



Spotlight on Michigan: Experiment to Find the Right Mix of Incentives

Key Takeaways

- Weight incentives to reward deep energy improvements over general program participation in order to maximize energy savings per home
- Recognize that neighborhood characteristics are important determinants of customer participation, sometimes more so than incentive levels
- Ensure that the program is flexible enough to adapt its features based on feedback and results during implementation



The Better Buildings Neighborhood Program is a U.S. Energy Department program that is improving lives and communities across the country through energy efficiency.

To learn how the Better Buildings Neighborhood Program is making homes more comfortable and businesses more successful and to read more from this Spotlight series, visit betterbuildings.energy.gov/neighborhoods.

With support from the U.S. Energy Department's Better Buildings Neighborhood Program, a diverse coalition of partners under the banner of BetterBuildings for Michigan designed 27 neighborhood "sweeps" across the state. These targeted outreach campaigns applied varying incentives and outreach strategies to designated neighborhoods with a goal to understand which incentives and strategies work best in the target communities.

In the earliest sweeps, program staff focused on maximizing the number of participants receiving a diagnostic energy assessment and some energy efficiency measures, called the program's "base package." Program staff quickly realized that to achieve deeper energy savings with a target of at least 15% per home, they would need to ensure that both their messaging and incentives encourage participants to invest in additional measures. Using this information, BetterBuildings for Michigan changed its approach in subsequent sweeps and offered rebates to promote larger scopes of work for each home. As of June 2012, the program had completed nearly half of the 27 sweeps and continues to experiment with program design to understand the best strategies for each community.¹ All 27 sweeps will be completed by summer 2013, at which time there will be more lessons to glean from the program's experiences.

Create Multidimensional Incentives to Address Customers' Varying Needs

In all of the Michigan sweeps, there are three main program elements offered to participants:

- **Base Package:** This first step to participating in the program includes a diagnostic energy assessment, direct install items, and other measures, depending on the sweep. The cost of the base package varies—\$25, \$50, or \$100.
- **Incentives for Additional Measures:** In addition to the base package, participants are encouraged to undertake more comprehensive work to maximize their energy savings, including insulation, air sealing, duct work, and furnace replacement. These incentives are most commonly rebates paid directly to the contractor, and their size and structure varies among sweeps.
- **Financing:** All sweeps offer financing for additional measures through Michigan Saves,² which provides standard, unsecured loans ranging from \$1,000 to \$20,000 at 7% interest for up to 10 years. The interest rate varies across the sweeps.

Table 1 shows the combination of these three program elements for 10 of the early sweeps. For the base package, the table shows the cost to the customer, payment to the contractors, and measures included. For additional measures, the table highlights the

¹ Trends in early program data highlighted in this case study have not been evaluated for statistical significance. Conclusions from Michigan's experience to date should, therefore, be viewed as lessons learned that may change as the program completes its sweeps and undertakes more rigorous data analysis.

² Michigan Saves info available here: <http://www.michigansaves.org/>

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Table 1: Customer Incentives in 10 Michigan Sweeps

Neighborhood and Sweep Dates	Base Package Customer Co-Pay	Base Package Contractor Payment	Base Package Measures								Rebates for Additional Measures	Loan Interest Rate
			Evaluation	Air Sealing	Duct Sealing	Compact Fluorescent Lightbulbs	Aerators	Showerheads	Pipe Wrap	Thermostat		
Ferndale (Detroit Suburb) 11/10 – 1/11	\$50	\$1,100	✓	✓	✓	10	2	2	✓	✓	10% off job cost up to \$250	7%
Eastown (Grand Rapids) 1/11 – 3/11	\$50	\$1,100	✓	✓	✓	10	2	2	✓	✓	10% off job cost up to \$250	7%
Rosedale Park (Detroit) 1/11 – 5/11	\$50	\$1,100	✓	✓	✓	10	2	2	✓	✓	10% off job cost up to \$250	7%
Riverside Park (Grand Rapids) 4/11 – 10/11	\$50	\$900	✓	✓		10	2	1	✓	✓	10% off job cost up to \$500, plus \$50 for duct sealing	3.99% (adjusted to 0% halfway through sweep)
Lathrup Village (Detroit Suburb) 4/11 – 10/11	\$50	\$900	✓	✓		10	2	1	✓	✓	10% off job cost up to \$500, plus \$50 for duct sealing	3.99% (adjusted to 0% halfway through sweep)
Oakdale (Grand Rapids) 8/11 – 3/12	\$25	\$975	✓	✓		10	2	1	✓	✓	\$100/million btu saved (average \$2,000-\$4,000 usually covered full cost)	0%
Sterling Heights (Detroit Suburb) 9/11 – 1/12	\$50	\$375	✓			10	2	1	✓	✓	Double utility rebates up to \$2,000 (up to \$4,000 total with utility rebate)	0%
Roseville (Detroit Suburb) 10/11 – 1/12	\$50	\$375	✓			10	2	1	✓	✓	Double utility rebates up to \$2,000 (up to \$4,000 total with utility rebate)	0%
DeWitt Township 9/11 – 2/12	\$50	\$975	✓	✓		10	2	1	✓	✓	10% off job cost up to \$500, plus \$50 for duct sealing	0%
Marquette 10/11 – 3/12	\$25	\$350	✓			10	2	1	✓	✓	Double utility rebates up to \$1,500 (up to \$3,000 total with utility rebate)	0%

maximum rebate amount that a homeowner could receive. For financing, the interest rate was the key variable. This range of incentives created an opportunity to evaluate how various neighborhoods respond to different combinations of incentives, with the goal of isolating the key variables in the offer that influence homeowner actions.

Invest Money in Deeper Upgrades for Greater Savings

Although the varied incentive levels do not explain all of the differences in outcomes across sweeps, some trends have arisen across neighborhoods. “We discovered that people do respond to where you put the money,” said Mary Templeton, statewide program director of BetterBuildings for Michigan. “At first, we put more funding in the base package to get people into the program, but we quickly realized that to get deeper [energy] savings, you have to focus resources on the additional measures.”

Figure 1 shows that larger base packages, particularly those that included air sealing and duct sealing, seemed to attract a higher percentage of the eligible population—20% to 30% participation for a package valued at around \$1,000 versus 10% to 15% participation for a package valued at around \$350. More analysis by program staff, however, is needed to determine the statistical significance of these results.

The program was initially focused on selling the base package in the first few sweeps, and selling the additional work was secondary and often not mentioned in the initial pitch. Additionally, program staff learned that many homeowners, having seen contractors crawling around their homes and making significant energy improvements as part of the base package, felt like they had completed energy upgrades, and didn’t feel the urgency to do more. In all of the later sweeps, both the outreach staff and program materials focused more on comprehensive energy savings that necessitate additional improvements beyond the base package.

Figure 1: Percent of Eligible Homes Completing the Base Package and Additional Upgrades

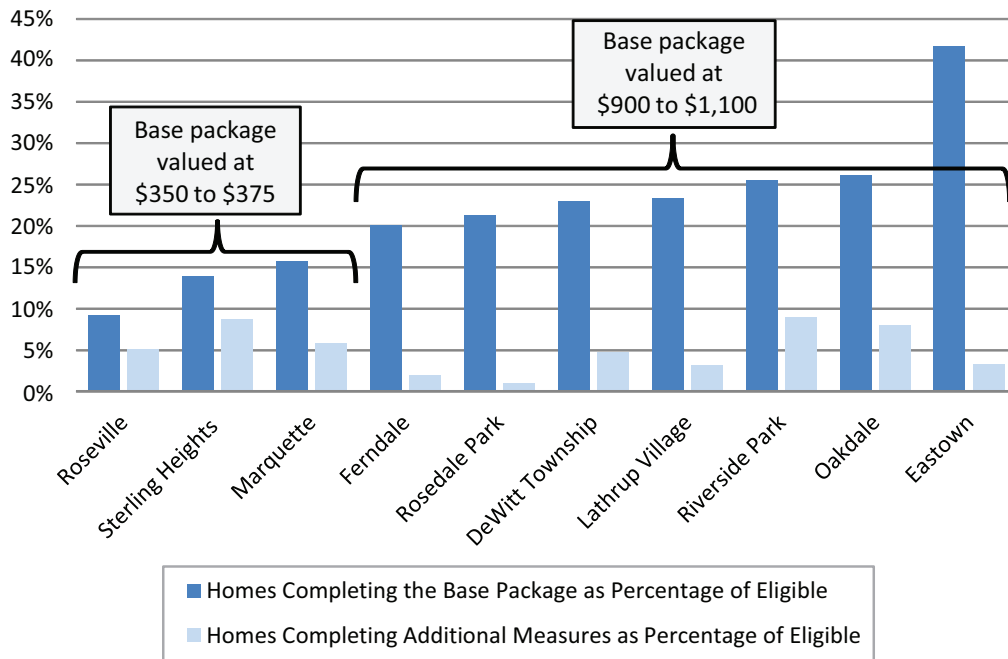
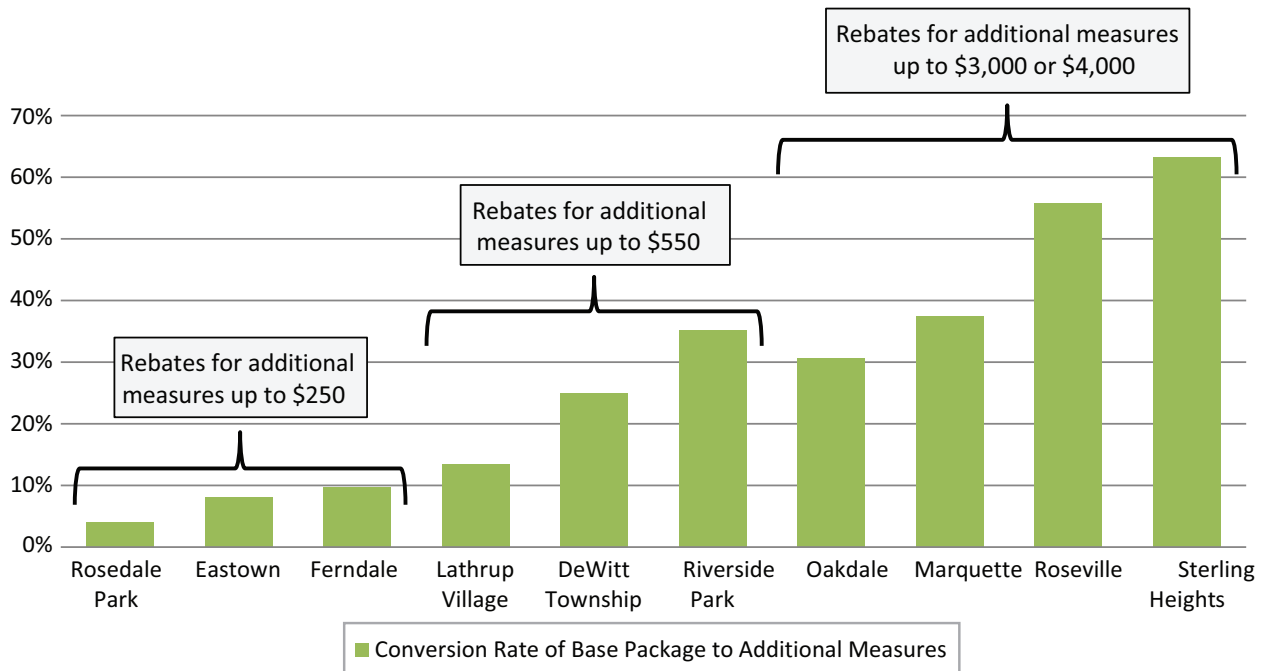


Figure 2: Conversion Rate of Base Package to Additional Measures



Although BetterBuildings for Michigan’s goal was to achieve more than 15% energy savings for participating homes, the base package could not get them to that level of energy savings. Even the larger base packages offered were estimated to save 10% or less. To better align program outcomes with this goal, BetterBuildings for Michigan staff decided to reduce the size of the base package incentives after the first few sweeps and increase the incentives for additional work. This had an immediate positive impact—the percent of the eligible homes undertaking additional measures increased to more than 30% (see Figure 2). For the sweeps in the Roseville and Sterling Heights neighborhoods where the program doubled the local utility’s rebates up to \$4,000 for additional measures, the program saw conversion rates increase from less than 15% in previous Detroit suburb sweeps to 56% percent in Roseville and 63% in Sterling Heights.

One anomaly in the neighborhood sweeps data is the high conversion rate of base package to additional energy-saving measures in Riverside Park versus the lower conversion rate in Oakdale, where the incentives were much higher. Staff suggested that this discrepancy may be due to the significantly higher income levels and the aggressive use of multiple outreach tactics in Riverside Park, but there may have been other factors involved as well.

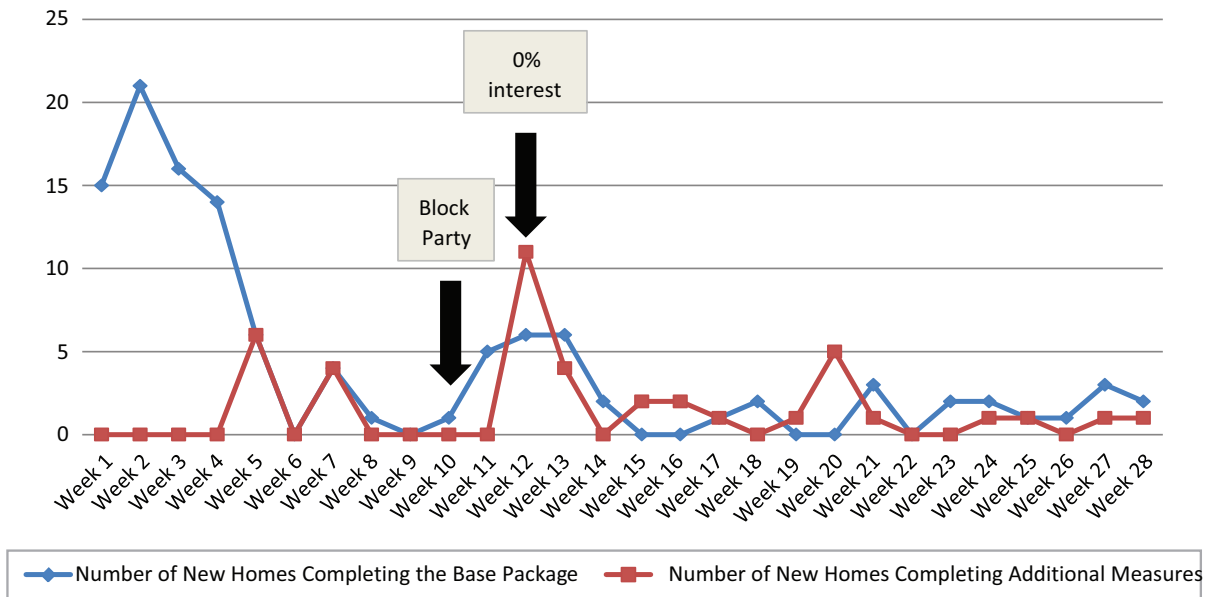
“The character of the neighborhood matters—you can’t offer the same program in different neighborhoods and expect the same results”

–Selma Tucker
Program Manager
City of Great Rapids

Understand How Neighborhood Characteristics Affect Response to Incentives

With nearly half of the sweeps completed, program staff started noticing how strongly certain neighborhood characteristics influenced residents’ response to the program, sometimes more strongly than the incentives offered. “The character of the neighborhood matters—you can’t offer the same program in different neighborhoods and expect the same results,” said Selma Tucker, program manager with the City of Grand Rapids. “It helps to really understand the community first.” Program staff were

Figure 3: Riverside Homes Completing Base Package and Additional Measures



often already familiar with the communities in which they worked. They reviewed as much demographic information as they could in advance, but there were still surprises.

Examples of this phenomenon were observed in the neighborhoods of Eastown and Riverside Park, which are located less than a mile from each other in Grand Rapids, Michigan. Although Riverside Park residents have a higher average income than Eastown residents, Eastown is very community-oriented, with many active nonprofits and neighborhood groups. Eastown residents attended community meetings about the program, and more than 40% of eligible households (162 homes) signed up for the base package, the highest of any sweep (see Figure 1); however, only 13 homeowners—or 8% percent of those who undertook the base package—went on to complete additional measures.

In contrast, very few people in Riverside Park attended community meetings, and door-to-door canvassers were often met with cold responses to their outreach. Program staff conducted extensive, alternate efforts, including:

- Enlisting program ambassadors who were residents of the neighborhood
- Hosting an educational neighborhood block party
- Offering an additional \$50 rebate from the local utility
- Sending an automated phone message from a local, well-respected public official

About 25% of Riverside Park households ultimately signed up for the base package. Once a contractor met with a customer to install the base package, however, these households were more likely to complete additional energy-saving measures. Of the 114 homes that had the base package installed, 40 homes (35%) went on to install additional energy improvements.

BetterBuildings for Michigan staff will learn more about the impact of the interest rate in subsequent sweeps and share that information with other programs.

Program staff concluded that neighborhood-level differences, especially community cohesion and income levels, have a significant impact on a neighborhood's response to the incentives offered and outreach strategies employed. Income levels appear to be particularly important determinants of program participation. In neighborhoods with lower incomes, households needed more incentives to proceed with additional work beyond the base package. For example, in Rosedale Park, a low- to moderate-income neighborhood in Detroit where low rebates were offered, only three of 84 households (4%) that completed the base package went on to install additional measures. In Oakdale, a low- to moderate-income neighborhood in Grand Rapids, the program was able to encourage 47 of 154 households (31%) that completed the base package to undertake additional measures by offering incentives that covered most of the project cost. Lower-income neighborhood residents also tended to be suspicious of "deals" and may have been hesitant to take on loans, even if they qualified.

Evaluate Which Incentives Really Impact Success

It is also important to recognize the incentives that do not appear to have a noticeable impact on a program. Program staff suspect that some factors had little impact on the program's success rate. For example, the initial cost to the customer of \$25, \$50, or \$100 for the base package did not appear to have an impact on participation.

It was also unclear whether the loan interest rate made a difference in the first 10 sweeps. The first three sweeps offered a 7% interest rate and experienced a lower conversion rate to additional measures, but they also had low rebates. More people participated when the interest rate was lowered to 0% in the next seven sweeps, but the participation of the 0% interest rate group seemed to be significantly influenced by the larger rebates, making it hard to isolate the impact of the interest rate. In the Riverside Park sweep, the interest rate dropped from 3.99% to 0% right after a block party was held to re-engage the community halfway through the sweep. This interest rate reduction, along with the block party, seemed to garner a response (see Figure 3).

In more recent sweeps, program staff reported that there was little difference in customer response to 1.99% versus 0% interest, but that 7% seems too high for most participants. BetterBuildings for Michigan staff will learn more about the impact of the interest rate in subsequent sweeps and share that information with other programs.



Michigan

Program Accomplishments

From October 2010 through March 2012

Home energy assessments completed: 2,291
Home energy upgrades completed: 1,171
Commercial energy assessments completed: 27
Commercial building space upgraded: 3,609,138 square feet

BetterBuildings for Michigan

BetterBuildings for Michigan was developed by the Michigan Energy Office and Michigan Saves, a non-profit organization dedicated to making energy improvements easy and affordable in collaboration with public, private, and non-profit partners throughout the state, including the City of Grand Rapids, the Economic Development Corporation of the City of Detroit, and the Southeast Michigan Regional Energy Office.

Learn More

www.betterbuildingsformichigan.org

BetterBuildings for Michigan Contacts

Robert Jackson, Manager, Co-Principal Investigator
Michigan Energy Office
jacksonr1@michigan.gov, 517-373-2731

Jeff Williams, Project Director, Co-Principal Investigator
Michigan Saves
jwilliams@michigansaves.org, 734-494-2190