Insights into the Hard-to-Reach Moderate Income Market

Jennifer Cathcart
Vermont Energy Investment Corporation
About VEIC

- Non-profit with 300+ employees
- Reduce economic & environmental costs of energy
- Energy efficiency, renewables, and transportation
- National and international clients
- Program design and evaluation
- Transformative policy, advocacy, and research
- Clients: government agencies, regulators, utilities, foundations, and advocates
How might we increase participation by moderate income Vermonter homeowners in Efficiency Vermont's energy efficiency program?
Research Journey

- Understand customer needs
- Design/Refine concepts
- Test program concepts
- Program Pilot
Research Journey: Test & Learn

Understand customer needs
Design/Refine concepts
Test program concepts
Program Pilot
PHASE 1: Qualitative Research

Understand customer needs

Design/Refine concepts

Test program concepts

Program Pilot

PHASE 1:
Digital Ethnography
“What makes moderate income Vermont homeowners tick?”
Phase 1: Digital Ethnography

- Core Values
- Homeownership
- Energy Efficiency
- EE Motivators & Barriers
- Financing
Vermont Values

Environmental concern
Conscious consumption
Self-sufficient pride

Home Is Where the Repairs Are

Competing priorities
Small steps
Unending wish list
Home is where I’m comfortable and safe
Pragmatic Money Managers

Conservation Is Cheap
Efficiency Is Expensive

Living on a budget
Creative compromisers
Debt averse
Weighing needs vs. wants
Energy efficiency aspirations

Believe and behave – but don’t buy
Educated but not yet effective
**Phase 2: Quantitative Research**

1. **Understand customer needs**
2. **Design/Refine concepts**
3. **Test program concepts**

**Program Pilot**

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**PHASE 1:**
Digital Ethnography

**PHASE 2:**
Telephone survey
What programs and packages will appeal most to moderate income homeowners?
Phase 2: Quantitative Research

How interested are you in making your home use less energy?

- Very Uninterested
  - Bottom 2 Box
  - -7%

- Very Interested
  - Top 2 Box
  - 86%
Phase 2: Quantitative Research

I'm going to read you a list of 6 areas in which someone might invest in home improvements. After I read all of the statements to you, I'll ask you to rank your top 3 options.

Making my home more comfortable - 41%
Making my home more attractive - 27%
Making my home more energy efficient - 57%
Making my home healthier/safer - 51%
Making my home more environmentally friendly - 22%
Making my home more valuable - 39%
I'm going to read you a list of 6 areas in which someone might invest in home improvements. After I read all of the statements to you, I'll ask you to rank your top 3 options.

- Making my home more comfortable: 41%
- Making my home more attractive: 27%
- Making my home more energy efficient: 57%
- Making my home healthier/safer: 51%
- Making my home more environmentally friendly: 22%
- Making my home more valuable: 39%
Phase 2: Quantitative Research

Very Uninterested

Bottom 2 Box

-63%

AUDIT ONLY

22%

Very Interested

Top 2 Box
Phase 2: Quantitative Research

<table>
<thead>
<tr>
<th>Very Uninterested</th>
<th>Very Interested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottom 2 Box</td>
<td>Top 2 Box</td>
</tr>
</tbody>
</table>

**AUDIT ONLY**
-63% Uninterested
- 22% Interested

**AUDIT + AIR SEALING**
-57% Uninterested
- 29% Interested
Phase 2: Quantitative Research

Very Uninterested

Bottom 2 Box

AUDIT ONLY

-63% 22%

AUDIT + AIR SEALING

-57% 29%

AUDIT + AIR SEALING + DIRECT INSTALL

-71% 17%
Phase 3: Qualitative Research

- Understand customer needs
- Design/Refine concepts
- Test program concepts
- PHASE 1: Digital Ethnography
- PHASE 2: Telephone survey
- PHASE 3: In-depth Interviews
Ideal Product Exercise

Already Done
- Check proper function/ventilation of current heating system
- Install a programmable/intelligent thermostat (e.g., Nest)
- Install a water-saving showerhead, faucet head or aerator
- Install new doors
- Install ENERGY STAR® certified replacement windows
- Install a more energy-efficient heating system (e.g., heat pump, boiler or furnace)
- Have LED light bulbs installed throughout the home

Interested
- Install on demand (i.e., tankless) or solar hot water heater
- Install new high-efficiency wood stove/fireplace insert
- Install a new roof
- Install more insulation into ceiling, ducts, walls, attic and/or basement
- Add solar panels to our home
- Seal air leaks in house, including attic and basement
- New appliances for the kitchen and/or laundry room
- Check for mold, mildew and moisture in your home
- Check proper venting of bathroom fans and dryer

Not Interested
- Install an air exchange unit (i.e., ERV/HRV)
- Install central A/C
**Biggest perceived impact?**

<table>
<thead>
<tr>
<th>COMFORT</th>
<th>LOWER BILLS</th>
<th>INCREASE RESALE VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seal air leaks</td>
<td>Seal air leaks</td>
<td>Seak air leaks</td>
</tr>
<tr>
<td>Install more insulation</td>
<td>Install more insulation</td>
<td>Install more insulation</td>
</tr>
<tr>
<td>More EE heating system</td>
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<td>More EE heating system</td>
</tr>
<tr>
<td>ENERGY STAR® windows</td>
<td>Add solar panels</td>
<td>ENERGY STAR® windows</td>
</tr>
<tr>
<td>Install new doors</td>
<td>LED light bulbs</td>
<td>Add solar panels</td>
</tr>
<tr>
<td>Home energy assessment</td>
<td></td>
<td>Install new doors</td>
</tr>
</tbody>
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Vermont Energy Investment Corporation
Service delivery doesn’t align with customers’ preferred approach to improvements.

<table>
<thead>
<tr>
<th>Customers’ approach:</th>
<th>Efficiency Vermont’s program:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-identified list</td>
<td>Audit</td>
</tr>
<tr>
<td>“ Chunking” projects</td>
<td>Comprehensive work</td>
</tr>
<tr>
<td>DIY</td>
<td>Pre-qualified contractor</td>
</tr>
</tbody>
</table>
Phase 4: Quantitative Testing

- Understand customer needs
- Design/Refine concepts
- Test program concepts

PHASE 1: Digital Ethnography
PHASE 2: Telephone survey
PHASE 3: In-depth Interviews
PHASE 4: Online survey

Program Pilot
Phase 4: Concept Testing

Concept: Efficiency Vermont offers an in-store discount that is automatically applied at the register, on high-quality insulation and air sealing materials.

POS Discount
63%
(63%)
Top 2 Box
Phase 4: Concept Testing

**Concept:**
You (or a contractor) air seal and insulate your attic, basement and/or rim joists. After the insulation work is completed, you are eligible to receive up to $150 for each area that insulated and air sealed – up to $450 in total. To receive the rebate, you submit proof of air sealing and insulation materials, complete a checklist of the project scope, and submit a rebate form.

66%  

*Top 2 Box*
Phase 4: Concept Testing

Post-Install Rebate

POS Discount
Phase 4: Concept Testing

Post-Install Rebate
73%

POS Discount
27%
Final Thoughts

- Beginner’s mindset
- Human-centered
- Iterative approach