



Michigan Home Energy Solutions

Submitted by The Heat and Warmth Fund in Response to the
State of Michigan
Social Impact Bonds – Pay for Success Based Financing
Request for Information
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Introduction

The Heat and Warmth Fund (THAW) is pleased to present the following information in response to the Request for Information for Social Impact Bonds – Pay for Success Based Financing. THAW, Michigan’s largest provider of emergency energy assistance, is dedicated to providing customer-focused solutions to Michigan’s low-income residents. THAW’s Michigan Home Energy Solutions (MHES) is our research and design center, through which our dedicated team focuses on innovation and design of next generation technologies and solutions. MHES programs are designed to help low-income families in Michigan increase their ability to pay their own energy bills and become energy self-sufficient.

MHES is a public-private financing partnership that leverages private resources to improve the effectiveness and quality of the State of Michigan’s energy assistance services, ultimately reducing the number of families in need of energy assistance. MHES aligns well with Governor Snyder’s commitment to delivering effective services to Michigan residents while utilizing partnerships to provide cost savings in service delivery. Through MHES, THAW is aligning the efforts of the public, private, and nonprofit sectors, promoting collaboration, and providing outcomes at a lower cost. MHES is also in line with the Governor’s focus on Human Services; working with best-in-class human service organizations to provide seamless, cost-effective services to those in need; as well as the State’s current policy support of services that increase energy self-sufficiency.

The Need for Change

Michigan families with incomes below 50% of the Federal Poverty Guidelines pay as much as 65% of their annual income simply for their home energy bills. More than 1.2 million households in Michigan are eligible for energy assistance. Unfortunately, only about 600,000 Michigan families receive energy assistance from federal Low Income Home Energy Assistance Program (LIHEAP)-funded programs annually, supplemented by state-funded grants, which address energy costs for an estimated 100,000 households per year. Nearly half of Michigan’s eligible households do not receive the energy assistance they need.

To compound the problem, current utility budget and protection programs are not always affordable, nor do they typically improve payment patterns amongst low-income families. THAW’s recent research confirms that the current utility transactional model is ill suited for the financial realities of low-income families. In the current system, the customer uses energy, then receives a bill informing them of the cost of that energy usage. While middle-income customers usually have the discretionary income to absorb unpredictable energy costs, low-income customers often do not have enough flexibility in their income streams to respond to costs, and struggle with arrears.

Traditionally, low-income customers qualified for energy assistance only when they received a shut-off notice. This, coupled with high arrears, provides for an emotional and financial crisis for everyone involved. Although the State of Michigan is testing new prevention strategies that do not require a shut-off notice for energy assistance eligibility, hundreds of thousands of customers are currently conditioned to get help only when going into energy crisis, rather than implement preventive measures.

THAW's Board of Directors, led by energy, corporate and community leaders in Michigan, has charged the MHES team to go beyond its current direct energy assistance model in order to identify where the real barriers to energy security lie, and determine how to best address these barriers. With our partners, we recognize the need to provide more than one solution to energy assistance to help families gain control of their own energy use and ability to pay. Every person has the potential to lower his or her energy use and contribute more. Through MHES, THAW and partners are developing a suite of innovative, scalable, technology-enabled solutions that will lead to systemic and productive change in the low-income households impacted by our work.

About The Heat and Warmth Fund

THAW is a Michigan non-profit organization created by a coalition of businesses, social service agencies, utility providers, philanthropy leaders, and concerned citizens that wanted to help prevent utility shut-off for those who could not pay their utility bills. THAW is a leading provider of emergency energy assistance for Michigan residents in need serving the most customers in Michigan outside of the Michigan Department of Human Services (MDHS). Since our inception in 1985, THAW has distributed more than \$125 million in energy assistance to more than 175,000 Michigan households. In 2012 alone, THAW distributed \$8.6 million to 9,000 households.

THAW provides a suite of services customers can select from to help solve their energy needs. We believe one solution does not fit all. Across all of the strategies we employ, our founding principles require that our energy solutions must 1) Meet the Customer where they are, 2) Give them a quick win (remove the temporary crisis), and most importantly, 3) Give them control over the solution. Longer term, THAW seeks to be the resource low-income customers turn to when they encounter problems paying their energy bills.

Historically, THAW addressed the challenges faced by low-income individuals and families by providing emergency energy assistance during times of temporary financial crisis. Through strategic partnerships with utility providers, community agencies, faith-based institutions and public schools throughout the state, THAW reaches diverse and traditionally inaccessible populations.

Low-income families confronted with a temporary energy crisis may apply for assistance through local community agency partners that serve as THAW screening sites in more than 60 counties throughout the state. Trained counselors help screen, process, and prepare each customer application that is submitted for funding. THAW then directly pays the customer's utility or fuel provider.

Customers who receive energy assistance from THAW benefit from timely and efficient customer service, receive energy efficiency education materials, and are directed towards THAW's social service agency partners for other needs. THAW often partners with social service agencies, funders, and utilities throughout the state through its mobile processing events – providing assistance in the customers' communities while also offering opportunities for customers to access financial and energy education tools and workshops.

About MHES

Michigan Home Energy Solutions (MHES) is a multi-year, \$10 million social innovation platform developed by THAW and its public and private partners to design, test and launch scalable solutions that improve energy affordability for low-income energy customers and put them on a path to self-sufficiency. This suite of programs includes pilot efforts already completed, while some are currently underway or planned for the near future. A timeline for MHES implementation is provided in Figure 1 on page 8.

While MHES has received significant support from the State of Michigan, utilities, and private foundations, THAW has identified a \$4 million gap in funding to complete, document, and evaluate MHES pilots in 2014 and 2015. THAW will determine funding needs for the second phase of MHES in late 2014, which will support full-scale implementation of the best solutions developed through the testing phase. Current estimates for the second phase range from \$5 million to \$15 million, which will be primarily directed towards technology and infrastructure implementation. This will position THAW and partners to scale up the successful solutions in 2015 and beyond, especially timely given the current sunset of important enabling legislation in September 2016.

The initial design and implementation of MHES initiatives was derived from behavioral research conducted by IDEO, a global design firm. The overall goals of the research were to reveal customer-based strategies for the low-income household to pay for the energy they use by improving the low-income customer's experience, creating transparency around energy behavior and use, reducing the pain of shut-offs, and increasing energy self sufficiency. The research provided the following set of findings:

- The low-income culture is one of instability and constant crisis
- Due to excessive debt, poor housing stock and the energy system's complexity, the low-income customer is extremely disconnected from their energy use

- The low-income customer is mired by day-to-day demands, unable to plan for the future and discouraged by the process

This research inspired the design of the MHES programs outlined in Table 1 and further detailed below. Instead of allowing low-income families to fall into significant arrears to qualify for assistance, and thereby putting other essential needs at risk, MHES programs focus on helping put families back on track of both consistently paying for and reducing their energy use. Beyond increasing the amount of energy assistance available to meet the unmet need for energy assistance, MHES provides services for low-income families with the potential of independently meeting the financial demands of their energy use.

THAW envisions that MHES programs will change and adapt as more data is gathered to show “what works” in terms of encouraging self-sufficiency amongst energy customers and fostering a greater ability to pay for the energy they use.

Program	Summary
Clear Control	A new, incremental energy billing system to encourage customers to “pay as they go”
THAW Seal of Approval	A designation provided to landlords and property sellers for dwellings that meet standards set by THAW for energy efficiency
THAW Affiliates	Energy assistance is bundled with other service offerings provided by “best in class” social service agencies. Current focus on integrating THAW’s services into MDHS’ Pathways to Potential program
Driving Transactional Efficiency	A collaboration between THAW, Michigan utilities and MDHS to optimize customer enrollment and electronic funds transfer of energy assistance funds from government funding agencies to utilities
Fostering a Social Innovation Ecosystem	Promotes social innovation through sponsored activities to encourage innovation within the social services sector in order to foster low-income energy affordability
Building Blocks	Encourages customers to learn about energy efficiency practices and implementation through weatherization techniques

Table 1: MHES Program Summaries

Clear Control, which began as a pilot in February 2013, is testing a new, incremental billing and payment system designed to encourage users to pay as they go and foster a greater understanding of the relationship between energy consumed and the customers’ utility bill. This new system will result in a reduction in energy consumption through low cost/high impact weatherization installation, and communication to customers of daily consumption in dollar amount through texts, emails, and outbound

calling alerts. The program is designed to increase the percentage of utility bills paid by users without assistance, provide users a greater sense of control over utility bills, lower energy bills, and provide for fewer days in shut off status. Clear Control is being piloted in Flint with 30 “moderate payment performing” customers to start and a planned scale-up to as many as 500 in 2014. Partners in the pilot include Consumers Energy, CLEAResult, and MDHS.

The **THAW Seal of Approval** program begins with a feasibility study that will determine if low-income energy customers are influenced in purchasing or renting a particular home if they know beforehand the potential energy cost of that home. The study is expected to lead to the development of a program in which landlords and property sellers will earn a *THAW Seal of Approval* for dwellings that meet standards set by THAW for energy efficiency. The program is expected to incentivize retrofitting in low-income housing, more low-income families living in more cost-effective housing stock, and lower energy bills. Partners are expected to include Consumers Energy and the Michigan State Housing Development Authority.

The **THAW Affiliates** program, which will be piloted in select locations near Detroit and in West Michigan, will test energy assistance delivery models through partnerships with “best-in-class” social service organizations that focus on moving low-income families to financial self-sufficiency. THAW and partners, along with 300 participants, will test whether energy assistance dollars are used more effectively when leveraged with bundled services provided by these social service agencies. In addition, THAW has targeted 25 schools that are part of the MDHS’ Pathways to Potential (P2P) program to integrate and align its services. The initial target areas for P2P include Detroit, Flint, Pontiac, and Saginaw.

Driving Transactional Efficiency is a collaboration between THAW, Michigan utilities and MDHS to optimize customer enrollment and electronic funds transfer of energy assistance funds from government funding agencies to utilities. THAW is engaged in joint planning activities with Consumers Energy to develop its “Customer Behavioral Analytics Engine,” which supports identification and segmentation of low-income customers. In addition, THAW has partnered with both Consumers and DTE under a fee-for-service relationship to enroll customers within their newly developed affordable payment plans (CARE and LSP). These programs seek to optimize an Affordable Rate transactional model, offering assistance over a 12-month period as long as participants make monthly “affordability payments.” In some cases (i.e. LSP), arrears forgiveness is incentivized based upon customer payment performance.

Although not designed to directly test methods for encouraging energy self-sufficiency, the **Fostering a Social Innovation Ecosystem** program will promote sponsored activities such as events, education, award programs, and competitions that encourage innovation within the social services sector in order to foster low-income energy affordability. THAW and Consumers Energy have developed a “Fostering Energy

Affordability” category prize within the MEDC and Michigan Corps’ Social Entrepreneurship Competition. THAW and Consumers Energy are frequent conference presenters and are working to establish social innovation tracks at the Detroit Regional Chamber Mackinac Policy Conference and/or West Michigan Policy Forum in 2014.

Building Blocks is designed to increase the understanding of the relationship between household energy consumption and energy bills by encouraging customers to learn about energy efficiency practices and implementation through weatherization techniques. This will be achieved through incentives, providing do-it-yourself conversion kits, training workshops, and ongoing conservation tips to maintain momentum in driving down energy costs. Building Blocks began as a 30 person pilot in March 2013.

Participant Base

THAW projects the participant base for MHES will grow from an initial 30 customers to 200,000 by 2018 (see Table 1). THAW, which currently provides energy assistance to families across the entire state of Michigan, from Detroit to the Upper Peninsula, expects the tools developed through MHES programs will ultimately be available in various forms to households across the state.

Depending on the scope of the specific MHES program, target demographics may vary; however, a common thread through MHES is to identify families who are not yet in crisis with the goal of making a greater impact by permanently pulling them out of the emergency energy assistance cycle. THAW will use data gathered by its own program analytics, MDHS, and utility partners to target low-income energy users who show a level of motivation to get out of energy debt.

Scaling MHES

MHES programs are designed be replicated, scaled-up and implemented in service areas throughout Michigan for any eligible household. MHES has significant capacity to expand due to THAW’s statewide presence and experience administering energy assistance as well as its strong partnerships with MDHS, the Michigan Public Service Commission (MPSC), utilities, and other service agencies.

A timeline for scaling MHES is provided in Figure 1. From a high level, 2014 will bring increased engagement with MDHS and MPSC for implementation and scaling of the MHES programs. In 2015, THAW and partners will further develop energy assistance technology and solutions, ultimately transforming THAW from a traditional, charitable assistance provider into a practical solutions provider operating on a fee-for-service level. Along with public and private sources already identified by THAW, Social Impact Bonds could provide the needed resources to fully implement and scale MHES for maximum impact.

	2010	2011	2012	2013	2014	2015+
THAW Board Seeks Change Agent	■					
Long Range Planning Group Convened		■				
THAW Begins Mobile Processing		■				
IDEO Behavioral Research Study to Inform MHES			■			
MHES Program Design			■			
Pursuing Funding to Meet Gap				■		
First Pilots Launched				■		
MDHS/MPSC Engagement				■		
MHES Programs Scaled					■	
Full Scale Technology/Fee for Service						■

Figure 1: MHES Implementation Timeline

Projected State Budgetary Savings

Currently, MHES is a five-year, \$10 million initiative of which nearly \$6 million has been secured to date. Much of this funding has supported technology, system, and product development; however, a considerable amount has been dedicated toward needed energy assistance to those in need throughout testing. This investment is projected to show significant returns, especially as it relates to the impact on public energy assistance.

Ultimately, through a combination of reducing energy consumption and better payment performance, the programs and services that emerge could impact a significant percentage of the 1.2 million Michigan residents eligible for energy assistance. THAW estimates it will reach as many as 200,000 Michigan households by 2018, with a reduction in subsidized energy assistance of \$873 per customer impacted (\$174,670,900 cumulative). The table below depicts the reduction in required state assistance through a comprehensive approach to equipping customers with the tools and information they need to use less and contribute more towards their energy costs.

	2013-14	2014-15	2015-16	2016-17	2017-18
Number of Customers	30	500	5,000	50,000	200,000
Cum. energy efficiency savings per customer	\$250	\$375	\$418	\$459	\$500
Cum. increase in payment performance per customer	\$100	\$1,200	\$255	\$313	\$373
Annual reduction in subsidies for impacted customers	\$10,500	\$287,500	\$3,362,500	\$38,595,000	\$174,670,900

Table 2: Program Impact Estimates

The above calculations assume that, through effective behavioral-based programs, the average low-income household could realize a 20% reduction in energy consumption by 2018. Through utility transactional models and communication strategies that are more in-line with the financial spending profiles of low-income households, customers' payment performance may be increased by as much as 36%. On a micro level, the interventions piloted through MHES will place a household on a path to self-sufficiency. On a macro level, the State will experience a measurable reduction in subsidies to the households impacted by our work.

Figure 2 depicts the compounding effect on state energy subsidies by more effectively controlling 2 variables: the energy efficiency of the home and a modest increase in the contribution of a household toward their energy costs.

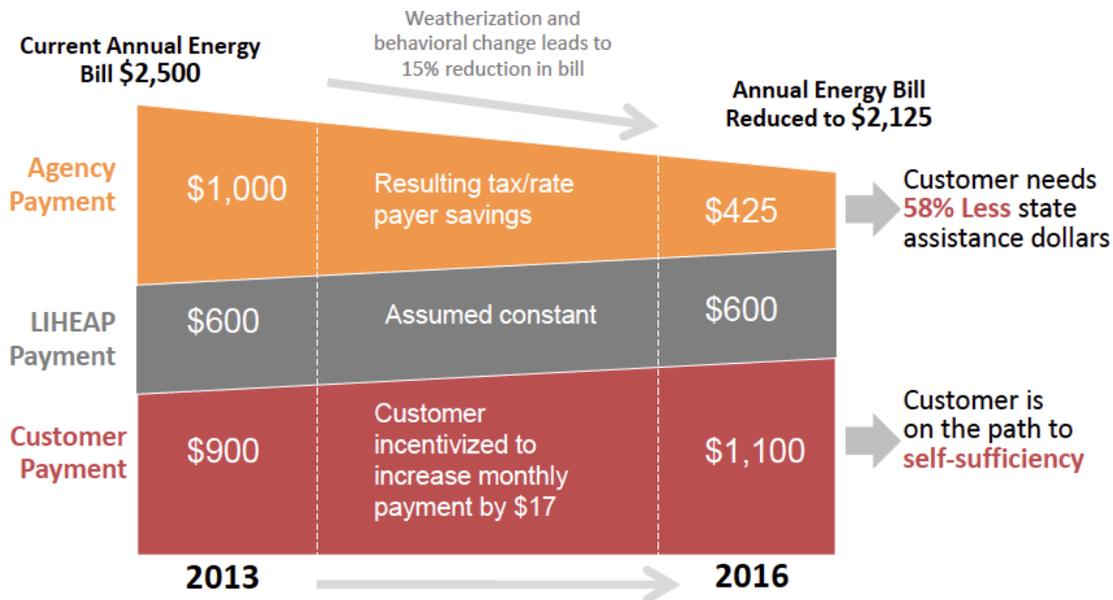


Figure 2: MHES Programs' Effect on State Subsidies

Evidence

MHES, and its expected outcomes, are strongly rooted in research and pilot testing. MHES and its partners, Consumers Energy, MDHS, and CLEAResult, began MHES as a 17-week research initiative, which concluded in November 2012. The research was conducted by an award-winning global design firm, IDEO. The design of MHES programs is based on this behavioral research.

Through piloting efforts conducted in Flint, Michigan, THAW gained a deeper understanding of the low-income energy customer. The initial IDEO research phase included immersion into the lives of low-income customers through observation; customer, stakeholder and expert interviews; three rounds of concepts and prototyping; in-home user feedback sessions; and other tactics to measure the behavior of low-income energy users, which leads to certain choices about energy consumption.

IDEO took a human-centered, design-based approach to identify new ways to serve and support people in need of energy assistance. The overall goals of the research were to reveal customer-based strategies for the low-income person to pay for the gas and electric energy they use by improving the low-income customer's experience with energy, reduce the pain of shut-offs, and increase energy self sufficiency. The findings from the research led to the progressive design of MHES.

Measurement

MHES includes target outcomes and specific methodologies for measuring and evaluating the program's impacts. Long-term outcomes include the reduction of low-income household energy bills through weatherization and behavior changes, and an

increase, through incentives, in the amount that they pay. Together, these two variables have the potential to significantly close the gap between energy used and energy paid for, a significant boost to attaining self-sufficiency.

Immediate outcomes of MHES will include tested and scalable strategies for implementation throughout the state that:

- Reduce arrears and shut-offs
- Improve transaction cycle time that better fit low-income situations
- Decrease system administrative costs
- Increase the percentage of utility bills paid by families without assistance
- Provide a greater sense of control over utility bills and finances overall

The overall success of MHES and its programs will be measured against three criteria:

- Did we help customers pay for the energy they use before they reached crisis, before shut-off, and before the destructive effects of shut-off can take hold?
- Did our outreach optimize energy efficiency for low-income users and reduce energy costs, thereby reducing total arrears costs now paid through public funding?
- Did MHES innovations help low-income customers pay a higher percentage of their energy bill than they currently pay, further reducing the need for Michigan taxpayer subsidization of the customers affected?

Conclusion

With appropriate funding, THAW and its partners will be able to fully implement MHES strategies, providing important programs that will change the way we provide energy assistance in the State of Michigan. Every household has the potential to lower their energy use and participate more in managing their energy bills. We believe that MHES will enable the development and implementation of scalable technology, processes, and customer-focused solutions that will lead to systemic and productive change in the low-income households impacted by our work.

MHES will move the standard of energy assistance towards prevention and systemic change rather than strictly responding to financial crises. Through this change, THAW will help meet the unmet demand for energy assistance, lessen dependence on taxpayer and ratepayer subsidies, and provide an energy assistance delivery model that will drive prosperity.