### Covered Multifamily Buildings (from LL84 data)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Types</th>
<th>Percent of Total Area</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AGE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pre-War</td>
<td>31%</td>
</tr>
<tr>
<td></td>
<td>Post-War</td>
<td>51%</td>
</tr>
<tr>
<td></td>
<td>Post-1980</td>
<td>18%</td>
</tr>
<tr>
<td><strong>SIZE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Very Large</td>
<td>29%</td>
</tr>
<tr>
<td></td>
<td>Not Very Large</td>
<td>71%</td>
</tr>
<tr>
<td><strong>HEIGHT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt; 8 floors (Low)</td>
<td>39%</td>
</tr>
<tr>
<td></td>
<td>&gt; 8 (High)</td>
<td>61%</td>
</tr>
<tr>
<td><strong>HEATING FUEL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Electric</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>Gas</td>
<td>64%</td>
</tr>
<tr>
<td></td>
<td>Oil</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td>District Steam</td>
<td>6%</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
This graphic compares the relative proportion and magnitude of ECMs recommended for each building segment. The savings from implementing all these ECMs as a proportion of each segment's total source energy is shown in Figure 10.
opportunities
Savings by Segment

- Top 3 segments represent 50% of potential energy savings
- Top 3 segments represent 48% of GHG savings, and only 38% of total area
- Top 3 segments represent 48% of total area and 46% of citywide costs

24.2 TBTU

- Very Large 26%
- Post-war Gas Low 12%
- Post War Oil 11%
- Pre-war Gas Low 10%
- Pre-war Oil High 6%
- Post-1980 Gas Tall 6%
- Post-war Oil Low 8%
- Post-war Gas Tall 9%
- Post-1980 Gas Low 3%
- Post-war Gas Tall 2%
- Pre-war Oil High 3%
- Post-war Gas Tall 2%
- Post-1980 Gas Low 2%
opportunities

ECM Categories

- Over 150 different measures across all categories were recommended
- 15 ECM categories were condensed into 7 for this report
opportunities
Savings by ECM Category

- Domestic Hot Water and Heating & Distribution represent just under 50% of the savings opportunity
- These categories are less than a quarter of the cost
opportunities

Distribution of Energy Savings from ECM Categories by Segment

Potential Source Energy Savings (TBTU)

- Very Large
- Post-war Gas Low
- Post-war Oil
- Pre-war Gas Low
- Pre-war Gas High
- Post-war Oil Low
- Pre-war Oil Low
- Post-1980 Gas High
- Pre-war Gas High
- Post-1980 Gas Low
- All Steam
- All Electric

Categories:
- Domestic Hot Water
- Envelope
- Heating Distribution
- Heating Equipment
- Lighting
- Other
- Ventilation and Cooling
data into action
**ECM packages: touchpoints**

Key implementation milestones in building lifecycle

- **Anytime/Anywhere**
  - lower cost,
  - simple measures

- **Midcycle Retrofit**
  - low to medium costs,
  - mid-level measures

- **Substantial Retrofit**
  - longer-term investment,
  - deeper savings

- **Tenant Turnover**
  - requires tenant unit access

- **Equipment Replacement**
  - lifecycle and energy upgrade opportunities
touchpoints

Savings by Touchpoint for each Segment

Potential Source Energy Savings (TBTU)

- Refinance
- Mid-Cycle
- Anytime/Anywhere