From the Bottom to the Top

Institutionalizing Efficiency in Multifamily Organizations
The Schochet Companies – AMO®
SCHOCHET BACKGROUND

- Schochet Companies is a full service real estate development and management company
- Founded by Jay R. Schochet over forty five years ago
- Developed, owned, and/or managed in excess of 7,000 apartments and over 600,000 square feet of retail and commercial space throughout New England and on the West Coast
- Currently we own and/or manage over 5,000 apartments and 100,000 square feet of commercial space throughout New England
- Headquartered in Braintree, MA, we have offices in Rhode Island, Connecticut, and Maine and employ over 165 people
Boston, MA & surrounding areas:
- Market Units: 43
- HUD Units: 1,520
- LIHTC: 675 (Elderly and/or Family)

Portland, ME:
- Market Units: 29
- HUD Units: 337 (Family)

Northampton, MA:
- Market Units: 85 (Family)

Greenfield, Orange, Gardner & Leominster, MA:
- Market Units: 0
- HUD Units: 667
- LIHTC: 413 (Elderly and/or Family)

Brockton, MA:
- Market Units: 0
- HUD Units: 242
- LIHTC: 240 (Elderly)

Hartford, CT:
- Market Units: 79
- HUD Units: 577
- LIHTC: 808 (Elderly and/or Family)

Groton, CT:
- Market Units: 324 (Family)

Franklin & Whitinsville, MA:
- Market Units: 216
- HUD Units: 55
- LIHTC: 72 (Family)

Worcester:
- Market Units: 0
- HUD Units: 302 (Elderly)

Newport & N. Kingstown, RI:
- Market Units: 17
- HUD Units: 343
- LIHTC: 240 (Elderly and/or Family)

Total Units: 5,116
VISION – TOP DOWN IS CRITICAL

To continuously reduce the environmental footprint of our multi-family properties.
OBJECTIVES

- To implement a consistent, comprehensive, corporate-wide methodology across all owned and managed properties that 1) minimizes energy and water consumption, 2) reduces solid waste tonnages and 3) reduces the use of toxic chemicals.

- To pursue all cost-effective strategies for reducing energy and water consumption including conservation, efficiency, and alternative and renewable technologies.

- To incorporate the concepts of conservation, efficiency and continuous improvement into our corporate culture.
Step 1 - Define the Approach
• From Senior Management
• Define Goals
• Develop Baseline

Step 2 - First Things First
• No and Low-Cost Opportunities
• Be Opportunistic

Step 3 - Add the Longer View
• Property Roadmaps
• Training

Step 4 - Corporate Integration
• Planning and Budgeting
• Employee Responsibilities
• Integrate New Properties

Step 5 - Continuous Improvement
• Revisit Previous Steps
• Assess and Adjust
• Recast Baseline

Ongoing Efforts
• Energy Tracking
• Reporting
• Communications
PROCESS/ COMMUNICATION

- Energy and water benchmarking using WeGoWise
- Implementation of No and Low Cost measures
- Pursuit of on-going operational improvements
- Inclusion of efficiency and healthy environment considerations when making equipment/building replacement and upgrade decisions
- Comprehensive multi-year planning of capital projects, Road maps integrated with site CNAs/financing
- Budgeting and long term planning
EMPLOYEE RESPONSIBILITIES/ ENGAGEMENT

- Be proactive
- Aggressively pursue all cost-effective efficiency opportunities
- Incorporate energy & water efficiency into all decisions
- Incorporate healthy environment considerations into all decisions
- Support NCLC, reporting, and other portfolio-wide programs
- Leverage company people and resources to ensure compliance with all responsibilities
- Maintain energy and water tracking records
PHASES 1 & 2:

**Phase 1 (2009-2011):**
- Beginning March 2009, we enlisted RPM to help identify and eliminate energy inefficiencies throughout the portfolio – 2008 was the baseline year
- A Sustainability Initiative was developed with the goal of creating a business model that includes a focus on sustainability, efficiency and accountability
- Gain a clear focus and take advantage of all emerging technologies
- Create goals to move forward and begin making real change throughout the portfolio

**Phase 2 (2012-2015):**
- To continue to reduce the Companies’ environmental footprint by improving building performance
  - Energy and water consumption optimization (toilet retrofits, laundry upgrades, etc.)
  - Minimize solid waste and toxic material use
  - Recast the baseline
- Work to promote continuous improvement and staff engagement with
  - Sustainability Conference Calls
  - Operations Surveys – Questionnaires to collect pertinent information and data
  - Road Maps – track/plan past, current and future projects and sustainability efforts
  - Information sharing through established channels

**Phase 3 (In Progress)**
PHASE 3 GOALS
BY YEAR END 2018 USING 2015 AS THE BASELINE YEAR

- Reduce energy consumption by 3%.
- Reduce CO2 emissions by 3%.
- Reduce water consumption by 3%.
- Build on healthy living initiative by implementing policies related to green cleaning, and environmentally preferable products and services.
- Augment the company’s current sustainability training with a focus on better monitoring of utility usage for property managers and routine systems training for maintenance staff.
- Leverage all appropriate, available federal, state, and local incentives.
- Pursue at least one opportunity per year to share our success and lessons learned with others in the industry.
PORTFOLIO UTILITY USAGE REDUCTIONS

Comparing calendar year 2017 to the baseline year of 2015, as a portfolio, usage for owner-paid electricity, gas and oil, and water have all surpassed Phase 3 reductions goals.
PHASE 3 PORTFOLIO UTILITY USAGE REDUCTIONS
YEAR END 2017 USING 2015 AS THE BASELINE YEAR

Total energy use (kBTUs) decreased 6.6%

Electricity use (kWh) decreased 6.0%

Gas use (therms) decreased 6.8%

Water use (gallons) decreased 17.6%

*This calculation does not include 6 properties with incomplete data
ALL PHASES - PORTFOLIO UTILITY USE REDUCTIONS
2011 THROUGH EOY 2017

Total energy use (kBTUs) decreased 11.4%

<table>
<thead>
<tr>
<th>Status</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.4%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Electricity use (kWh) decreased 14.6%

<table>
<thead>
<tr>
<th>Status</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.6%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Gas use (therms) decreased 9.7%

<table>
<thead>
<tr>
<th>Status</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.7%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Water use (gallons) decreased 22.7%

<table>
<thead>
<tr>
<th>Status</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>22.7%</td>
<td>20%</td>
</tr>
</tbody>
</table>

*This calculation does not include 6 properties with incomplete data
Schochet has implemented over 150 projects across the portfolio with a value of over $7 Million.

73% of the costs were covered by incentives and grants.

Greenhouse gas reductions are approximately 4,200 tons per year, which is equivalent to 1,030 cars off the road.

Water reductions are estimated at 1.2 million gallons per year.

Policies and procedures have been implemented to cultivate a spirit of sustainability and improvement for all employees.

A major barrier to improvement has been tackled
  • Ready access to capital
  • To address this Schochet introduced the Roadmaps concept into budgeting and refinancing processes
    • Roadmaps are a site level list of projects that would benefit a property, and are updated annually.
RESOURCES

- Peter Lewis, Vice President, Property Management
  peter.lewis@schochet.com
  617-398-5143 Office/Direct

- Ilene Mason, Sustainability Consultant
  Rethinking Power Management
  imason@rpmpowerllc.com
  508-259-5030
From the bottom to the top and sideways: Institutionalizing Efficiency in Multifamily Organizations

Julie Klump
Vice President
Design and Building Performance
POAH is a nonprofit organization whose mission is to preserve, create, and sustain affordable, healthy homes that support economic security and access to opportunity for all.

The Design + Building Performance Team:
The Design + Building Performance Department holistically integrates energy and water efficiency into development projects and the owned portfolio, working closely with property management staff to maintain each building’s green upgrades and monitor the effectiveness of our conservation initiatives.
Basis of Design
Utility Tracking
Project Highlights
Energy Reporting
WELCOME TO THE BASIS OF DESIGN

A POAH Building Design Resource
Some units look like this when we buy them.

But of course the goal is to have units that look like this.
How did we do? Project Highlights

- These are done in excel
- Completed for all projects
- Show utility and rehab projects
- Highlight discreet measures and their impact
How did we do? Quarterly Utility Reporting

Melpet Farm Residences

Year Over Year Electric Cost, Usage, and Rate

**Electric**  Jan-Mar 2018

Melpet Farm Residences

Change (Q1 2017 to Q1 2018)

<table>
<thead>
<tr>
<th>Owner pays for:</th>
<th>Full building</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost change</td>
<td>27%</td>
<td>Resident training in utility conservation planned</td>
</tr>
</tbody>
</table>

Usage change

<table>
<thead>
<tr>
<th>Rate Change</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>$3,963</td>
<td></td>
</tr>
</tbody>
</table>

Year Over Year Gas Cost, Usage, and Rate

**Water/Sewer**  Jan-Mar 2018

Melpet Farm Residences

Change (Q1 2017 to Q1 2018)

<table>
<thead>
<tr>
<th>Owner pays for:</th>
<th>Natural Gas</th>
<th>% change</th>
<th>Value change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost change</td>
<td>-80%</td>
<td>-$853</td>
<td></td>
</tr>
</tbody>
</table>

Usage change

<table>
<thead>
<tr>
<th>Rate Change</th>
<th>No prior data</th>
</tr>
</thead>
</table>

Notes:
No 2018 water data so far. Bill received only twice a year.
Year Over Year Electric Cost, Usage, and Rate

**Electric** Jan-Mar 2018
Briston Arms Apartments

Change (Q1 2017 to Q1 2018)

<table>
<thead>
<tr>
<th>Owner pays for:</th>
<th>Cost change</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common</td>
<td>(1.7%)</td>
<td>17%</td>
</tr>
</tbody>
</table>

Year Over Year Gas Cost, Usage, and Rate

**Natural Gas** Jan-Mar 2018
Briston Arms Apartments

Change (Q1 2017 to Q1 2018)

<table>
<thead>
<tr>
<th>Owner pays for:</th>
<th>Cost change</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common</td>
<td>(2.3%)</td>
<td>23%</td>
</tr>
</tbody>
</table>

Resident DHW
Solar Thermal System in design

Gases Monthly Use (Therm)

Gases Monthly Cost
Communication is Key.

- It lets the architects and builders know what we expect for building performance.
- It highlights for the development team what their work in rehabs is accomplishing or not.
- It highlights for site staff what happened as a result of the rehab or utility program.
- It keeps sites up to speed on ongoing utility spend, consumption and rate, and what we are doing about it.
Thank you.

Julie Klump
jklump@poah.org
King County Housing Authority

- Serves mainly King County (excluding Seattle)
- About 150 properties
- Over 10 million square feet
- Elevator, garden style, mobile home, single-family, plus community centers and office space
- Public housing, tax credit, and non-profit ownership
- Includes Housing Management, Weatherization, Construction, New Development and Resident Services departments
History of Sustainability at KCHA

- 1970s: Manage low-income weatherization state funding
- 2004: The Sustainability Project (O’Brien & Co.) report
- 2005: KCHA Board Resolution 5005 Commitment to Sustainable Communities Through Excellence in Environmental Stewardship and the Establishment of Resource Conservation Department
- 2007: Completed 1st EPC project
- 2016: Environmental Sustainability Plan (2017-2021)
- 2017: Completed 2nd EPC project
## Environmental Sustainability Plan

### 2017-2021 Year-End Goals

<table>
<thead>
<tr>
<th>7 Sustainability Plan Goals</th>
<th>2016 (Baseline)</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2021 Stretch Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% reduction in gallons per person per day (GPD) for multifamily properties (without irrigation)</td>
<td>50.3 GPD</td>
<td>46.6 GPD</td>
<td>45.6 GPD</td>
<td>44.7 GPD</td>
<td>43.7 GPD</td>
<td>42.8 GPD</td>
<td>41.4 GPD</td>
</tr>
<tr>
<td>10% reduction in normalized energy use per square foot (EUI) for all multifamily properties</td>
<td>36.8 EUI</td>
<td>36.0 EUI</td>
<td>35.3 EUI</td>
<td>34.6 EUI</td>
<td>33.8 EUI</td>
<td>33.1 EUI</td>
<td>32.0 EUI</td>
</tr>
<tr>
<td>5% reduction in greenhouse gas emissions from building electricity and gas (Kilograms CO₂e/ft²)</td>
<td>4.464 kg CO₂e/ft²</td>
<td>4.420 kg CO₂e/ft²</td>
<td>4.375 kg CO₂e/ft²</td>
<td>4.331 kg CO₂e/ft²</td>
<td>4.287 kg CO₂e/ft²</td>
<td>4.243 kg CO₂e/ft²</td>
<td>4.022 kg CO₂e/ft²</td>
</tr>
<tr>
<td>100% increase in capacity of renewable energy systems installed</td>
<td>98.6 kW</td>
<td>195 kW</td>
<td>195 kW</td>
<td>195 kW</td>
<td>195 kW</td>
<td>195 kW</td>
<td>250 kW</td>
</tr>
<tr>
<td>55% recycling and organic waste composting diversion rate</td>
<td>40%</td>
<td>43%</td>
<td>46%</td>
<td>49%</td>
<td>52%</td>
<td>55%</td>
<td>60%</td>
</tr>
<tr>
<td>100% qualified properties certified as 3 EnviroStars</td>
<td>50%</td>
<td>60%</td>
<td>70%</td>
<td>80%</td>
<td>90%</td>
<td>100%</td>
<td>100% 5 Stars</td>
</tr>
<tr>
<td>31% KCHA vehicles use alternative fuel</td>
<td>8%</td>
<td>10%</td>
<td>17%</td>
<td>22%</td>
<td>26%</td>
<td>31%</td>
<td>40%</td>
</tr>
</tbody>
</table>
Sustainability Integration Framework

Structural
- Policies/Procedures
- Administration/Reporting
- Utility Data

Supportive
- Change Management
- Engagement
- Customer Service
Sustainability Integration Framework

**Structural**— adoption of new policies and procedures that integrate sustainability organization-wide.

- Utility data management
- Resolutions
- Policies/Procedures
- Cost benefit analysis
- Reporting (monthly and annually)

**Supportive**— ensuring progress by managing the process, getting organizational buy-in, overcoming barriers.

- Upper management & field support
- Employee engagement
- Messaging/communications
- Partnerships
- Marketing
Supportive

**Change Management**
- Managing sustainability initiatives through strategic stakeholder communications.

**Engagement**
- Using quantitative data and qualitative research to design behavior change programs and initiatives.

**Customer Service**
- Serving staff and residents by troubleshooting barriers and process, highlighting benefits, and providing education and training.
EPC – Energy & Water Project

- Advance warning – “It’s coming”
- Solicit feedback from maintenance staff – “We hear you”
- Troubleshoot barriers
- Provide product maintenance training
- Highlight progress and benefits with multiple messages
- Use data and be honest with results
- Closure – “It’s over”
- Ongoing support to staff – “We still hear you”
Thank you

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