Portfolio-Wide Energy Efficiency: **SHOW ME THE MONEY!**
Case Studies from PartnerPREP
June 6th, 2013
Supportive Housing Network of New York
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Enterprise Community Partners

Introduction

**ENTERPRISE COMMUNITY PARTNERS**
- 300,000 Units built or preserved since 1982
- 410,000 Jobs created nationwide
- $11 billion In equity, grants, and loans

**ENTERPRISE GREEN COMMUNITIES**
- 47% Of states with Green Communities Criteria
- 2020 Goal to Green **ALL** Affordable Housing

**WEATHERIZATION ASSISTANCE PROGRAM**
- $15 million In Weatherization Funds
- 96 Buildings Weatherized
- 2,226 Units Weatherized
PartnerPREP: Enterprise’s Newest Green Initiative

- Enable Affordable Housing Organizations to become effective energy efficiency stewards of their portfolios
- Provide Building Science Expertise with an Asset Management Focus across whole portfolios
- Utilize portfolio-wide data analysis to drive capacity building, trainings, and O&M improvements to achieve 10%-25% savings
- Perform Green CNA’s for HPD Y15, LL87 compliance, and Owner’s Representative services

Show Me the Money! – Two Target Areas for Savings

Is 10%-25% in savings achievable?  
YES!

Overheating
Up to 20% Waste

Water Inefficiency
Up to 25% Waste
Show Me the Money! - Overheating

**Symptoms of Overheating**
- Indoor Temperature substantially higher than minimum required
- Open windows on cold days

**Causes of Overheating**
- Heating Controls not set properly
- Boiler Equipment not functioning properly (burner, pumps)
- Unbalanced Heating Distribution (steam or hydronic)

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Show Me the Money! - Overheating

**Evidence of Overheating**

![Graph showing heating savings over time]

- **Heating Savings**
  - October 10: $564.7
  - November 10: $5137.4
  - December 10: $5081.5
  - January 10: $444.9
  - February 10: $90
  - March 10: $877.4
  - April 10: $1070.18
  - May 10: $5998.86

Total Potential Savings: $5194.48
Show Me the Money! - Overheating

What is the cost of Overheating?

**PartnerPREP Analysis:**
- 68 Buildings
- 2,179 Units

### The Cost of Overheating

<table>
<thead>
<tr>
<th>Size of Buildings</th>
<th>Count of Buildings</th>
<th>Ave. Cost per Building</th>
<th>Ave. Cost per Unit</th>
<th>Ave. % of Heating Cost spent on Overheating</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;20 Units</td>
<td>32</td>
<td>$2,740</td>
<td>$253</td>
<td>19%</td>
</tr>
<tr>
<td>20-50 Units</td>
<td>24</td>
<td>$5,123</td>
<td>$158</td>
<td>18%</td>
</tr>
<tr>
<td>&gt;50 Units</td>
<td>12</td>
<td>$7,894</td>
<td>$96</td>
<td>21%</td>
</tr>
</tbody>
</table>

Show Me the Money! - Water

**Symptom of Water Inefficiency**
- Over 100 Gallons/Bedroom/Day

**Causes of Water Inefficiency**
- Leaks, leaks, leaks
- High-Flow Showerheads and aerators, faulty shower diverters
- Leaky toilets, high GPF toilets
- Unauthorized water usage (laundry, sidewalks, etc.)
Evidence of water inefficiency

**PartnerPREP Analysis:**
- 48 Buildings
- 1,348 Units

The Cost of Water Inefficiency (Excess of 100 Gallons/Bedroom/Day)

<table>
<thead>
<tr>
<th>Size of Buildings</th>
<th>Count of Buildings*</th>
<th>Ave. Cost per Building</th>
<th>Ave. Cost per Unit</th>
<th>Ave. % of Water Cost Inefficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;20 Units</td>
<td>24</td>
<td>$4,610</td>
<td>$473</td>
<td>35%</td>
</tr>
<tr>
<td>20-50 Units</td>
<td>15</td>
<td>$9,114</td>
<td>$289</td>
<td>25%</td>
</tr>
<tr>
<td>&gt;50 Units</td>
<td>4</td>
<td>$33,825</td>
<td>$431</td>
<td>35%</td>
</tr>
</tbody>
</table>

*5 Buildings used <100 Gallons/Bedroom/Day
### How YOU can make your portfolios more efficient

#### Effective HEATING Initiatives

<table>
<thead>
<tr>
<th>Initiative</th>
<th>No Cost ($0)</th>
<th>Low-Cost (&lt;$5K)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Set your Heating Controls right!</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>2) Set Heat Complaint Protocols</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>3) Basic Retro-commissioning</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>4) Minor heating plant repairs</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>5) Minor heating distribution repairs</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

#### Effective WATER Initiatives

<table>
<thead>
<tr>
<th>Initiative</th>
<th>No Cost ($0)</th>
<th>Low-Cost (&lt;$300)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Annual Unit Inspections</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>2) Vacancy Turnover Installation</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>3) Remove unauthorized washers</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>4) Water Leak Response Protocols</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
How **YOU** can make your portfolios more efficient

<table>
<thead>
<tr>
<th>O&amp;M Recommendations</th>
<th>Overheating</th>
<th>Water Inefficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Vacancy Turnover Checklist</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2) Maintenance Checklist</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>3) Benchmark &amp; Monitor Fuel Use</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>4) Benchmark &amp; Monitor Water Use</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>5) Resident Engagement</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>6) Staff Education &amp; Trainings</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

**Thank You!**

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