

Panel:

# Ongoing Operations Support in Multifamily Buildings

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# GOALS

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

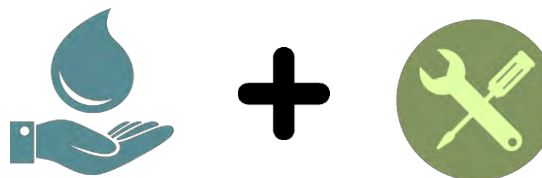


# Selfhelp & Bright Power



## 2011 Weatherization Work

**Selfhelp:** 3 buildings upgraded  
**Bright Power:** Performed audits



## 2014 Water Conservation & Retrofit

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



## 2011 Benchmarking

**Selfhelp:** 9 buildings tracked  
**Bright Power:** LL84 compliance



## 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

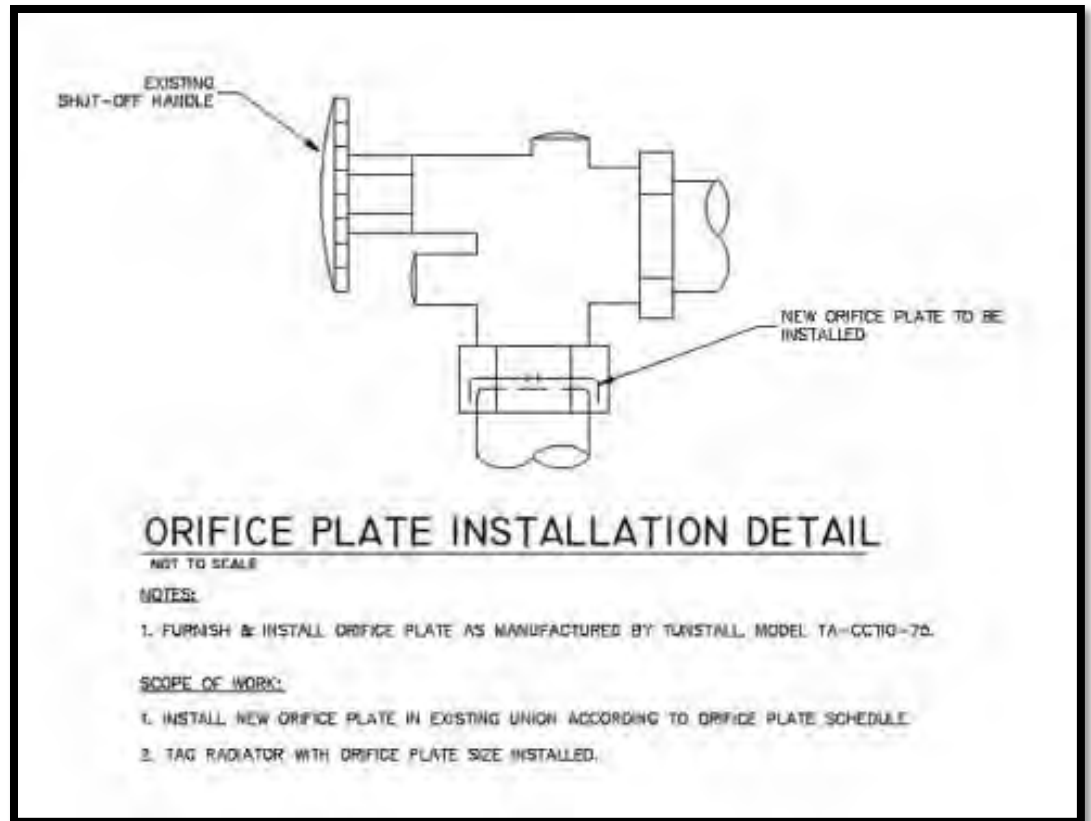
Start small.

Keep it simple.

Make their jobs easier.



# Heating & Water Case Studies





# Heating Case Study



# Manual

March 31, 2017  
am. 3:50 deg - 4:20

K-1 45-25 Kissena Blvd.

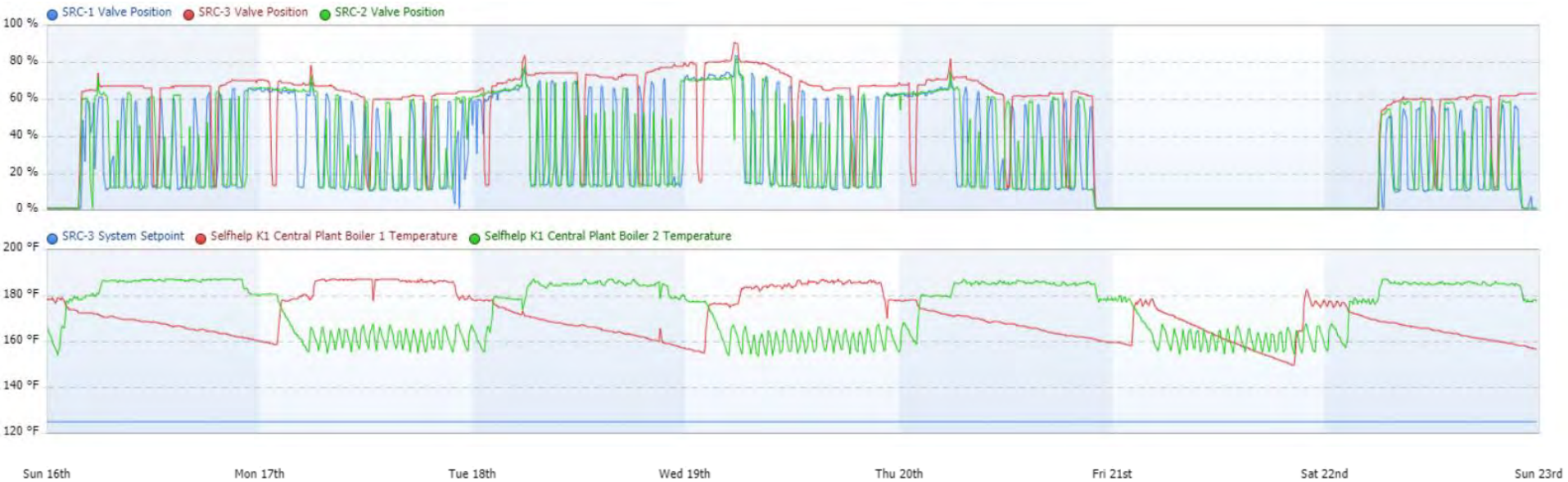
Pam Slighter S.H.

SRC Controller	Outdoor Air Temp	Cycle Time @4:00pm	0-1 mins (%)	Mid-Cycle (%) 3/5	Last Minute (%) 5/5 → 6/6
ZVC-1	42°F	0/5	13, 14, 17, 18, 23, 24 35, 36, 38 → 4	70, 72, 73 *1 67, 65, 71.	46, 44, 40, 37, 36, 35 30, 28, 27, 24, 23, 19, 18, 14 → 10
ZVC-2	42°	4/5 *2	? *2	70, 71	60, 59, 58, 57, 56, 52 52, 46, 45 → 15.
ZVC-3	41°	N/A	*3		

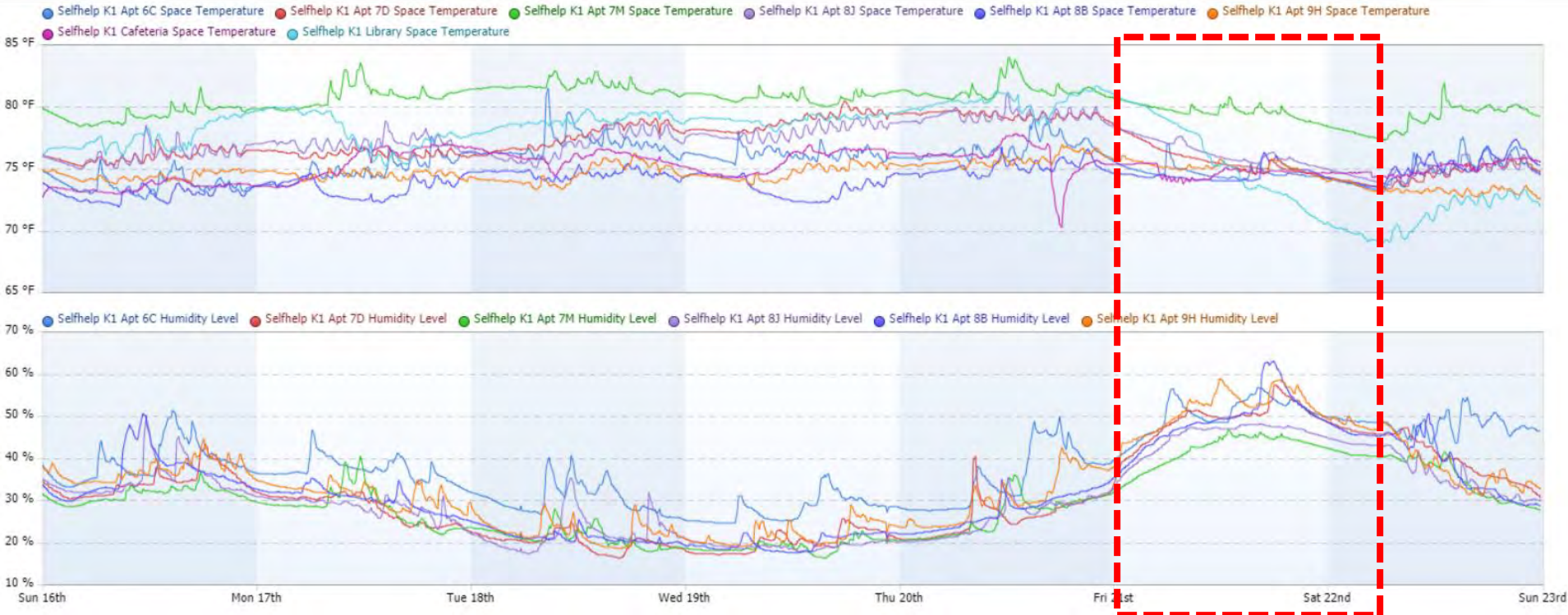
- \*1. At minute 3, 2<sup>nd</sup> digital (green letters) line starting flipping between 4/5 to 5/60 and back to 6/60 and to 6/7 and then to 7/60. At 7/60 or 8/60, burner went "quiet"
- \*2. This started w/o me noticing. [2<sup>nd</sup> digital line didn't have Cycle On/OFF readings until the cycle actually started. Before that, it said "established heat 175"
- \*3. The 3<sup>rd</sup> panel didn't show a "cycle on/OFF" reading on the 2<sup>nd</sup> line, and it never changed info on screen.



# Automatic



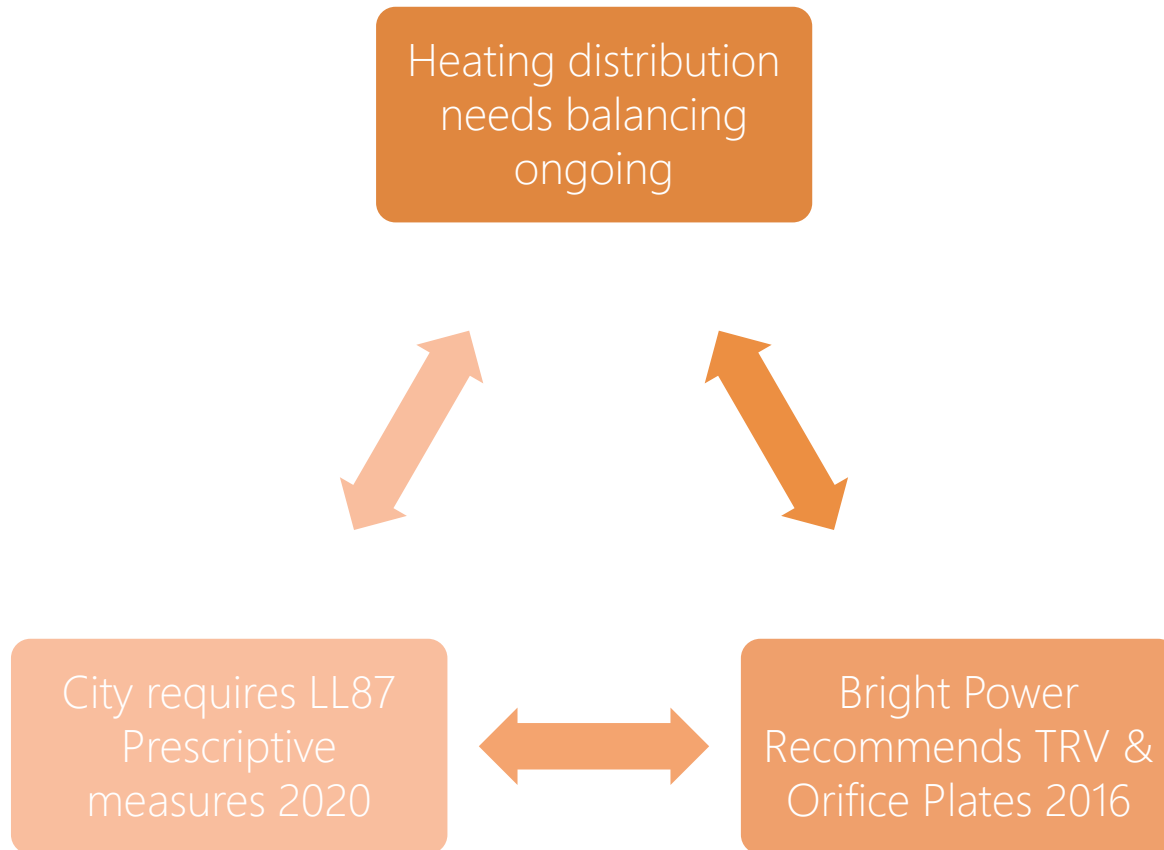
# Distribution Monitoring



*Change is good!*



# Compliance & Goals Align





# 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.



Title	ID'ed on	ID'ed by	ID'ed how	Priority	Issue narrative	Equipm...
134. Air Valve on Boiler	03/28/19	Hugo/BP	Site Visit - BP Staff	—	Ace Atlas needs to correct	B1
053. Radiator Grills blocked by paint	04/06/17	SH/PJS	Site Visit - BP Staff	↓	Grill area of radiator cover has been painted over, repeatedly. Paint is now blocking approx 50% of radiation coming off heat fins	radiators covers

Proposed solution	Correction narrative	Phase	B.I.C.
Ace Atlas needs to correct	When onsite it was noted that the air valve was not operating correctly.		SH
Remove paint that is blocking the air flow. Pam to purchase material and try on a sample/vacant unit with Hugo before the orifice plate project begins	6/2 - test material here. PJS discussed with Hugo. Hugo to strip paint off grill area (only) Paint cover, EXCEPT for grill area. 7/25. Paint stripper (clean strip by Dumond) didn't work well.	4. timing hold/r	DE/Hugo



# Tenant & Staff Coordination



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

Date	Floor	Units	*Make up Day
Wednesday, July 19 <sup>th</sup>	2 <sup>nd</sup> Floor	2K, 2L, 2J, 2H, 2M	7/21
Friday, July 21 <sup>st</sup>	2 <sup>nd</sup> Floor	2G, 2F, 2A, 2E, 2B, 2C	7/24
Monday, July 24 <sup>th</sup>	2 <sup>nd</sup> Floor	2D	7/26
	3 <sup>rd</sup> Floor	3K, 3L, 3J	



# Outcome of Effort

Indices	Full Year 2017 - Owner	Full Year 2018 - Owner	Difference		Units
 Energy Index	94 <b>C</b>	82 <b>B</b>	↓ -12%	-12.0	kBTU/ ft <sup>2</sup> /yr
 Cooling Index	3.2 <b>C</b>	0.9 <b>A</b>	↓ -73%	-2.30	BTU/ ft <sup>2</sup> /CDD
 Heating Index	13.5 <b>D</b>	11.1 <b>C</b>	↓ -18%	-2.40	BTU/ ft <sup>2</sup> /HDD
 Electric Baseload Index	3,826 <b>B</b>	4,396 <b>C</b>	↑ 15%	570	kWh/unit/yr
 Fossil Fuel Baseload Index	14.9 <b>B</b>	14.7 <b>B</b>	~	-0.20	mmBTU/bdrm/yr
 Water Index	129.5 <b>C</b>	128.8 <b>C</b>	~	-0.70	gal/bdrm/day

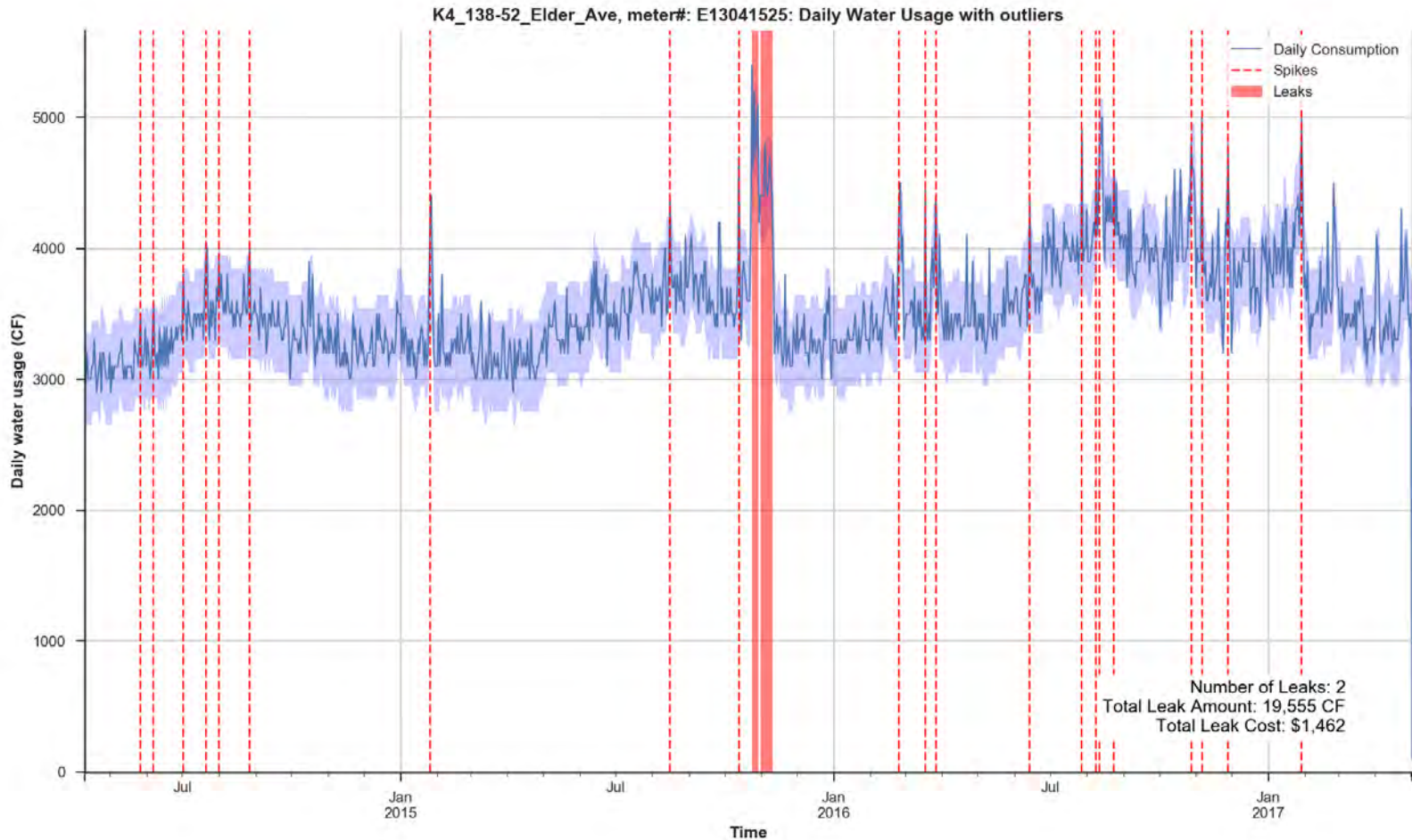
Baseline year compared to 2018



# Water Case Study



# Water Usage at Site 1





# 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!

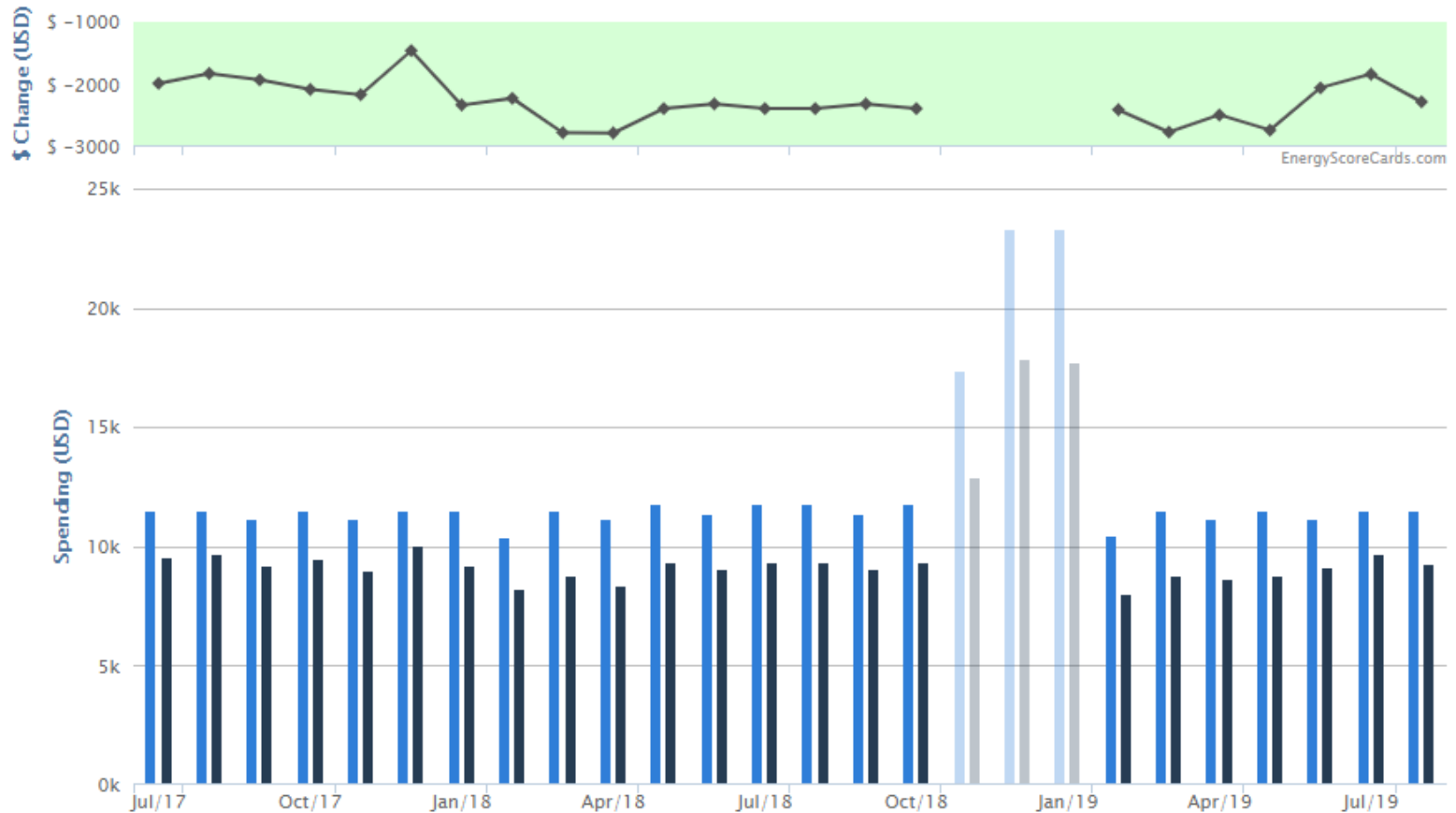
Package: **Medical Tenant Water Repair**

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 organizations needs
3. Struggle of operating buildings
4. Focusing on immediate likes 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

