

Evaluating Massachusetts's Heat Loan Program

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MA Heat Loan Program

- Began in 2006 w/532 loans, 11,000 in 2014
- 0% loans of up to \$25,000 over 7 years
- Covers weatherization, HVAC, water heating
- Participants must receive free Home Energy Assessment
- Heat loan provided in addition to financial incentives

Heat Loan Accomplishments

- **Largest Volume**--Over \$250 million financed (residential) in last three years - more than other leading states, combined.
- **Broadest Lender Participation**--Over 60 local Banks and Credit Unions across the Commonwealth
- **Broad FICO score acceptance**--Since 2011 Heat Loans approved with FICO well into sub-prime category
- **Broad Income Distribution**--~45% of household incomes taking the Heat Loan in 2014 were in Census Blocks with median incomes between \$40 to \$80K. Banks indicate income is not a major barrier for heat loan approval
- **Lowest Cost**--5% interest write-down; no credit enhancements; no admin; lenders bear principal risk

Can We Calculate Heat Loan's Contribution to Overall Energy Savings

- Challenge similar to determining relative contribution of LeBron James, Kyrie Irving, and other Cavs.

Evaluation Options

	NBA	Energy Efficiency	Issues
Use Advanced Statistics	Player Efficiency Rating, Win Share, Adjusted Plus/Minus	Self-report ratings, Analytic Hierarchy Process	Subjective, Multiple Interpretations, Pits individual achievement against team goal
Post--Expert Decision	MVP Vote	Delphi Panel	
Pre-Negotiations	Salaries	Stipulate Shares	

Heat Loan Results

- **Heat Loan pushes participants to do more—**
 - 81% said the loan enabled them to make improvements they would not otherwise have made
 - 85% said it enabled them to install more of the recommended measures
 - Heat loan participants installed 70% of recommended insulation measures, others only 44%
- **Most contractors Heat Loan very important to business and pushes customers to do more and choose higher efficiency**

Analytic Hierarchy Process

- Traditionally, we asked what was the most important factor in your decision to participate
- AHP compares each possible factor head-to-head with each other.
- AHP then provides relative importance scores for each factor.
- Better, than traditional approach, but!
 - Still relies on self-reported recall of past event
 - Rational post assessment not necessarily what happened
 - Buy decisions are complex, include emotions
 - Underplays value of intangibles and catalysts

Relative Importance of Heat Loan vs Incentives and Energy Specialist

- Those taking loan rated heat loan 50% more important than incentive, and 300% more important than energy specialists.
- However, only 9% of HES participants took loans; only 6% rated HEAT LOAN as most important factor.
 - 14% were unaware that they existed
 - 77% knew of loans and did not use them.
- Heat loan is tool in toolbox, but is not something that should replace incentives and energy specialist.