Fuel Poverty in Lawrence, MA

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Abstract

Low income communities in Lawrence, MA face the hardship of fuel poverty. This dilemma does not have a one-size-fits-all solution. We strive to contribute to the community by designing a low cost weatherization kit that households can easily utilize.

Background

In the US, ~15.9 million households live in fuel poverty. A household is in fuel poverty if they spend over 10% of their net income to safely heat their home. Inefficient heating systems cause higher costs. Poor weatherization of homes leads to a negative effect on the residents and the environment.

Waffles for Warmth

In order to raise money for the weatherization kit, we sold waffles to the general public of WPI. We also held a raffle contest with gift cards from various restaurants around the Worcester, MA area.

Money Raised: $380.00

Conclusion

While not the most effective solution, the weatherization approach is the most realistic solution in terms of cost for this area. We successfully raised enough money to put together an affordable weatherization kit for $106.00. Because of its low cost, this kit could potentially be implemented in low income households to help combat fuel poverty.

Weatherization Kit

Description of kit contents and benefits

- **Cost:** $106.00
- **1 Caulking ($8.61):** Reduces heat lost through unsealed windows/doors
- **4 Frame Insulation Strips ($6.90):** Reduces heat lost through large gaps
- **2 Door Sweep ($18.54):** Reduces heat lost through the gap between doors and floors
- **5 Ping Gun ($5.35):** Reduces heat lost through large gaps
- **3 Shrink Window Kit ($13.00):** Reduces heat lost through unsealed windows
- **6 Full Tape ($7.88):** Prevents heat loss from air leaks

Note: The numbers above do not match our total cost of the kit as some basic tools are not included.

Acknowledgements

We would like to thank:
- Professor Brian Savilonis and Professor Geoff Pfeifer
- Rebecca Zahn: Research Librarian
- Sam Evins and Hany Tlegnaga (PLA)
- Linda Swasey: LIHEAP Director in Lawrence, MA
- Larry Brown: Director of Weatherization at the Community Teamwork Ink in Lowell, MA

Mr. Frezza & Mr. Martin Landefeld in RI
Patron Basil in Worcester, MA
The Breunin in Worcester, MA
Mr. Dock: Photographer for Waffles for Warming
Waffles for Warmth Volunteers
Jess Norman for buying so many waffles

References