



# Baseline Assessment and Policy and Program Evaluation

**An Assessment of Current Policies and Programs for Energy  
Efficiency and Renewable Energy for Agriculture and Rural  
Communities**

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MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY

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## Executive Summary

The Michigan Energy Office initiated the Agriculture and Rural Communities Energy Roadmap process to document the current status of energy-efficiency and renewable energy policies and programs for rural residents and businesses in Michigan, as well as to inform key decision makers about policies and programs that could promote greater access to these resources amongst the agriculture sector and in the state's rural communities. The impetus for this effort was the recognition that **despite the overall success of Michigan's energy-efficiency and renewable energy standards over the past ten years, current standards do not emphasize serving agricultural or rural customers, and because of this lack of focus, these groups have not realized the same benefits as others.**

Responding to a directive from the Michigan Energy Office, the project team undertook a multifaceted approach to develop a roadmap for advancing energy efficiency and renewable energy across targeted populations and supporting the state's goals for a cleaner, more-efficient energy system. The first component of the roadmap process was to develop a comprehensive inventory of the current state of Michigan's energy-efficiency and renewable energy policies and programs. Next, the project team evaluated these programs and policies to determine how well they are serving agricultural and rural customers and examined exemplary programs in other states to define practices that could be adopted in Michigan to improve the impact of energy efficiency and renewable energy. The project team drafted a comprehensive summary report of the information gathered, compiling the document with the objective of informing stakeholders of barriers and opportunities that can be addressed through policy and programmatic changes that will expand opportunities for agricultural and rural customers.

## Background

Energy efficiency and renewable energy have been key components of Michigan's energy policy framework for more than a decade. These policies require energy providers to work with customers to reduce energy use through efficiency upgrades and behavioral changes and promote the development of renewable resources at the utility, customer, and community scales. While these policies are available to all businesses and residents in the state, to date, there has not been a concerted effort to connect these resources to the agriculture sector or rural populations, which have historically been harder to reach than the typical energy consumers.

**Despite being one of the largest segments of Michigan's economy, the agriculture sector has struggled to tap into the full potential offered by energy efficiency and renewable energy.** In some cases, utilities have found it difficult to know exactly which accounts belong to agricultural customers because this aspect of customer accounts is not identified in utilities' billing systems—an agricultural customer would look like any other commercial and industrial or residential customer in the system. The challenge of reaching agriculture customers is compounded by the fact

that Michigan's agricultural sector is diverse, and these customers have unique needs that can require a more time-intensive approach than other businesses. In addition, the seasonal nature of agriculture operations means it is essential for program administrators to get timing right for outreach and implementation. Since energy is an essential input for the agriculture sector, representing up to 50 percent of the business expenses for several types of commodities, energy efficiency can have a major impact on agricultural customers' bottom line. Michigan's rural population has faced similar challenges to accessing energy-efficiency and renewable energy programs due to limitations such as access to suitable Internet service, proximity to major retailers offering discounted energy-efficiency products, availability of participating trade allies, and exposure to traditional marketing and outreach efforts.

Overall, rural and agricultural customers exhibit strong support for energy efficiency and conservation as well as renewable energy, specifically solar, yet customer awareness of available program offerings remains low and these groups have not accessed a proportionate share of existing programming. To date, there has been no analysis of the potential for energy efficiency or renewable energy in the agriculture sector or rural communities; however, stakeholders and customers perceive that **there is a sizeable untapped market for energy efficiency and recognize that existing programs and policies do little to target investment in these segments**. Analysis of utility energy-efficiency program data reveals that while there has been significant penetration of energy programs in agricultural and rural communities, the total savings impact falls short of a proportional share when compared to the number of customers residing or operating in rural zip codes; the majority of investment through energy-efficiency programs has occurred in more populated areas and with residents and businesses that are easier to reach.

Policies that specifically target the agriculture sector or rural communities have been limited; however, targeted programs, like those offered through the U.S. Department of Agriculture and Rural Development, certain utility providers, and the Michigan Energy Office, have demonstrated how concerted outreach can benefit agricultural and rural customers. In spite of this fact, these programs have not made up a large proportion of the overall funding for energy-efficiency programming in the state, and **more needs to be done to align policies and programming with the needs of rural and agricultural customers**. This report identifies a number of key themes and objectives that policymakers should consider to advance energy efficiency and renewable energy for these important sectors in Michigan.

## Key Takeaways

**Energy-efficiency programs should be available that have a specific emphasis on serving the needs of agriculture and rural customers.** The largest source of energy-efficiency funding flows through utility programs as a part of Michigan's energy-efficiency resource standard. In recent years, utilities have begun to take a more direct approach to reaching agricultural customers through their energy-efficiency programs, recognizing the potential in the underserved population. Consumers Energy was the first utility to establish a specific agricultural program in 2014, and since

that time, several other utilities have established their own agriculture-specific programs. The rise of sector-specific programs illustrates how utilities are responding to the unique needs of their agriculture customers. Customers will benefit from an increasingly targeted approach to program design and implementation efforts.

**Cost-effective energy-efficiency programming should continue to be a statewide policy priority and be made available to all Michigan residents.** Energy efficiency remains a cost-effective resource in utilities' energy supply portfolios. However, there is no requirement for municipal utilities and electric cooperatives to continue to offer energy-efficiency programming for customers after 2020. While these utilities might voluntarily pursue energy efficiency, the lack of a state policy requirement creates a significant risk that there will be a portion of Michigan's rural population that would no longer have access to energy efficiency through their utility service provider. This creates the possibility that energy-efficiency investment in these communities will slow as the communication and incentives provided by existing programs diminish.

**Better communication of the potential benefits of energy efficiency to help customers feel confident in their decision to invest is key.** Agriculture customers stand to benefit from energy efficiency and renewable energy; however, there are other priorities that often take precedence over investing in energy. This is especially true when the agriculture sector faces low commodity prices and broader economic uncertainty. Additionally, agriculture customers are wary of the administrative burden associated with programs and can be reluctant to take on additional requirements. While low commodity prices are a strain on some agriculture customers' ability to invest in energy efficiency, they also mean that agriculture customers have a strong incentive to reduce input costs wherever they can.

Despite the potential benefits, many customers are still reluctant to invest due to the upfront costs. To build confidence, customers need accurate, trustworthy information about how their investment will benefit them in the short and long terms. However, even with accurate information about the cost and benefits of efficiency or renewables, some customers still won't be able to overcome the capital requirements needed. Programs that offer financial incentives (e.g., rebates) that make energy-efficiency investment more attainable by reducing upfront costs and shortening the payback period, together with financing options that address the need for upfront capital, have the potential to help customers overcome these barriers and drive energy investments.

**Increasing customer awareness requires education and outreach about the viability of onsite renewable energy generation to control and/or reduce energy costs.** Declining costs for customer-owned renewables continue to make onsite renewables, especially solar, a strong alternative to traditional utility service. The changing policy landscape for customer-owned resources presents an obstacle for some customers as they seek to understand how new program designs will impact them, but there is more that can be done to educate customers about the potential value of onsite renewable energy production, increase customer awareness, and ultimately drive adoption.

**As Michigan's renewable energy sector is primed for continued expansion, rural landowners need to have support to understand the impact of renewable energy siting on their business and how they can benefit.** The growth in utility-scale renewable energy has led to new opportunities for farmers to lease portions of their land for wind and solar development, augmenting their farm incomes with additional revenues. By leasing their land for renewable energy development, agricultural and rural customers can see declining costs for renewable energy as well as improved options for offsetting their energy costs.

**Deliverable fuel customers should have the same opportunities to access energy-efficiency services as customers served by natural gas utilities.** Rural communities have much greater dependence on deliverable fuels, such as propane, which are typically more expensive than natural gas. Currently, there is no requirement or incentive for deliverable fuel providers to offer energy-efficiency services, so customers who already pay more for their home energy also lack access to energy-efficiency programs. Policymakers should consider options for addressing this challenge with the goal of expanding energy-efficiency programs to deliverable fuel customers.

**Michigan's rural communities and agriculture sector need better collaboration and coordination to advance policies that reflect their needs and disseminate information about existing opportunities.** There is a sizeable unrealized energy savings in targeted sectors, and current efforts have not gone far enough to make resources available and build the necessary capacity among customers to expand these programs. Information related to opportunities for energy efficiency and renewable energy is largely disaggregated and only available from the entity that administers a program. To improve the availability and accuracy of information, there needs to be a resource that compiles information in a central location and makes it available to the appropriate groups. Opportunities exist for commodity groups and associations to partner with local civic organizations, nonprofits, or community institutions to inform the design of utilities' energy-efficiency programs and to connect customers to programs that will help them achieve real savings. These efforts should focus on improving how program administrators, contractors, and other vendors communicate about energy efficiency to support customers' understanding of how they might benefit from program participation. In addition, education efforts could promote peer-to-peer learning opportunities where customers can share their experiences and demonstrate program success.

**Farm energy audits need to be focused on demonstrating tangible benefits for customers in a way that drives implementation and supports customer action.** One of the key ways agricultural customers learn about the potential benefits offered by energy efficiency is through farm energy audits. Michigan's farm energy audit program has been an important resource for promoting standards and outreach in the agriculture sector, but the program does not do enough to drive implementation because the audits do not adequately document savings opportunities, nor do they

substantiate any future savings claims for custom agricultural projects. As one of the primary means by which customers learn about areas in which they can improve their energy efficiency, farm energy audits must do a better job of communicating potential benefits to customers and helping them understand how efficiency upgrades can improve their operations.

**Finally, more needs to be done to directly link farm energy audits to utility energy-efficiency programs that can provide financial incentives and other assistance to help enable energy-efficiency improvements.** Upfront and maintenance costs are the primary barriers for agriculture customers choosing to invest in energy efficiency, and customers need to feel confident that there are opportunities for them to access program support and other incentives or rebates. This is especially important since farm energy audits represent an added cost for customers—if these audits are not providing useful information, it will be increasingly difficult to get customers to partake in them. Farm energy audits also present a challenge for the auditors themselves—the amount of money auditors receive does not reflect the true cost of completing an audit, as the cost has been established administratively and does not correspond to an auditor's actual time commitment. Given that audits do not reflect the true cost of an auditor's time and the fact that agriculture customers are already sensitive to audit costs, farm energy audits that reflect the actual cost could further inhibit the number of audits conducted.

The key takeaways identified through the Agriculture and Rural Communities Energy Roadmap process provide important context for the needs of agricultural and rural customers in the state and offer potential paths forward to improve access and adoption in these populations. Addressing the barriers and opportunities for energy efficiency and renewable energy will take collaborative efforts from stakeholders and policymakers to implement policies and improve programs. This report will inform this dialogue and serve as a foundation for efforts going forward.