

Determining Disparities in the Distribution of the Energy Efficiency Resource through the History of Michigan Policy

Authors : M. Benjamin Stacey

Abstract : Energy efficiency has been increasingly recognized as a high value resource through state policies that require utility companies to implement efficiency programs. While policymakers have recognized the statewide economic, environmental, and health related value to residents who rely on this grid supplied resource, varying interests in energy efficiency between socioeconomic groups stands undifferentiated in most state legislation. Instead, the benefits are oftentimes assumed to be distributed equitably across these groups. Despite this fact, these policies are frequently cited by advocacy groups, regulatory bodies and utility companies for their ability to address the negative financial, health and other social impacts of energy poverty in low income communities. Yet, while most states like Michigan require programs that target low income consumers, oftentimes no requirements exist for the equitable investment and energy savings for low income consumers, nor does it stipulate minimal spending levels on low income programs. To further understand the impact of the absence of these factors in legislation, this study examines the distribution of program funds and energy efficiency savings to answer a fundamental energy justice concern; Are there disparities in the investment and benefits of energy efficiency programs between socioeconomic groups? This study compiles data covering the history of Michigan's Energy Efficiency policy implementation from 2010-2016, analyzing the energy efficiency portfolios of Michigan's two main energy providers. To make accurate comparisons between these two energy providers' investments and energy savings in low and non-low income programs, the socioeconomic variation for each utility coverage area was captured and accounted for using GIS and US Census data. Interestingly, this study found that both providers invested more equitably in natural gas efficiency programs, however, together these providers invested roughly three times less per household in low income electricity efficiency programs, which resulted in ten times less electricity savings per household. This study also compares variation in commission approved utility plans and actual spending and savings results, with varying patterns pointing to differing portfolio management strategies between companies. This study reveals that for the history of the implementation of Michigan's Energy Efficiency Policy, that the 35% of Michigan's population who qualify as low income have received substantially disproportionate funding and energy savings because of the policy. This study provides an overview of results from a social perspective, raises concerns about the impact on energy poverty and equity between consumer groups and is an applicable tool for law makers, regulatory agencies, utility portfolio managers, and advocacy groups concerned with addressing issues related to energy poverty.

Keywords : energy efficiency, energy justice, low income, state policy

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