WHY CARE ABOUT HOME ENERGY EFFICIENCY?

- **52 million** – Homes in the United States built more than 25 years ago
- **1976** – Median year an owner-occupied home in the U.S. was built
- **$2,200/year** – Amount the average household spends on energy bills – 4% of their average pre-tax income.
- **62 percent** – Amount of average homeowner’s net worth tied to the home
- **90 percent** – Percentage of U.S. single family homes that are under-insulated
THE “TOP 3” MARKET BARRIERS

1. Information gap
2. Access to and prioritization of capital
3. Transaction costs and hassles associated with decision-making
Home energy audit uptake is linked to knowing others who have had one

...... and making EE improvements is linked to having an audit

Figure 3. Number of Friends or Neighbors Who Had Audits, by Respondents Who Had Audits and Those Who Did Not

Figure 2. Extent of Follow-up on Insulation Recommendations by Whether Audit Included Particular Features

Energy awareness is a virtuous circle/vicious cycle: the more you know, the more you want to know; the less you know the less you seek to know
**BARRIER 1: INFORMATION GAP**

**Industry Perspective**

NAIMA Member Survey:
“*What is the single biggest obstacle you see to increasing the rate of insulation retrofits in existing homes?*”

- Lack of consumer awareness or interest: 47
- Financial Incentives: 29
- Confusion and Uncertainty: 21
- Sales Aptitude: 16
- Labor issues: 12
- Hassle and Difficulty: 10
- Energy Prices: 5
How do we generate awareness of inefficiency without in-home analysis?

Homeowner Audits last 4 years

- Audit 32%
- No Audit 68%

29% of this group have “never heard of an energy audit”

A thermal imaging pilot in MA saw 10% of all homes contacted make improvements; 2% is BAU, so this was 5x more effective.
BARRIER 1: INFORMATION GAP – WHO CAN DO IT?

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- It can be difficult to find contractors who are knowledgeable and have the skills to successfully complete a high quality retrofit project.
- Access to a list of vetted firms can reduce the transaction cost for homeowners by allowing them to easily identify well trained contractors.
BARRIER 2: ACCESS TO AND PRIORITIZATION OF CAPITAL

Insulation Contractor Survey: Impediments to closing a sale
(1=not an impediment, 10=primary impediment)\(^7\)

<table>
<thead>
<tr>
<th>Impediment</th>
<th>Weighted average responses</th>
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<tbody>
<tr>
<td>Upfront cost</td>
<td>6.65</td>
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<tr>
<td>Other</td>
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<tr>
<td>Lack of utility savings</td>
<td>4.84</td>
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<tr>
<td>Homeowner confusion or uncertainty</td>
<td>4.42</td>
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<tr>
<td>Homeowner difficulty or hassle to complete project</td>
<td>3.95</td>
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Contractors cite cost as the top barrier, as many surveys do, but is it really?
BARRIER 3: TRANSACTION COSTS

NAIMA Member Survey:
What factors get customers across the finish line to make a purchase

Insulation Contractor Survey:
Impediments to closing a sale

Market actors don’t seem to agree on top barriers, so, who is right?
50% of homeowners said the main reason for their failure to follow up on audit recommendations was that they “had not gotten around to it.”

Cost and savings lagged far behind cost in matters, but cost in time, hassle and aggravation matters as much or more.

Best-in-class programs develop approaches to make the process easier for homeowners.
1. **Information gap:** utility bill analytics and neighborhood or city-wide infrared imaging (seen earlier) show great promise in generating demand for energy efficiency, which is a first-order problem to solve.

1. **Financing:** new, private capital-based funding mechanisms like WHEEL require very limited government support and result in easy to use, market-friendly programs.

1. **Transaction costs:** Governments can support “one stop shop” clearinghouses which serve to demystify the complexities of improving home efficiency.

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Energy efficiency policy isn’t just about “more mandates” or “more spending”. There are middle of the road approaches that can address major market barriers.