BUILDINGENERGY NYC

Turning Building Supers into Energy-Saving Superheroes!

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Northeast Sustainable Energy Association (NESEA)
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Turning Building Supers into Superheroes
Our Team

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Building Superintendent
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Manager and Head of Energy Compliance at Viking Management

Jonathan Ruhl
Owner / Manager
Ranger Management

Tomas Aponte
Property Manager / Super Ranger Management
Top Ops is:

A customized training program targeted to building operators wrapped into strategic energy management (SEM) approach.
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<td>20</td>
<td>Action Shots: Lab &amp; Classroom</td>
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NYSERDA INCENTIVES MADE THIS POSSIBLE

- NYSERDA incentives help our communities become more energy independent

- They realize building staff are key to realizing energy savings, especially with controls!
TOP OPS = STRATEGIC ENERGY MANAGEMENT (SEM)

SEM builds a structure around existing compliance activities

LL33 - Energy Grades & ESTAR

LL87/97 - Energy Audits & RCx

Heating Retrofits

LL84/133 - Benchmarking
Program Goals

• Increase Skills of Staff to operate buildings efficiently
• Ensure long-term persistence of efficient building operation
• Align Energy Management with Business Drivers
• Minimize Tenant Complaints / 311 Calls, Increase Tenant Retention
LL97 COMPLIANCE COSTS

MULTIFAMILY LL97 CARBON INTENSITY LIMITS
- 2024 = 5.75 kg CO2e/sf
- 2030 = 4.07 kg CO2e/sf

$133,170
Estimated Annual LL97 Fines 2024-2029

$574,967
Estimated Annual LL97 Fines 2024-2029
LL97 Plan

Prioritizing staff and measures to minimize compliance costs.

#1 - Over 2024 Limit
- Oil to Gas Conversions
- Prescriptive ECMs (no TRVs)
- TRVs and / or RECs if needed

#2 - At 2024 Limit
- Prescriptive ECMs (no TRVs)
- RECs if needed

#3 - At 2030 Limit
- Prescriptive ECMs (no TRVs)
- File ONETIME report!
## Prescriptive ECMs

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Temperature Controls or Enclosures for Radiators ($)</td>
</tr>
<tr>
<td>2</td>
<td>Radiant Barriers</td>
</tr>
<tr>
<td>3</td>
<td>Functioning Steam Traps</td>
</tr>
<tr>
<td>4</td>
<td>Repair Heating System Leaks</td>
</tr>
<tr>
<td>5</td>
<td>Piping insulation, Steam and Hot Water Tank Insulation</td>
</tr>
<tr>
<td>6</td>
<td>Steam System Master Venting</td>
</tr>
<tr>
<td>7</td>
<td>Temperature Set Points</td>
</tr>
<tr>
<td>8</td>
<td>Heating System Function</td>
</tr>
<tr>
<td>9</td>
<td>Indoor/Outdoor Temperature Sensors</td>
</tr>
<tr>
<td>10</td>
<td>Upgrade Lighting</td>
</tr>
<tr>
<td>11</td>
<td>Building Envelope</td>
</tr>
<tr>
<td>12</td>
<td>Exhaust Fan Timers</td>
</tr>
</tbody>
</table>
Site visits and interviews identify savings opportunities.

Training tailored to specific systems and staff skill sets.
Core Training

Day # 1
Program overview, air sealing, DHW and lighting. Classroom, Lab and field Training

Day # 2
Heating Controls, Burner Modulation, Master Venting Classroom and Lab, and Field Training

Follow Up:
• 1-1 Operator Sessions
• Quarterly Management Sessions

Two half day sessions
Each Training Section...

Includes sample animations to simplify complex concepts

Demonstration videos to walk staff through the tough ones step by step
1 pipe steam system
1-1 FOLLOW UP: STEAM TRAVEL TIME TEST
# Sustainability: Concise Next Steps

<table>
<thead>
<tr>
<th>Note ID</th>
<th>Steam Travel Time (minutes)</th>
<th>Description of Existing Conditions</th>
<th>Recommended Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Under 5 minutes</td>
<td>No existing vent, no additional vents needed</td>
<td>None</td>
</tr>
<tr>
<td>B</td>
<td>No Access</td>
<td>Unknown</td>
<td>Determine exact location of steam main end</td>
</tr>
<tr>
<td>C</td>
<td>Under 5 minutes</td>
<td>One existing vent leaking steam and water</td>
<td>Replace with Gorton #1 vent</td>
</tr>
<tr>
<td>D</td>
<td>13 minutes</td>
<td>One small vent stuck open and leaking steam</td>
<td>Replace with two Gorton #2 vents (minimum 1/2” tap)</td>
</tr>
<tr>
<td>1</td>
<td>N/A</td>
<td>There is a leaking and unnecessary vent on the return line near steam main end D</td>
<td>Remove existing vent and close the tap in the piping</td>
</tr>
</tbody>
</table>
Train to Sustain

Streamlined materials left with our partners to continue the effort in house

1. Determine which risers go to the ceiling of the top floor, and which risers end one floor below top floor.

2. Identify risers that are enclosed in the wall:
   - If enclosed, use IF camera to locate and mark with painter's tape
   - If not enclosed, skip to step 3

3. Tap Pipe with 1/2" diameter IPS thread, angle so condensate drains towards riser. Remove all debris from holes:
   - If enclosed, drill through wall and use an extension if needed.

4. Install 3/8" diameter nipple long enough to stick out 1-1/2" from the wall, and 90º elbow, using pipe thread sealant and teflon tape.

5. Install Straight mounted Gorton #20 or equivalent vent using teflon tape.

6. Keep track of the number of vents and locations installed in each apartment.

WHAT CAN YOU DO? TO BE MORE COMFORTABLE IN YOUR HOME & REDUCE ENERGY USAGE

HEATING

- Take AC units out of windows in winter months
- Remove furniture from in front of radiators
- Close windows
- Check radiator floor valve is completely open
- Report radiator and air valve issues to the office:
  - Hissing never stops. Never hisses (plugged), loud banging

WATER

- Report water leaks (faucets, toilets, tubs, steam vents, etc.)
- Turn off water when not in use (brushing teeth, shaving, etc.)
- If hot water takes more than 2 minutes to arrive at faucet, notify the office

ELECTRICITY

- Close window curtains in summer to keep it cooler
- Turn off lights when you leave a room
- Use LED bulbs
- Do not use electric heaters
- Turn off AC units when not home

EMAIL US FOR MORE INFO: TOPOPS@ROSSENERGYLLC.COM
Each Training Section...
Includes hands-on and/or field activities
Thank you!

Email:

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