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# Utility efficiency programs offer model to merge climate, racial justice solutions

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***Many states require utilities to help low-income customers conserve energy despite higher costs and barriers.***

As urgency grows to simultaneously address climate change and racial justice through proposals like the Green New Deal, low-income energy efficiency programs provide a potential example of how to merge the priorities.

The time is right to bolster such programs since

the pandemic's economic effects mean more households will likely need assistance with energy bills, advocates say.

Studies — including a [recent one](#) by Lawrence Berkeley Livermore National Laboratory — show that dollar for dollar, the biggest efficiency gains can be made by investing in commercial and industrial energy conservation, while efficiency programs targeting low-income customers are among the least cost-effective.

However, many consumer groups, utilities, researchers and other stakeholders agree: The benefits provided by helping low-income customers are wide-ranging, and especially important to advance racial equity and protect vulnerable people in times like these.

“For low-income households, those savings can really make a difference,” said Annie Levenson-Falk, executive director of the Citizens Utility Board in Minnesota. “Almost a third of households in the U.S. struggle to pay their

energy bill, and it's even higher for Black and Latino households. Now you have the economic effects from the pandemic exacerbating energy burdens overall and particularly for households of color. Energy efficiency can make a real difference there.”

Across the Midwest, legislative and policy efforts are underway to bolster low-income energy efficiency programs and remove barriers to participation, efforts that are also expected to create jobs in communities and sectors hard-hit by the pandemic-related recession.

“Better energy efficiency frees up money to spend on other essentials [low-income families] have difficulty paying for, like food and housing,” said Amy Bandyk, executive director of the Citizens Utility Board in Michigan. “For other groups that are not under as much financial pressure, saving money on energy costs is great and important, but it won't be the difference between, say, being evicted or not.”

## Costly programs

Many states have laws mandating that utilities reduce their energy demand each year, and require utilities to spend a certain percentage of revenue on energy efficiency programs. They usually require specific spending for low-income customers, either a specific dollar amount or percentage of total spending. In Minnesota, for example, electric utilities are required to spend 0.2% of gross operating revenue and natural gas utilities 0.4% on low-income programs, and the proposed [ECO Act](#) would double that amount.

“We regularly exceed both spending requirements in Minnesota and in 2019, spent about \$2.5 million on our low-income energy efficiency programs to serve about 5,700 low-income electric customers,” said Matthew Lindstrom, spokesperson for the utility Xcel Energy. “That year we also spent about \$1.9 million to serve about 2,000 low-income natural gas customers.”

Peoples Gas in northern Illinois spent \$8.8 million on efficiency programs for low-income customers last year, according to spokesperson Vanessa Hall, who said, “Our [income-qualified] energy efficiency programs are an essential way for us to support our customers who have financial insecurities.”

Energy efficiency investments typically must meet a cost-benefit test to make sure there is enough energy saved per dollar spent; this return on investment is much lower for low-income programs.

The Berkeley Lab study looked at utility-run natural gas efficiency programs in states including Minnesota, Iowa and Michigan between 2012 and 2017, and found that 28% of efficiency spending was in low-income programs, but only 7% of energy savings. Commercial and industrial energy efficiency programs made up only 20% of spending but reaped 44% of savings.

That's in part because utilities often pay the entire cost of energy efficiency investments for low-income customers — like the cost of a new hot water heater or insulation — as opposed to a rebate or partial payment for commercial, industrial or market-rate residential customers.

“In most cases if you're looking at the residential, commercial, industrial sectors, program administrators — for example, utilities — might be paying for 20% to 50% of the cost of the equipment, and in low-income if you want to have an impact they might have to pay for the whole thing,” said Steven Schiller, lead author of the Berkeley Lab study.

“Programs for income-eligible customers, by design and by necessity, typically cover more of the complete cost of various energy efficiency improvements for participants,” said Ross Corson, spokesperson for CenterPoint Energy, which has since 2010 spent \$35 million on low-income energy efficiency programs serving

140,000 households including in multifamily buildings and single-family homes. Commercial and industrial efficiency programs, he continued, “are aimed at influencing different decision-makers and pursuing different goals, both societal and utility.”

### **Multiple benefits**

Advocates note that real energy savings may be greater with low-income customers than they appear in a cost-benefit analysis, because many market-rate customers will make energy efficiency investments like a new heater even without a rebate, whereas the investment more likely wouldn't happen without support in the low-income household.

Meanwhile. making sure people are not disconnected and can afford to use energy means important quality of life and health benefits. Energy efficiency investments ensure hot water is available, that homes are warm and

lit, and that unsafe space heaters or hot pots are not used for cooking and heating. Low-income efficiency programs also help avoid utility shut-offs, a benefit for both customers and the utility.

“If you are reducing the cost then you increase the likelihood someone will be able to maintain their service,” Schiller said. “It’s expensive to disconnect someone’s service and then reconnect them.”

Schiller noted that sometimes energy efficiency upgrades may increase a low-income household’s energy use, because if they had a broken or extremely inefficient appliance, they might not have been using it at all — a factor that could be taken into account in cost-benefit calculations.

“If you get a proper heating system in place, even if it’s very efficient, it consumes more energy than a heating system that does not work or is not used, so you have suppressed demand,” Schiller said. “What is the proper



baseline from which you determine savings?  
What were they using last year, or what should they be using to maintain a healthy comfortable environment?”

Schiller co-authored another [Berkeley Lab study](#) released in May that explored how to incorporate factors including health, productivity, water resources, grid reliability and comfort into cost-benefit calculations. Some Midwest states already use some of these measures in their tests, as [cataloged by the National Efficiency Screening Project](#).

Pam Marshall, executive director of the organization Energy CENTS Coalition that administers low-income programs for Minnesota utilities, said they’d like to see changes in how cost-effectiveness is calculated.

“These programs represent the most cost-effective housing stability program that exists,” she said. “For the cost of a furnace and with the energy-savings, low-income people can remain

in their homes. Right now, the societal test does not capture these and health-related benefits, but we are working with Xcel and a contractor to quantify the non-energy impacts of these programs.”

She said the benefits of low-income efficiency investments, “from the decrease in health care visits, to increased food security and the ability to pay for other necessities, extend well beyond the actual installed efficiency measures.”

### **Low-income options**

Often energy efficiency projects like weatherization or installing new appliances can't be undertaken in low-income households because there are other structural or safety issues that must be addressed first, like mold, asbestos or faulty wiring. Consumer and advocacy groups are calling for policy changes and funding to address such challenges.

Corson said about 10% of households eligible

for CenterPoint's low-income energy efficiency programs must defer the work because of "asbestos/vermiculite; roof or other water leaks; excessive mold; defective wiring; lead paint; and similar issues," which the utility program cannot address.

"Other household issues such as extreme clutter or foreclosure can sometimes inhibit service providers," he added.

Households with incomes below a certain threshold are eligible for federal weatherization and efficiency programs, which can often fund structural repairs needed before energy efficiency overhauls are made. These funds are disbursed based on level of need, and not everyone who is eligible receives them. Utility-run programs are meant to serve customers who have low incomes but are ineligible for the federal program. Consumer advocates have long worried about a "donut hole" wherein customers who meet federal criteria but are last in line for

funds don't qualify for utility programs.

“States are beginning to focus on coordinating these [federally-funded and utility-funded] efforts,” said Midwest Energy Efficiency Alliance Executive Director Stacey Paradis. “And trying to identify more resources for the health and safety walkaway realm” — situations where efficiency work cannot be done until other building improvements are addressed.

She noted that stakeholders collaborations along these lines are underway in Minnesota, Illinois, Missouri and Michigan.

## **Keeping large customers in**

Depending on the state, the cost-effectiveness of energy efficiency investments can be calculated per program or for the utility's portfolio as a whole. To facilitate more low-income investments, some say, it is ideal to judge the portfolio as a whole and increase participation of large commercial and industrial customers

where efficiency investments have major payoffs. That increases the cost-efficiency of the whole portfolio, allowing more spending on less cost-effective low-income programs.

“Industrial and commercial programs are the most cost effective within the utility efficiency portfolio, so robust [commercial and industrial] programs generating larger energy savings can lead to more funding for harder to reach programs, in under-resourced communities, rural and agricultural communities,” said Midwest Energy Efficiency Alliance policy director Nick Dreher.

MEEA has long been advocating for more participation of commercial and industrial customers in utility-run energy efficiency programs. They lament the fact that in every Midwestern state with an energy efficiency mandate, there is a way for industrial customers to opt out of participating in utility-run energy efficiency programs.

The idea is that when large customers opt out of utility-run energy efficiency programs, they will pursue energy efficiency on their own. But a [2017 study](#) by MEEA found that often those efforts are lacking.

A [2019 MEEA report](#) says that while much “low-hanging fruit” in energy efficiency savings in the residential sector has been plucked, industrial energy efficiency savings are “largely untapped.”

“The higher cost-effectiveness of the [commercial and industrial] portfolios can help offset the very low or even negative cost-effectiveness scores attributable to low-income portfolios,” the study says.

In a 2019 fact sheet, MEEA reported that industrial customers in Wisconsin’s Focus on Energy program saved \$3.14 per dollar invested in gas and electric energy efficiency, and other utilities including Xcel in Minnesota, DTE Energy in Michigan and Consumers Energy in Ohio also saw industrial customers save more than \$2 per

dollar invested.

## **Jobs created, efforts underway**

Energy efficiency, especially weatherization, is a strong creator of local jobs. Expanding low-income efficiency programs, and getting more commercial and industrial customers to participate in utility programs, could help reverse job losses since the pandemic. Energy efficiency jobs make up the bulk of clean energy jobs lost during the pandemic at more than 413,000 nationwide, [according to a report](#) by the organization E2.

“It contributes to a lot of local contractor jobs — insulation, air sealing, mechanical contractors get a lot of work through these residential programs, particularly the low-income programs give them the most work,” said Rebecca Olson, director of residential programs for the Center for Energy and Environment in Minnesota, which works with utilities to run efficiency programs.

Olson also wants to see more focus on low-income renters, who may live in highly inefficient buildings but find it difficult or impossible to take advantage of utility efficiency programs.

“It takes a lot to get those projects done, there are multiple decision makers, property owners pay some bills, tenants others, there are a lot of barriers to getting work done on rental properties,” Olson said. “We would like to see more concerted effort because we have a lot of income-qualified customers in rental properties” — and such large projects could be big job creators.

Michigan leads the Midwest in total clean energy jobs, and energy efficiency jobs make up by far the largest portion of those jobs, according to a [2019 report from Clean Jobs Midwest](#).

Meanwhile Michigan has had the third most clean energy job losses since the pandemic, according to E2.

Bandyk hopes energy efficiency jobs in Michigan



will rebound and increase in the future, in part thanks to low-income investments.

“Up until 2017, the utilities’ investment into low-income efficiency programs in Michigan were weak compared to those for overall residential programs,” she said by email. “But over the last couple years utilities have increased their investment and now the level of spending for low-income customers is close to those of other residential customers. But since low-income efficiency costs more than efficiency for other groups, spending the same on low-income efficiency as for other groups does not equal saving the same.”

Midwest Energy Efficiency Alliance and Citizens Utility Board leaders say they are hopeful that across the Midwest, state legislators and utilities are working to expand and improve low-income energy efficiency programs. In Minnesota, programs would be expanded under the proposed ECO Act, which utilities CenterPoint

Energy and Xcel both support. And in Illinois the [proposed Clean Energy Jobs Act](#) would increase low-income energy efficiency assistance and job training. Neither bill passed during legislative sessions so far this year, but advocates hope the measures will be brought up in special sessions or next year.

“Illinois back in the late ‘80s, early ‘90s had the highest average electric bills in the Midwest, and now we’re among the lowest in country,” said Dave Kolata, executive director of CUB in Illinois. “A big reason is our investment in energy efficiency.”