Panel:

Ongoing Operations Support in Multifamily Buildings

NESEA’s Building Energy NYC 2019

September 25, 2019
Samantha Pearce, Director of Energy Management Services

Pam Slighter, Operations Coordinator

BRIGHT POWER

Samantha Pearce, Director of Energy Management Services
1. Identify five best practices for engaging onsite staff in multifamily buildings
2. Describe the benefit of remote monitoring as a teaching tool
3. Recognize culture and behavior norms with tenant spaces
4. Prioritize work issues
Selfhelp & Bright Power

2011 Weatherization Work
Selfhelp: 3 buildings upgraded
Bright Power: Performed audits

2011 Benchmarking
Selfhelp: 9 buildings tracked
Bright Power: LL84 compliance

2014 Water Conservation & Retrofit
Selfhelp: Toilet upgrades & Green Retrofit at one site
Bright Power: Cost share & design & Cx

2013 Facilities Manager
Selfhelp: Hires a new position

2015 Partnership
Selfhelp: Requests long term support
Bright Power: Creates service product
Operating Buildings is Hard

Unexpected issues come up frequently... which require immediate action.
How Do You Affect Change When...

Change is HARD.
Most people DO NOT like change.
Change is often thought of as MORE work.
Organize Change

Start small.

Keep it simple.

Make their jobs easier.
Heating & Water Case Studies

ORIFICE PLATE INSTALLATION DETAIL

NOT TO SCALE

NOTES:
1. FURNISH & INSTALL ORIFICE PLATE AS MANUFACTURED BY TURINSTALL, MODEL TA-CTI0-75.

SCOPE OF WORK:
1. INSTALL NEW ORIFICE PLATE IN EXISTING UNION ACCORDING TO ORIFICE PLATE SCHEDULE.
2. TAG RADIATOR WITH ORIFICE PLATE SIZE INSTALLED.
Heating Case Study
### Manual

**Date:** 31, 2017  
**Time:** 3:50 pm - 4:20

**Location:** 45-25 Kissena Blvd.

**Pam Slighten TS:**

<table>
<thead>
<tr>
<th>SRC Controller</th>
<th>Outdoor Air Temp</th>
<th>Cycle Time</th>
<th>0-1 mins (%)</th>
<th>Mid-Cycle (%)</th>
<th>Last Minute (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZVC-1</td>
<td>42°F</td>
<td>0/5</td>
<td>13, 19, 17, 6, 23, 24</td>
<td>70, 72, 73</td>
<td>*1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>9, 35, 34, 35</td>
<td>67, 85, 71</td>
<td></td>
</tr>
<tr>
<td>ZVC-2</td>
<td>42°F</td>
<td>4/5</td>
<td>*2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZVC-3</td>
<td>41°F</td>
<td>N/A</td>
<td></td>
<td>*3</td>
<td></td>
</tr>
</tbody>
</table>

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*1. At minute 3, 2nd digital (green letter) line started flipping between 4/5 to 5/60 and back to 4/60 and to 6/7 and then to 7/60. At 7/60 & 8/60, burner went quiet.

*2. This started w/o me noticing. 2nd digital line didn't have cycle on/off readings until the cycle actually started. Before that, it said "established heat 175°".

*3. The 3rd panel didn't show a "cycle on/off" reading on the 2nd line and it never changed info on screen.
Automatic
Distribution Monitoring

Change is good!
Compliance & Goals Align

Heating distribution needs balancing ongoing

City requires LL87 Prescriptive measures 2020

Bright Power Recommends TRV & Orifice Plates 2016
Tracking Issues

By keeping clear notes, Selfhelp can communicate with Bright Power and create a log of issues to be addressed.

Adding in a scope item to a heating efficiency project that improves the tenants experience can often gain more buy-in from tenants.
Dear Resident,

Selfhelp Community Services is committed to providing our residents with the most efficient and comfortable living environments. We have recently begun work to analyze all of our heating systems to better provide more consistent and comfortable living environments. As part of this effort we will need to access every apartment to upgrade the heating distribution (radiators) in your building. The work will require a contractor and one Selfhelp maintenance staff person to be present in your apartment for 2-3 hours to complete the work.

The heating upgrade will provide more even heat throughout the building and reduce banging noises. This work is not optional, as all radiator must be upgraded, therefore access must be provided to make the upgrade effective.

A full schedule will be provided detailing out when your floor will be visited. In preparation please ensure the following:
- All personal items should be removed from around the window and radiator area. This includes all breakable and personal items.
- The maintenance staff will assist in moving ONLY heavy furniture the day of the upgrade. All small personal items must be moved by the resident in advance of the scheduled date.

### Orifice Plate Installation Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Floor</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wednesday, July 19th</td>
<td>2nd Floor</td>
<td>2K, 2L, 2J, 2H, 2M</td>
</tr>
<tr>
<td>Friday, July 21st</td>
<td>2nd Floor</td>
<td>2G, 2F, 2A, 2E, 2B, 2C</td>
</tr>
<tr>
<td>Monday, July 24th</td>
<td>2nd Floor</td>
<td>2D</td>
</tr>
<tr>
<td></td>
<td>3rd Floor</td>
<td>3K, 3L, 3J</td>
</tr>
</tbody>
</table>

*Make up Day

7/21
7/24
7/26
Outcome of Effort

Baseline year compared to 2018
Water Case Study
Water Usage at Site 1

K4_138-52_Elder_Ave, meter#: E13041525: Daily Water Usage with outliers

- Daily Consumption
- Spikes
- Leaks

Number of Leaks: 2
Total Leak Amount: 19,555 CF
Total Leak Cost: $1,462
Fix The Leak Campaign

Chapter one

Fluid Master Dial Flapper

With the hole in this position the flapper closes the quickest.

With the hole in this position (9 o’clock as you look at the bottom); the flapper will stay open the longest.
Fix The Leak Campaign

Chapter two
Fix The Leak Campaign

Resolution
Positive Results!

Package: Medical Tenant Water Repair
Status: N/A
Savings to Date: $86,248
Energy Savings: 10.51%
Water Savings: 16.11%
Take Action
Identify 5 Best Practices for Engaging Site Staff in Multifamily Buildings

1. Start small- don’t tackle too much at once
2. Listen! You might learn what the challenges are that your staff face
3. Make their job easier- help your staff help you
4. Empower – Give them the ability to control or participate
5. Reward – Provide follow through where their efforts are acknowledged
Describe The Benefit of Remote Monitoring as a Teaching Tool

1. Can help make manual tasks more efficient
2. Have someone who can make the actionable data
3. Train or hire someone who knows how to help – data management is HARD
Culture & Behavior

1. Recognize culture and behavior norms with tenant spaces
2. Observe them and communicate with tenants on how & why!
Prioritize

1. Prioritize work issues
2. Use tools that work
Remember

Make it simple.
Operate it smart.
Make it actionable.
Questions?

Thank you!

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Management of Building Information, Utilities and Systems

Schedule:
1. Overview of relationship Selfhelp<> Bright Power
2. Bringing in a consultant to support an organization’s needs
3. Struggle of operating buildings
4. Focusing on immediate issues like toilets and resident issues, can be distracting from focusing preventative maintenance planning and execution, and long planning, capital planning let alone anything sustainable. Challenging building staff that will or will not cooperate
5. Orifice plates, planning and executing
6. How to actually execute on a project like this, timing, tenant access, incentives to fund
7. Water issue at K4, X-ray sink and waste disposal room toilet
8. Water graph of usage over that period of time ... and beyond.... Toilet inspections were inspected already, a site visit and due diligence was the best way to find issues
9. Operating a building is not a perfect science and you can not wait to do one measure at a time, and in fact multiple things have to happen at once.
10. Smartsheets tracking, how to communicate well with internal staff ... setting up Smartsheets or a similar tracking tool, can be used for multiple sectors of building operations