Panel 1

Present & Future Challenges: A Program Implementer’s Perspective

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Association for Energy Affordability

Energy Efficiency Portfolio Standard
Overview Forum
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NYS “15 x 15” Goals

• EPS provides a pathway to implement the Governor’s 15 x 15 goals.

• Key Lessons Learned:
  – An ambitious, clear and consistent message
  – Statewide planning
  – Multiyear goals
  – Stable funding
  – Performance incentives
  – Coordinated programs
Implementer’s Vantage Point

• NYS Weatherization Program (WAP)
• Projects coordinated with WAP
  – Con Edison’s ULIEEP (1993-95)
  – Con Edison’s LIRRP (1996-2001)
  – NYSERDA’s Low Income Direct Install, Weatherization Network Initiative, Assisted Multifamily Program, EmPower, Multifamily Performance Program (just starting)
AEA: Training the Infrastructure

- Multifamily Standardized Training (preparing for BPI Certification)
  - MF Building Analyst
  - Energy Efficient Building Operations Specialist (building supers and property mgrs)
  - Hydronic Heating System Designer
- Home Performance contractors
  Building Analyst, Envelope Specialist
- One of the Energy $mart Learning Centers of Hudson Valley Community College Workforce Development Institute
Buildings Research

• Pre-weatherization energy use intensity data collection for building modeling
• Post-weatherization bill analysis documenting savings
• Data loggers, fuel meters, 15 minute interval data collection of building dynamics
• Comparing bill analysis and metered data
• R D &D - Advanced metering and web enabled building controls
• Time Sensitive Rates demonstration
Program Design

• Target all types of low income households
  – in single family and multifamily housing
  – Rental and owner occupied housing
• Coordinate utility and public benefit program funds with WAP and owner $
• All fuels/fuel neutral measures
• Ensure tenant measures and tenant protections
• Measure, monitor and verify energy use intensity pre- and post-installation
• Provide both construction and performance incentives (New MPP model)
Background on multifamily housing units in New York City

• Over 2.2 households in MF buildings (>5+ units)
• Large variation in age, size, condition, rent regulation status, energy use intensity
• NYC as the “overheated city”
• Indicators of Energy Efficiency
  – BTU/sq ft/Heating Degree Day
  – Energy use per person
### Housing Tenure, 2000
NYC - Southern Region v. NYS and US

<table>
<thead>
<tr>
<th>By Occupant</th>
<th>Bronx County</th>
<th>Kings County</th>
<th>New York County</th>
<th>Queens County</th>
<th>Richmond County</th>
<th>Rockland County</th>
<th>Westchester County</th>
<th>NYC - Southern Region</th>
<th>NYS</th>
<th>U. S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Housing Units</td>
<td>490,659</td>
<td>930,866</td>
<td>798,144</td>
<td>817,250</td>
<td>163,993</td>
<td>94,973</td>
<td>349,445</td>
<td>3,645,330</td>
<td>7,679,307</td>
<td>115,904,641</td>
</tr>
<tr>
<td>Occupied Housing Units</td>
<td>463,212</td>
<td>880,727</td>
<td>738,644</td>
<td>782,664</td>
<td>156,341</td>
<td>92,675</td>
<td>337,142</td>
<td>3,451,405</td>
<td>7,056,860</td>
<td>105,480,101</td>
</tr>
<tr>
<td>Percent of Total Housing Units Occupied</td>
<td>94.4</td>
<td>94.6</td>
<td>92.5</td>
<td>95.8</td>
<td>95.3</td>
<td>97.6</td>
<td>96.5</td>
<td>94.7</td>
<td>91.9</td>
<td>91.0</td>
</tr>
<tr>
<td>Owner-occupied housing units</td>
<td>90,687</td>
<td>238,367</td>
<td>148,732</td>
<td>334,815</td>
<td>99,695</td>
<td>66,424</td>
<td>202,673</td>
<td>1,181,393</td>
<td>3,739,166</td>
<td>69,815,753</td>
</tr>
<tr>
<td>Owner-occupied housing units, percent of all occupied</td>
<td>19.6</td>
<td>27.1</td>
<td>20.1</td>
<td>42.8</td>
<td>63.8</td>
<td>71.1</td>
<td>60.1</td>
<td>34.2</td>
<td>53.0</td>
<td>66.2</td>
</tr>
<tr>
<td>Renter-occupied housing units</td>
<td>372,525</td>
<td>642,360</td>
<td>589,912</td>
<td>447,849</td>
<td>56,646</td>
<td>26,251</td>
<td>134,469</td>
<td>2,270,012</td>
<td>3,317,694</td>
<td>35,664,348</td>
</tr>
<tr>
<td>Renter occupied housing units, percent of all occupied</td>
<td>80.4</td>
<td>72.9</td>
<td>79.9</td>
<td>57.2</td>
<td>36.2</td>
<td>28.3</td>
<td>39.9</td>
<td>65.8</td>
<td>47.0</td>
<td>33.8</td>
</tr>
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Energy Efficiency in MF Housing

• Split Incentives – major barrier
• Who pays the energy bill (for each energy use in the building)
• Who directly benefits from energy efficiency installations?
• Challenge: How to create an alignment of interests among all stakeholders in the building in supporting energy efficiency
Barriers/Challenges

• Deep owner resistance to paying for tenant benefit measures
• Lack of confidence in the basic model (RE: ROI/savings affects MOTIVATION
• High turnover rates of property ownership and management company responsibility
• Bank financing availability for added cost of McMansions but not easily for EE (either in retrofit or new construction)
• “We have the technology, what we need is the will” --
## Renter Occupied Housing Units, 2000
NYC- Southern Region vs. NYS and US

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<tr>
<td><strong>Percent with 1.01 or more occupants per room</strong></td>
<td>22.7</td>
<td>18.3</td>
<td>12.2</td>
<td>22.3</td>
<td>9.6</td>
<td>16.9</td>
<td>12.5</td>
<td>17.7</td>
<td>13.6</td>
<td>11.0</td>
</tr>
<tr>
<td><strong>Housing units with 10 or more units in structure</strong></td>
<td>295,982</td>
<td>326,498</td>
<td>532,058</td>
<td>215,454</td>
<td>15,778</td>
<td>7,785</td>
<td>64,320</td>
<td>1,457,875</td>
<td>1,672,434</td>
<td>11,596,217</td>
</tr>
<tr>
<td><strong>Percent housing units in structure with 10 or more units</strong></td>
<td>79.4</td>
<td>50.8</td>
<td>90.2</td>
<td>48.1</td>
<td>27.9</td>
<td>29.7</td>
<td>47.9</td>
<td>64.2</td>
<td>50.4</td>
<td>32.5</td>
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Tools:

- Codes and standards
- Policies, laws, regulations - end-use metering
- Comprehensive whole building scopes of work
- Installations by qualified contractor infrastructure
- Proper use and operation by building operators
- Tax credits and incentives for owners and developers
- Building equivalent of a miles per gallon standard
- “Dashboard” – energy use information available to home owner, tenant, property manager
- Enabling technology for building controls, load management, feedback loop to stakeholders
Why not just give tenant subsidies for utility bills?

• Measures that reward both landlord and tenant for choices that reduce energy utilization provide continuous benefits to both parties long after public funds are spent.
Why not let the market take care of energy efficiency?

• Rising tide does not lift all boats equally
• Low-income people more likely to suffer consequences of flooding, global warming, etc. – first and hardest
• Low-income homeowners are less likely to be able to afford improvements on their own.
Structuring owner and tenant incentives in low income rentals:

- Creating
- Longstanding
- All
- Stakeholder Partnerships
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