Reaching and Influencing the Affordable Housing Rehab Buildings Market

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Mission driven: provide housing - desire and intent for energy efficiency and green, but:

- Funding cuts for housing over the last 8 years, housing providers focused on keeping people in homes and not cutting staff
- Energy efficiency was a luxury item
- Funding limited and competitive
- Mechanisms for funding energy efficiency oftentimes “value engineered” out of budget with no consequences
Barriers to Affordable Housing Rehab

• Split incentives - owner pays, tenant benefits
• Disconnect between energy efficiency’s contribution to home affordability and comfort
• Disconnect between energy efficiency and green
• Historically, prescriptive only programs available. No performance program or market mechanism for building owners to assess the synergies of multiple measures
• Building owners are less engaged in understanding how their buildings perform
• Limited and competitive funding
• Energy efficiency a luxury item therefore select cheapest equipment
• Don’t invest in encouraging tenants to change behavior to lower utility bills
Designed for Comfort (DfC) : Overcome Barriers and Influences Approach to Rehab

- Reduce high first cost of measures, building analysis, and verification through financial incentives - overcome split incentives
- Connect energy efficiency with affordability and comfort
- Connect energy efficiency as a key component of the green pie
- Change how owner-developers think about energy use in their buildings by providing a whole-building program approach through design assistance
- Engage buildings (& tenants when possible) owners in the process
- Leverage other funding to make dollars go further
- Increase tenant awareness of the building upgrades, energy efficiency, and involve them in committing to behavioral changes
Affordable Housing Owners - Classic split incentive market barrier:

- Building owners have little or no incentive for investing in energy efficiency
  - Owner pays for improvements
  - Tenant gets lower utility bills
  - Can’t recoup investment through rents
- Tenants have no control over energy efficiency upgrades and capital investment, but can control behavior
Impact on Affordable Housing

Percent (%) of Income Spent on Utility Bills

- Middle Income: 4-5%
- Affordable-qualified: about 20%
- Retired Elderly on SSI: over 25%
- Low-Income Households worst months of 2001: up to 70%
Energy Efficiency: A Key Component of Green

- **Greatest impact on utility bills**
  - makes homes more affordable
  - dollars saved on energy bills results in additional money available to be spent in the community - multiplier effect
  - impact on operating costs
- **Greatest impact on comfort**
  - fewer complaints (tenants and homebuyer callback)
  - critical for sensitive populations
- **Major impact on green house gases**
- **Associated with higher quality and high performance homes and equipment**
Two Approaches to Rehab

- Typical retrofit program options
  - Weatherization
  - Prescriptive equipment replacement
    - Deemed energy savings
    - Measures chosen by available incentives rather than effectiveness

- Prescriptive
  - Identify measures by immediate need or available rebates

- Performance – Whole building approach
  - Identifies energy savings resulting from one measure on another (best package of measures)
  - Maximizes the energy savings to reduce payback period and save on costs
Assembly Bill 549

- AB 549 Directed the CEC to target the existing building stock
  - **Integrated Whole Building** Diagnostic Testing and Repair
  - California Home Energy Rating System (HERS) program
  - Information Gateway
  - Assistance to **Affordable Housing**
DfC Whole Building Approach

- HERS energy audit
- Simulation modeling - applies building science principles - comprehensive look at energy use in buildings – 2 models
  - Existing conditions
  - Show 20% improvement in dwelling units over existing baseline
    - HVAC
    - DHW
    - Insulation
    - Windows
- Building owner engaged in the process
  - HERS verification following installation
SCE/SCG Designed for Comfort Program Eligibility

- **Small Multifamily Projects**: 3-8 units - up to $1,500/unit
- **Large Multifamily Projects**: 9+ units - up to $700/unit
- **Special Needs Housing**: SRO, dorm units
- Must be served by SCG/SCE
- 10% of units must be low income
- Achieve a 20% energy efficiency improvement over existing conditions
- **HERS rater verification** of energy efficiency measures ($50/unit)
- **Energy consultant** provides energy analysis ($40/unit)
Energy Savings Opportunity in Existing MF Buildings Market

Multifamily Total Housing Stock by Age of Construction - California

<table>
<thead>
<tr>
<th>Age of Construction</th>
<th>Total</th>
<th>Percent of US Total</th>
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</thead>
<tbody>
<tr>
<td>1990-2000</td>
<td>303,243</td>
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<td>1980-1989</td>
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<td>1960-1969</td>
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<td>Pre-1960</td>
<td>730,334</td>
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<tr>
<td>Total</td>
<td>2,745,544</td>
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- Statewide recognition
- Turning away projects in SCE/SCG area
- Currently 40 projects (2,132 units) on waitlist
- Constantly receiving calls from other utility jurisdictions - turning projects away
- Should be expanded to include all of multifamily (market rate and affordable)

Leverage Other Funding Sources

Tax Credit Allocation Committee (TCAC) Funds

Project may be qualify for a maximum of 8 competitive points for sustainable building methods:

- A new construction or adaptive reuse project that exceeds Title 24 energy standards by at least 10% OR

- For a rehabilitation project not subject to Title 24, that reduces energy use on a per square foot basis by 25% as calculated using a methodology approved by the California Energy Commission (DfC provides checks and balances mechanism to keep energy efficiency in rehab effort)
Utility Allowances

Utility Allowance Reform

- Minor regulation arena
- Increases monthly cash flow
- Helps pay back investment in energy efficiency
- Generate more money in permanent loan financing
- Corrects artificially high utility allowances (common in areas with a high percentage of older housing stock)
- Helps to address split incentive issue
Standard Utility Allowance Schedule

Average Utility Costs Used in Calculating Total Housing Costs (Housing Burden)

- Averages across varying vintages (1950s, pre-energy code, and new construction) and considers consumption, price, and unit size
- Established based on formula/usage but does not consider energy efficiency
- Are established for affordable housing and subtracted from the total cost of housing amount a tenant pays
Rent to Owner $400

$100

Example Standard Utility Allowance

- Total Housing Burden: $500/mo
- Utility Allowance: $100/mo
- Developer Rent: $400/mo
- Tenant Utility Costs: $100/mo
Owner’s rent increases $10/mo and tenant’s net utility costs decrease $2/mo without changing total housing burden.

For more info, contact Julieann Summerford summerford@h-m-g.com
### Increased Cash Flow

<table>
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<th>Mortgage Amount</th>
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<tr>
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<td>Mortgage Rate</td>
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#### Standard Schedule

<table>
<thead>
<tr>
<th>Year</th>
<th>Rental Income</th>
<th>Other Income</th>
<th>Gross Income</th>
<th>Vacancy</th>
<th>Effective Gross Income</th>
<th>Operating Expense</th>
<th>Net Operating Income</th>
<th>Debt Service</th>
<th>Residual Cash</th>
<th>Cumulative Residual</th>
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#### Energy Efficient New Construction Schedule

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#### Yearly Difference

|                | $3,850 | $7,808 | $20,356 | $43,693 | $70,403 |

**Increased Cash Flow**
Leverage Other Funding Sources, Resources, and Benefits

- **City & Local Support**
  - **Permitting Benefits:**
    - Fast tracking
    - Reduced permit fees
  - **Redevelopment Funds**
    - Energy efficiency requirements or rewards
  - **Housing Authority**
    - Energy efficiency requirements or rewards
    - Energy Efficiency-Based Utility Allowance (EEBUA) policy
    - Project-Specific Utility Allowance (PSUA)

- **Green Building Grants**
  - Enterprise Foundation
  - Global Green

**Smart Design**
Moving Forward: Greater Intervention

- More comprehensive
- Streamline process
- Improve tools
- Further education
- Financing options
More Comprehensive Program

- Building diagnostics
- Lighting
- Appliances
- Photovoltaic
- Solar hot water
- Plumbing fixtures
- Common spaces
- Mixed use projects
- Tie in with green programs?
Further Efforts and Education to Engage Building Managers and Tenants

- Building Management
  - Familiarity with energy features (or lack of) in the buildings they manage

- HERS Raters and Energy Consultants
  - One professional playing both roles
  - New simulation tools

- Owners
  - Available resources
  - Leverage LIHEAP and other programs (weatherization) more

- Tenants
  - People use energy, not buildings
  - Better engage existing low-income programs (CARE)
More Financing Options

• Energy Efficiency-Based Utility Allowance for existing buildings
• Take advantage of utility financing/on-bill financing
• Loans built into utility bills
Contact Information

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