) multi-utility submetering system

BUILDING DESCRIPTION

9-story Class A engineering research facility; 414,000 square feet of leasable space

EQUIPMENT AND SERVICES USED

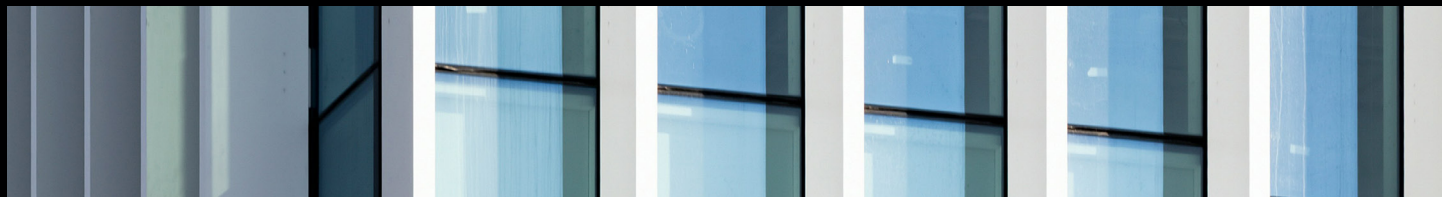
- ✔ 106 electric meters
- ✔ 43 BTU meters
- ✔ 36 steam meters
- ✔ 40 domestic water meters
- ✔ 67 airflow meters
- ✔ A full meter audit, consisting of reference testing, point-to-point commissioning, and validation of meters and data collection system
- ✔ Monthly utility billing services that confirm accuracy of bills from the utility provider and prepare tenant packages according to usage and lease terms
- ✔ Tight meter alert thresholds so that issues are diagnosed and corrected quickly
- ✔ Null Fill capability – should meter communication fail, utiliVisor is able to fill the missing interval based on the surrounding data, eliminating gaps and guesswork.

Background

360 Longwood may not be Boston's biggest building, but it's definitely one of the most complex when it comes to utility allocation and tenant billing. One of the larger engineering tenants had previously experienced problems with their billback numbers at a prior property. Consequently, the tenant had exacting requirements about utility cost allocation in their lease language. But the setup of this building means that utilities are billed pro rata based on airflow. The building had hundreds of meters to help determine costs, but no ongoing validation program to ensure the data was correct.

The Challenges

Three months after beginning her role at Longwood, senior property manager Marie O'Brien discovered the building's steam meter readings were "off the charts." At the same time, she noticed multiple errors in the billing spreadsheet she'd inherited from her predecessor.



Not surprisingly, the more O'Brien looked at the spreadsheet, the more unclear everything became. Made up of 30 tabs and a nesting doll set of formulas referencing other formulas, the billing spreadsheet created more questions than it answered. All 292 meters are involved in utility cost calculations for each tenant, so if any meter or formula is wrong, it affects the billing for all the tenants, not just one.

The only aspects that were clear about Longwood's cost allocation were that 1) tenants had high expectations of accurate billing and 2) unlike many commercial tenants, Longwood's engineering tenants were capable of auditing their bills should they perceive an issue.

The Solution

O'Brien began unsnarling her accounting conundrum by recommissioning the building. The recommissioning firm recommended utiliVisor for auditing and validating the building's metering system to ensure the data was accurate. utiliVisor tested 79 electric and BTU meters and found 26 had a variety of common meter issues, such as phasing problems, poor mapping, and incorrect multipliers. One BTU meter had a broken wheel, and another's temperature sensors were off.

O'Brien also asked utiliVisor to take over preparation of invoice packages, a task that took a minimum of 8–12 hours each month. utiliVisor engineers and billing analysts worked together to painstakingly determine how tenants had been billed in the past, reconciling those methods against lease terms to create a simpler set of billing packages with easy-to-understand explanations. When tenants had questions on their new billing packages, utiliVisor experts went through the calculations with them and ensured that everyone agreed on the methodology.

Results

Verifying billing packages used to take O'Brien 2+ days a month but now takes about 2 hours. The improved accuracy has also reduced tenant debate about billback costs. Additionally, O'Brien knows where to turn for straight answers to complicated problems. Recently, utiliVisor has helped troubleshoot a data communication issue and identify the location of a steam leak. Now O'Brien has more time to optimize the base building systems and elevate the services she provides her tenants.

About utiliVisor

Founded in 1978, utiliVisor offers comprehensive energy monitoring and submetering services, not just software. Our Operations Center is staffed with expert engineers, billing analysts, and meter technicians who review your data for accuracy to deliver insights and save you money.

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Having all of that data from the tenant side in one selective place allows us more time to be able to review the actual utility bills and how that those financials affect the base building utility bills, because they net each other. So from my perspective, it just makes the monthly financial process a lot smoother.

Marie O'Brien

Senior Property Manager
National Development

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