

REDUCING BARRIERS TO RESIDENTIAL ENERGY SECURITY THROUGH AN INTEGRATED CASE-MANAGEMENT, DATA-DRIVEN, COMMUNITY-BASED APPROACH

#1952038

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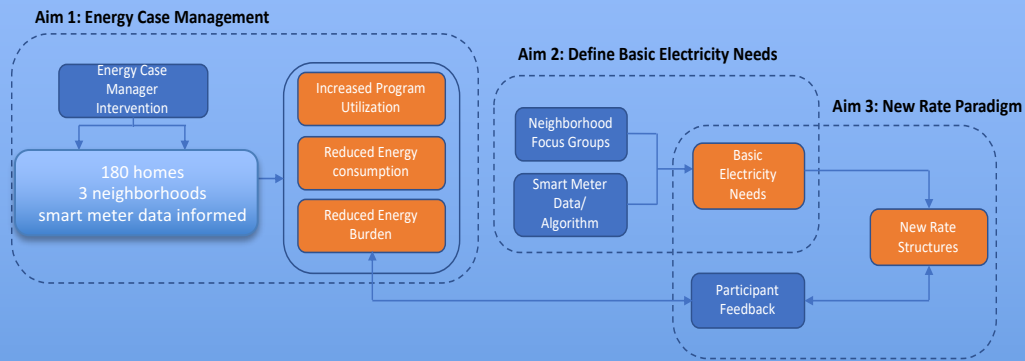
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- Justin Schott, Ecoworks
- Zachary Rowe, Friends of Parkside
- Michelle Lee & Rebecca Nikodem, Jefferson East, Inc.
- Sarah Clark, Southwest Detroit Environmental Vision

Project Overview

Visual Schematic



Project Vision

- Increase our understanding of low-to moderate-income (LMI) household consumption patterns and develop a framework for utility rate equity
- Implement a data-driven, community case-manager approach to increase LMI household energy efficiency participation

Project Overview

Use-Inspired Research

- Detroit, Michigan is one of the top energy burdened cities in the US, some households can spend up to 30% of their income on energy.
- Community-based organizations want to use technological information to drive decision making that reduces energy consumption and costs at the household and policy levels.

Fundamental Research Contributions

This project is grounded in the principles of distributive, procedural and corrective energy justice, and will advance how energy knowledge and engagement at the community-level can foster greater use of technology and the information it can provide.

Project Update

Research Question 1, What is the efficacy of a neighborhood-embedded energy case management intervention to facilitate reducing household energy insecurity?

- *Developing case-manager training kit*
- *Developing integrated participant application process informed by existing program qualifications and energy consumption patterns to inform individual household energy improvement plan.*
- *Developing household targeting and recruitment strategy*
- *Developing household survey and monitoring protocols*

Research Question 2, How can integrated social and technological methods help determine the amount of electricity that should be considered a basic right in LMI households and communities?

- *Working with local utility on energy consumption data requests*

Research Question 3, How can integrated social and technological methods facilitate development a new electricity rate paradigm that achieves the following objectives: i) a free level of basic electricity, ii) supplemental electricity priced to cover utility provider costs, iii) dynamic stability, and iv) rates that encourage energy efficiency and renewable energy investments?

Project Evolution

The pandemic has illuminated the critical interrelations between social, environmental, economic, and health disparities and the importance of a home environment that is affordable. The notion of uninterrupted energy access as a basic right has also elevated during this period, this was less the case when we proposed this project. The community partners discuss having increased conversations with residents about energy costs and savings. So our project comes at a great time.

We have learned that there are a growing number of opportunities both at the community, city, state and federal levels that will complement the efforts on this project. In our planning meetings, the community partners are discussing programs that either they have launched or know about and we are creating a collaboratively developed suite of energy programs offerings for our research participants

Anticipated outcomes & success measures for next year

Develop and analyze demand curve profiles for our three LMI neighborhoods and one control neighborhood; and for 180 participant households.

Implement neighborhood-based, energy case-management intervention with 180 participant households, enrolling participants in energy saving programs tailored for them.