

IT'S NOT ALWAYS EASY GOING "GREEN" IN LOCAL GOVERNMENT

Energy Efficiency and Renewable Energy Efforts in Wisconsin

Many local governments in Wisconsin have reported efforts to improve energy efficiency and utilize renewable energy. Our review of a state sustainability program finds that large investments in water and wastewater treatment systems have produced the greatest reported reductions in energy costs. Understanding the full range of costs and benefits of local governments' energy-related projects remains a challenge, however, because reporting on these efforts is complex, resource intensive, and not currently standardized in Wisconsin.

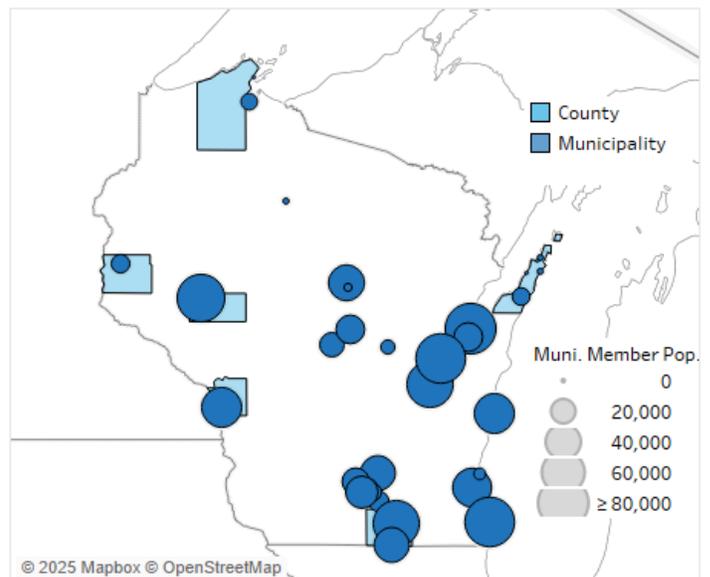
Since 2010, local governments participating in a statewide sustainability program have reported at least \$17 million in energy cost reductions through energy efficiency and renewable energy projects. Green Tier Legacy Community Charter participants have also reported at least 40 million kilowatt hours of energy saved – enough to power about [3,300 homes](#) for a year. Though imperfect, these estimates offer insight into the impacts of these strategies for local governments and the challenges of reporting about costs and savings.

The Wisconsin Department of Natural Resources (DNR) [Green Tier program](#) supports businesses, organizations, and local governments seeking to improve environmental performance and sustainability. The [Green Tier Legacy Communities Charter](#), a small subset of the overall program, provides local governments with a framework of suggested sustainability actions related to energy, transportation, land use, water quality, solid waste, health, and equity. In 2010, the program began with five participating communities and since then has grown to include 42 towns, villages, cities, and counties (see Figure 1). Participating communities' sustainability priorities vary, but a shared desire to conserve limited resources motivates many to pursue energy efficiency and renewable energy projects.

"Legacy Communities" have the option to submit annual reports to the DNR, and some choose to

The lead author of this brief, Rose Melton, was the Wisconsin Policy Forum's 2024-25 Todd A. Berry Fellow. The fellowship supports a graduate student selected annually to lead a research project on a state or local policy issue. It was named after Berry, who led the Madison-based Wisconsin Taxpayers Alliance (a predecessor to the Wisconsin Policy Forum) for more than 20 years.

Figure 1: Communities Across WI Participate in Green Tier
Green Tier Legacy Community members*, with municipal populations



Source: Wisconsin DNR. *The Bay Lake Regional Planning Commission is also a member of GTLC.

Energy Saving Project Categories

LED Replacement: The process of replacing traditional lightbulbs with more efficient and longer-lasting light-emitting diode (LED) bulbs

Building Energy Efficiency: Changes to a building's equipment, systems, or structure that reduce its energy consumption

Solar Energy Projects: Installation of solar panels that provide electricity directly to government facilities or electricity that a government sells back to its utility

Fleet Strategies: Policies and purchases that reduce the use of traditional diesel or gasoline fuel by government vehicles

Water and Wastewater Treatment: Equipment and processes that reduce the amount of energy required to treat and move water or wastewater

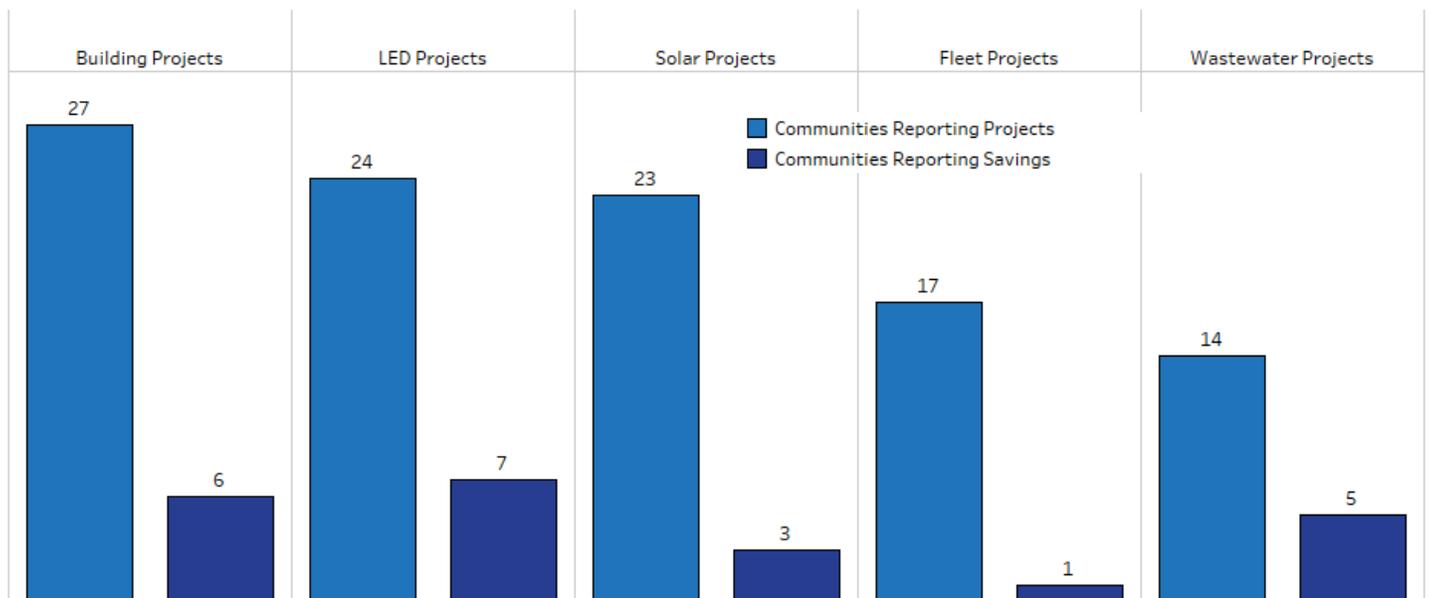
categories are simpler to quantify than other sustainability strategies.

A lack of standardization across the reports meant that the narratives required some interpretation, a challenge with two main outcomes. First, we were able to provide an estimate of reported energy cost savings rather than net savings that also factored in the cost of the upgrades. We offer conservative estimates based on the available data, but cannot independently verify reported costs or savings. Second, the findings are an underestimate of the entire scope of statewide efforts for both the costs and benefits of these projects for several reasons, including the small proportion of Legacy Communities that have reported project savings (see Figure 2).

Of the 34 communities whose reports we reviewed, only 13 have reported estimated financial or energy savings from their projects, which indicates potential challenges with data collection, communication, and project implementation. While limited, these annual reports provide one of the only statewide data sets related to sustainability outcomes for local governments. This report does not attempt to evaluate the Green Tier program, but rather takes advantage of its available data to learn more about energy efficiency and renewable energy projects in Wisconsin. Our next sections dive deeper into some of the additional findings and limitations of this review.

describe the outcomes of completed actions. To estimate the financial and energy savings their efforts have produced, we reviewed 195 annual reports submitted by 34 Legacy Communities between 2011 and 2023. We classified reported actions related to energy efficiency and renewable energy into one of five broad categories, described in the text box above. Local governments buy discrete units of energy to power lights, buildings, processes, and vehicles. As a result, financial and energy savings in these five

Figure 2: Communities Report Savings for a Fraction of Total Projects
Type of project reported in Green Tier Legacy Communities member reports, 2011-2023



Source: WPF Research on Green Tier Legacy Community Documents

ESTIMATING FINANCIAL AND ENERGY SAVINGS

To learn about the impacts of these projects, we first summarize energy and cost savings by category as reported by participating Legacy Communities. Then, we dive into case studies on Bayfield County and the cities of Wisconsin Rapids and Appleton.

Compared to housing, transportation, and public education, energy efficiency and renewable energy are relatively new public policy initiatives. At this time, a standardized statewide reporting process has not yet been developed in Wisconsin like those that currently exist for state [road quality](#), [fiscal data](#), or [statewide utility data](#). As a result, state and local leaders have an opportunity to shape the future of energy efficiency reporting.

The 42 participating Legacy Communities and our three case studies include small and medium-sized communities that are representative of the places where most Wisconsin residents live. However, it is important to note that not all Wisconsin local governments engaged in energy efficiency and renewable energy projects are Legacy Communities. For example, Milwaukee and Madison are not members of the program, and the scale of the projects in those cities warrants dedicated reporting in some future research. Despite these limitations, reported actions by Legacy Communities offer broad insight into project types and potential outcomes from across the state.

If pursuing energy efficiency and renewable energy remain public policy issues, then communities may wish to find ways to provide clear investment and outcome data to residents. This transparency is especially important for taxpayers, since implementation often requires upfront investment by local governments, even if the project promises long-term savings.

Our analysis identifies some high-investment strategies and examples of projects that did (or did not) create the level of savings anticipated. In addition to analyzing reported actions and savings by Legacy Communities, we discuss some barriers and potential strategies to providing detailed reporting.

Building and Lighting Energy Efficiency

Between 2010 and 2023, building energy efficiency and lighting replacement were the most commonly reported project types. Twenty-seven communities reported efforts to increase the energy efficiency of heating and ventilation systems, boilers, windows, building controls, and more. Many projects incorporated energy conservation into planned facilities updates, which can include moving operations to more efficient buildings. Of these communities, six together reported saving a total of at least \$2.1 million and 3.6 million kilowatt hours of electricity (enough to power [around 300 homes](#) for one year).

During the same timeframe, 24 Legacy Communities reported replacing at least 9,500 conventional streetlight, traffic light, interior, or exterior bulbs with LEDs. These conversions saved at least \$378,000 and 2.4 million kilowatt hours of electricity, according to reporting from seven Legacy Communities. The city of La Crosse has replaced all city-owned street and traffic lights with LEDs, for example, and St. Croix County only uses LEDs in its buildings.

Compared to other types of bulbs, LEDs [last longer and use less energy](#), so one-for-one replacement results in electricity savings. Some communities replace bulbs “at failure,” which means that costs and savings are spread over long periods of time. Replacing all bulbs at once increases the upfront costs, and communities may rely on outside funding to initiate these projects. For example, in 2015 the village of Weston in Marathon County received a state grant for its LED light replacement initiative, which had stalled for several years. According to the village’s annual reports, the \$110,000 project was expected to improve lighting quality and reduce annual electricity costs.

[Energy benchmarking](#) processes determine a building’s baseline energy usage and can help identify high-impact projects to increase building and lighting energy efficiency. For example, in 2013, the city of Fitchburg in Dane County began an audit of its facilities’ energy use that identified [priority projects](#) estimated to save \$22,660 annually, which generated enough savings to cover the initial investment within three years.

Integrated benchmarking software, such as [ENERGY STAR Portfolio Manager](#), provides local governments

with the tools to collect, interpret, and report on building performance data. Without benchmarking processes, calculating savings from specific projects becomes much more complicated. Weather influences heating and cooling demand, energy prices fluctuate over time, and major disruptions like the COVID-19 pandemic can complicate a community's ability to estimate energy and financial savings over time.

Greening Electricity and Fleet Vehicles

While building energy efficiency and LED replacement aim to reduce overall energy use, solar and fleet strategies focus more specifically on switching to alternative energy sources. Since 2011, Legacy Communities have reported installing at least 3,390 kilowatts of solar panel capacity on government property, including on public works buildings, libraries, and city halls (see text box for unit explanation).

While 23 Legacy Communities reported installing solar panels, only three provided estimated cost or energy savings. Those three communities reported generating at least 2.7 million kilowatt hours, and that prevented spending of at least \$170,000 on purchased electricity between 2011 and 2023.

In addition to investing in municipal solar panels, communities reported supporting community solar projects and purchasing renewable energy credits from their local utility. Advancing renewable energy goals seems to be the primary aim of many of these solar projects, while reducing government electricity costs is an additional benefit. Several Wisconsin communities have been recognized for pursuit of renewable energy, including Sun Prairie, which [recently reached 100% renewable energy](#) for city buildings and infrastructure.

Monitoring equipment can provide communities with detailed solar energy generation data. However, few communities have reported specific estimates of electricity generated or avoided energy costs. Some have reported savings as a percentage decrease in a building's total electricity consumption, which is difficult for outsiders to summarize. The lack of reported savings from some communities could also indicate that their projects have not yet broken even financially. This interpretation is supported by the large upfront investment needed to install solar panels, though those costs have declined and their efficiency has improved in recent years.

Understanding Units of Energy

Solar panel capacity is described in kilowatts (kW). In one hour of ideal conditions, 3,390 kilowatts of solar panels can produce 3,390 kilowatt hours, which is around \$610 worth of electricity ([based on March 2025 nationwide energy prices](#)).

[According to EnergySage](#), an energy marketplace that partners with the U.S. Department of Energy, average customers in Wisconsin currently see investments in solar panels break even after just over 10 years of operation. Electricity use and cost, solar energy system cost, and access to incentives influence how long it takes systems to break even.

The energy and financial impacts of fleet vehicle strategies seem even more challenging to estimate. While 17 Legacy Communities reported some type of fleet-related strategy, only one offered an estimate of savings. Some communities have reported swapping traditional fuel vehicles for hybrid, fully electric, compressed natural gas, and clean diesel vehicles across departments.

A few larger cities, including Appleton, Eau Claire, and La Crosse, have added hybrid or clean diesel buses to their public transportation systems. In 2013, the city of Eau Claire reported \$50,000 in avoided fuel purchases from new hybrid buses, but did not provide details on the upfront investment in these vehicles. Smaller communities have reported idling reduction programs and operational or fuel efficiencies, including route improvements for winter plowing.

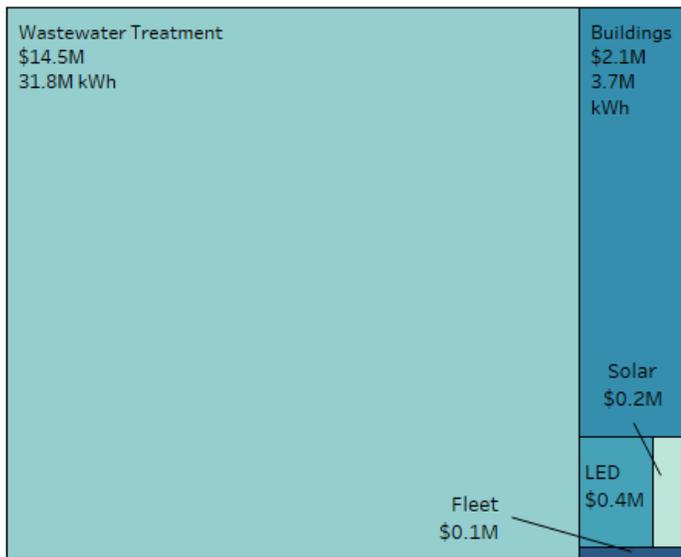
Collecting data on fuel and engine use often relies on individuals, which creates opportunities for human error. Fuel cost also varies substantially across time and place, adding another layer of complication to estimating savings from fleet strategies.

Water and Wastewater Treatment

Improved energy efficiency for water and wastewater treatment showed the greatest reported savings of any project category, despite the small number of communities that reported actions (Figure 3 on the next page). Fourteen communities reported water or wastewater projects, and five reported a combined savings of at least \$14.4 million and 31.7 million

Figure 3: Reported Savings From Wastewater Treatment Plant Projects Far Exceed Other Projects

Reported savings from projects by type, 2011-2023



Source: Wisconsin DNR Green Tier Legacy Community Reports

kilowatt hours between 2011 and 2023. Reported savings represent avoided energy purchases resulting from energy efficiency and renewable energy practices, rather than net savings that factor in the cost of the upgrades.

Wastewater treatment efficiencies can result in massive reductions in energy purchases because these services are often the largest municipal energy users. According to the Environmental Protection Agency, the energy usage by water utilities and wastewater treatment plants typically accounts for [between 30% and 40%](#) of a local government’s total consumption.

Communities operating their own treatment facilities have reported a few common project types. Examples include installing [combined heat and power](#) systems, which use excess heat created during treatment processes to generate electricity on site. Several communities use biogas, a byproduct of [anaerobic digestion](#), to power turbines or heat their facilities, which reduces natural gas purchases and emissions associated with water treatment. Other reported projects include installing higher efficiency boilers, [variable frequency drives](#), and [ultraviolet-light](#)-based sanitation systems.

As local governments make massive capital improvements to wastewater treatment facilities, including energy efficiency as part of treatment infrastructure upgrades could reduce the long-term cost of providing these essential services.

LEARNING FROM COMMUNITIES

Next, we explore specific projects, implementation stories, and lessons learned from three Wisconsin communities: Bayfield County and the cities of Wisconsin Rapids and Appleton. Details for these case studies come from Legacy Community annual reports, community-published data, state program data, and interviews we conducted with experts and local staff. Like most Legacy Communities, these three have reported on projects in multiple categories, which indicates a significant commitment to energy savings.

Range of Projects in Wisconsin Rapids

Wisconsin Rapids, home to around [18,600 residents](#) in the center of the state, has invested heavily to improve wastewater treatment efficiency and has worked with community partners to install a solar energy system at the city’s library. Changes in planning and land use round out the city’s broader sustainability efforts. The range of projects and outcomes in Wisconsin Rapids offers some insights as to how communities might select renewable energy or energy efficiency initiatives that align with local goals.

The [Wisconsin Rapids Wastewater Treatment Plant](#) has undergone major facility upgrades that have reduced energy consumption for the city and addressed water treatment needs. Energy efficient processes include using ultraviolet light disinfection and generating biogas to use onsite for [combined heat and power](#). Since 2020, the treatment plant has generated 8.2 million kilowatt hours of its own electricity, or about half of the plant’s total energy usage during that period, according to the city’s wastewater superintendent. If the city had to purchase the same amount of electricity in March 2025, it would have cost over \$1.4 million [based on national energy trends](#).

The rationale behind local investment in renewable energy and energy efficiency projects is important for determining whether they result in the desired outcome. The city of Wisconsin Rapids determined that treatment plant updates were necessary to meet the [needs of local users](#), including growing industry in the

region. In response, the city financed wastewater treatment updates in 2008 and 2018 using loans from the state's [Clean Water Fund Program \(CWFP\)](#). This revolving loan fund provides financial support, primarily through the forgiveness of principal owed, to help keep local public water systems in compliance with federal drinking and surface water regulations. As existing infrastructure ages, keeping these systems updated requires significant investment.

Communities participating in the Green Tier program or with significant low-income populations can be eligible for [increased principal forgiveness](#), as can projects that increase regionalization or energy efficiency. As of June 30, 2024, the city of Wisconsin Rapids has received over \$1.22 million in principal forgiveness and grants on its [total loan award](#) of just over \$35.2 million. Leveraging energy efficiency as part of this massive investment helped the city access principal forgiveness and reduce ongoing energy costs. These benefits help improve the cost effectiveness of a long-term investment that the city planned to do anyway.

Challenges with the solar panel installation at McMillan Library offer a different perspective on project outcomes. In 2017, Wisconsin Rapids' McMillan Library started a public-private [partnership with Viking Electric](#) to install a 235 kW solar panel system on the library's roof. The original contract language and responsibilities resulted in challenges for the library and city leadership.

[Project funding](#) relied on Viking Electric pursuing tax credits, contributions from the library's endowment, an anonymous donor, and \$60,000 in needed fundraising. Despite the project's aspirations, financial constraints made the economic argument for keeping these solar panels less compelling to the library. A combination of [high maintenance costs and low energy production](#) led to discussions about removing the panels instead of continuing to operate them as planned. Viking Electric did end up [donating the panels](#) to the library in 2024, but this collaboration still shows the need to consider such efforts carefully to ensure they benefit the public.

[Sustainability](#) efforts led by the city's Department of Community Development include reducing barriers to residential solar, reducing lot and home size requirements, and planning reinvestment in the downtown and riverfront.

Based on these experiences, communities seeking to maximize savings may want to incorporate cost and energy efficient strategies into existing projects. Projects without strong economic outcomes may still be worthwhile for a community if social and environmental impacts are also important to local goals.

Appleton Shares Expertise

In the city of Appleton, motivated community members, city staff, Common Council members, and a designated advisory panel support ongoing sustainability and renewable energy efforts. The city's reported savings are primarily attributed to energy efficiency projects and using biogas to heat its [wastewater treatment facilities](#). In 2021, the city also installed a [296 kW solar energy system](#) at its Municipal Services Building, which is expected to generate \$28,363 in annual savings for an estimated payback of the original investment within 12 years. Other [recent projects](#) include smart LED installation on parking ramps and LED replacement in the Municipal Services Building, which both paid for themselves within a few years of installation, according to city staff.

Appleton relies on the efforts of knowledgeable staff members to implement energy saving projects. When possible, the city advances capital projects and facility updates that also reduce energy usage, maintenance, and operational costs. The city also uses return-on-investment and life cycle analyses to evaluate proposed projects.

For larger investments, the city pursues local, state, and federal grants to cover any costs that exceed estimated savings. While Appleton advances projects with quantifiable savings, the city also conserves resources through efforts like recycling gravel base on most pavement reconstruction projects.

Using data reported in Appleton's [sustainability plan](#), the city saved an estimated 10.1 million kilowatt hours and avoided energy costs of \$6.3 million between 2010 and 2023. While it uses the same calculation method, this estimate is more conservative than what we found in the city's Green Tier annual reports. City staff estimate that since 2008, Appleton has reduced electricity use by about 20% and reduced natural gas use by about 50%. These different estimates highlight

the challenge of quantifying and communicating about potential savings, even for large communities.

Appleton began pursuing renewable energy production using a biogas generator as early as 1992 and was one of the first Green Tier Legacy Community members in 2010. Decades of experience with energy efficiency and renewable energy projects help make Appleton a regional leader. As a result, peer communities and sustainability organizations often look to Appleton to share the city's experiences.

The city's participation in Green Tier and the [Wisconsin Local Government Climate Coalition](#) complements Appleton's overall sustainability goals, which [include achieving net-zero emissions by 2050](#). The Wisconsin Local Government Climate Coalition is a nonprofit that provides a platform for local governments to engage in peer-to-peer learning, connect with experts, and access project funding. Some Wisconsin communities are members of both of these programs, particularly in the southern and central parts of the state (see Figure 4).

Both initiatives ask local governments to provide documentation of their commitment, such as by passing a resolution. However, a wide variety of other [local sustainability or climate action organizations](#) (nonprofits, coalitions, and research initiatives) in Wisconsin provide opportunities for staff to gain

expertise they can use in their departments and communities.

The similarity between these organizations offers choice and resilience to sustainability organizing in Wisconsin, but may divide limited resources and create other inefficiencies. Collaboration and information sharing between communities, such as through Green Tier or the Wisconsin Local Government Climate Coalition, remain a key strategy for pursuing sustainability and energy saving projects.

Rural Energy Resilience in Bayfield County

Bayfield County has completed projects in all five categories we explored, but may be most notable for its pursuit of energy resilience and independence. In 2020, Bayfield County facilities used [100% carbon-free electricity](#) through county-owned renewables, Xcel Energy Solar, and some carbon credit purchases. In small and rural communities, state and federal funding provides an important catalyst for large-scale efforts, according to project leaders we interviewed. They also noted that since grants often require some local investment, financial transparency and accountability are critical for public support.

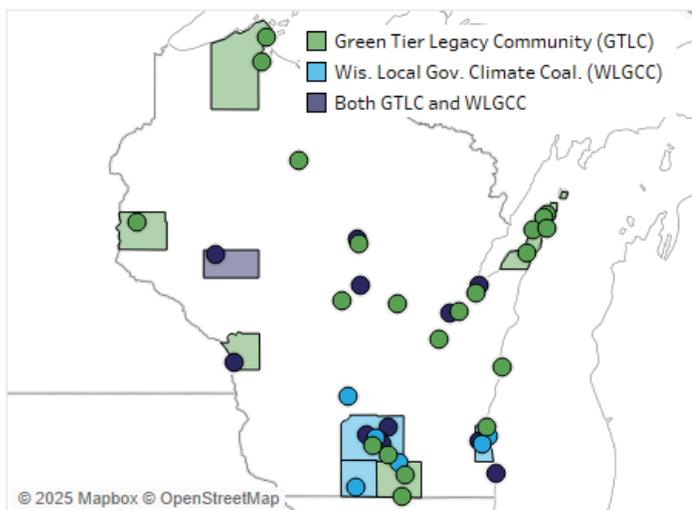
Partnering with nonprofit [Cheq Bay Renewables \(CBR\)](#) has helped the county secure significant funding to advance energy projects. Cheq Bay is a renewable energy developer that provides grant writing support, connects communities with project partners, and helps conduct detailed [energy use reporting](#) to determine if projects are working as intended. Smaller communities typically have fewer facilities, fleet vehicles, and staff. For this reason, the logistics of tracking energy use can be more straightforward than in larger communities.

Bayfield County also collaborates on energy projects with local towns, school districts, sanitary districts, and the Red Cliff Band of Lake Superior Chippewa. In 2024, for example, Bayfield County and the Red Cliff Band were awarded a \$9.8 million federal grant from the U.S. Department of Energy to increase [rural energy resilience](#). The project will install 46 electric vehicle charging plugs, 1,084 kW of solar panel capacity, and battery storage capacity across 17 local communities.

Other recent projects include installing a [microgrid](#) at the Bayfield County Courthouse and Jail, for which the county was awarded \$273,714 (about 50% of the estimated project cost) by the Wisconsin Office of

Figure 4: Thirteen Communities Maintain Membership in Both Green Tier and The Wisconsin Local Government Climate Coalition

Cities, villages, town and county members of GTLC, WLGCC or both



Source: Wisconsin DNR and Wisconsin Local Government Climate Coalition.
*The Bay Lake Regional Planning Commission is also a member of GTLC.

Energy’s [Energy Innovation Grant Program](#). [Microgrids](#) offer local energy resilience by generating and storing energy at a small scale, which can help stabilize utility bills and reduce disruption from extreme weather. The county estimates the microgrid will save around [\\$12,400 annually](#) in avoided electricity purchases.

In addition to supporting the Bayfield County microgrid, the statewide Energy Innovation Grant Program (EIGP) has awarded funding for microgrid projects in [Sun Prairie](#) (2022), [McFarland](#) (2022), and [La Pointe](#) (2023). Several additional communities have received grants to conduct microgrid feasibility studies. Funding awarded for these projects indicates a growing interest in using microgrids to advance local and state energy resilience goals.

Project Funding Sources

In 2023, Wisconsin allocated funding from the [Infrastructure Investment and Jobs Act](#) (also known as the Bipartisan Infrastructure Law) to both the [Energy Innovation Grant Program](#) and the new [Grid Resilience program](#). While the Energy Innovation grants support a variety of energy projects, the Grid Resilience program focuses on increasing infrastructure resilience, decreasing disruption, and developing a skilled workforce.

According to [data](#) provided by the state’s Public Service Commission, around 30%, or \$2.35 million, of available Energy Innovation funding was awarded to local governments in 2023. These funds supported building energy efficiency, microgrid, electric vehicle charging, and energy planning projects across the state. Local electric cooperatives received the majority of Grid Resilience funding in 2023, according to Public Service Commission [data](#). Of the over \$8.5 million of funds available, just \$534,989 was awarded directly to Wisconsin local governments from the Grid Resilience program.

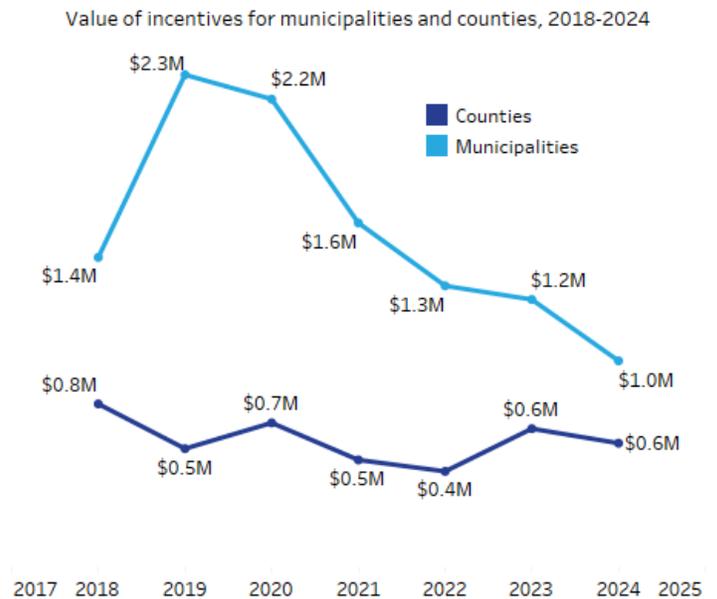
The statewide [Focus on Energy](#) program also provides financial support for renewable energy and energy efficiency projects. In addition to serving residents and businesses, Focus on Energy offers [local governments](#) access to energy advisors, facilities audits, and financial incentives. State legislation requires investor-owned utilities to fund the program, largely through user fees, and the Public Service Commission of Wisconsin approves how these funds are spent.

In 2023, 189 local governments represented 4.8% of the participants in Focus on Energy’s non-residential programming. Other participants in this category include schools and industrial, commercial, and agricultural users. For all non-residential programs in 2023, LED replacement efforts received the greatest amount of financial incentives and saved the most electricity statewide (\$5.8 million and 117 million kilowatt hours of verified gross savings). Other non-residential projects with high energy savings included solar panels, whole building updates, and boiler replacement.

Of the over [\\$55 million](#) in Focus on Energy incentives awarded statewide in 2023, financial support for local government projects totaled just over \$1.8 million. Incentive funding distributed to municipalities declined following atypically large amounts awarded in 2019 and 2020, according to the Public Service Commission (see Figure 5). Local government pursuit of Focus on Energy incentives can vary due to changes in capital budget schedules, economic uncertainty, and local priorities.

Beyond these state sources, Legacy Communities have reported receiving grant funding directly from varied federal agencies, including through the Federal Transit Administration, the Department of Housing and Urban Development, and the Environmental Protection

Figure 5: Focus on Energy Incentives to Local Governments Have Fallen



Source: Wisconsin Public Service Commission

Agency. However, the future of these federal funding sources, including grants, remains uncertain under the current administration.

WHY REPORTING MATTERS

Detailed energy and financial savings data are challenging and resource intensive to produce, but are valuable for third-party reviewers, decisionmakers, taxpayers, and communities hoping to learn from each other. High-quality reporting requires staff capacity not only to implement these projects, but to collect and analyze data and communicate findings in a meaningful way.

Incorporating energy and cost efficient technologies often is in the best interest of departments, as resulting savings can be repurposed to support staffing, projects, or in response to shrinking budgets. However, data collection and monitoring are essential to determine whether investment in these efforts will provide the desired benefits, including whether financial savings cover the upfront costs. Wisconsin local governments that under-report the extent and impact of energy saving initiatives miss opportunities to communicate these actions to their constituents. As a result, officials may struggle to justify the cost of the reporting process or generate buy-in for future initiatives. State and federal funding sources also rely on quality reporting to understand the impacts of grants on recipients, which helps decisionmakers evaluate programs.

Options for improving reporting quality vary depending on local goals and resources. Some governments prioritize less quantifiable sustainability strategies, such as land use reform, water quality improvements, and increasing transportation choice. Community development or planning departments can implement these strategies and may be tasked with reporting on sustainability initiatives. However, these departments may struggle to quantify their community's energy or financial savings. Communication barriers between departments or missing expertise in highly technical processes, such as in wastewater treatment, can limit staff ability to access and interpret data.

Communities focused on energy saving initiatives may benefit from asking facilities or capital improvement staff to report on progress. However, small communities especially may need to prioritize meeting

basic service requirements over providing detailed data. To improve the quality of their reporting, communities may consider partnering with an outside agency, such as a consultant or nonprofit.

In 2020, Energy On Wisconsin, a program within the University of Wisconsin Extension's Community Economic Development Program, [conducted a survey of Energy Independent Communities](#). Energy Independent Communities have committed to reaching at least 25% renewable energy by 2025, and some have set more ambitious goals for the coming decades. The survey's goal was to understand how far participating communities were from reaching renewable energy goals, and barriers to achieving them. Despite using a different methodology to evaluate a different program, the 2020 survey found the same common projects and funding sources as in our analysis. The survey also asked about barriers to implementing renewable energy and energy efficiency projects. Key barriers included funding and staffing shortages, but respondents also indicated a need for assistance in making local plans, educating officials, and determining energy baselines.

Recommendations emerging from the Energy Independent Communities survey advocate for standardizing measurement and reporting processes, and increasing the resources available to local governments to do so. Standardizing reporting systems for energy efficiency and renewable energy projects could assist state and local governments with monitoring outcomes and making future policy decisions. To do so, local governments would need to adopt the same set of practices for quantifying the costs and benefits of these projects. Sustainability efforts are an emerging and complex area of public policy at the local, state, and national level. However, reporting systems that already exist, such as within the [Department of Revenue](#) for local spending and revenues and within DOT for [roadway quality](#), could help inform future sustainability reporting. Implementing uniform measurement and data collection techniques could also improve data consistency for future analyses and prevent the duplication of efforts by local governments.

In early 2023, the DNR launched a new Green Tier Legacy Community reporting format that aimed to resolve challenges with the original system, in which communities self-assigned subjective scores based on

broad goals. Now, the program suggests actions to improve quantifiable metrics in each sustainability area. Overall, the new system makes reporting for some metrics more consistent across communities and will help local governments monitor progress over time. However, communities will still need to add narratives to their reports if they want to connect specific projects to financial or energy savings, and collecting financial data falls outside the program's current scope.

The DNR is still evaluating potential impacts of the new system on communities. The program published business participant findings from [2023-2024 in an online report](#), and may want to consider similar reporting for government participants in future years. While findings from our analysis and the 2020 Energy Independent Communities survey both indicate a need to standardize reporting on sustainability investments and benefits, it remains unclear what program or organization may be best suited to collect and share these data from local governments.

CONCLUSION

Green Tier Legacy Community annual reports provide one of few statewide data sources about outcomes from local governments' renewable energy and energy efficiency projects. Some Legacy Communities have reported that these strategies reduced energy usage and government spending on energy, but the net cost savings from these efforts remain unclear. The increasing adoption of energy efficiency and renewable energy projects points toward an opportunity to improve local government's reporting on costs and benefits.

While few Legacy Communities have reported undertaking projects that increase water and wastewater treatment efficiency, our analysis shows that these efforts have had some of the largest impacts, substantially lowering energy needs and helping to reduce the enormous cost of updating facilities and providing treatment services. Other communities may be able to leverage energy efficiency and regionalization benefits to make needed improvements to their treatment plants and save energy, while also accessing financial incentives from the Clean Water Fund Program. However, that program requires Wisconsin to match federal funds, and high interest rates may limit how much financial support the

state can offer. Other funding sources, including the Energy Innovation Grant Program and Focus on Energy incentives, also help local governments finance large-scale projects.

Beyond Green Tier, Wisconsin is home to a number of other sustainability organizations that offer resources to government officials and staff, including peer-to-peer learning. Energy efficiency and renewable energy projects are just a subset of sustainability actions that communities pursue to improve environmental, economic, and social outcomes for their residents.

While reduced energy use can be described using dollars and cents (and kilowatt hours), outcomes like improved air and water quality are more complicated to quantify. Communicating the costs and potential benefits of energy saving projects to constituents and accessing funding remain a challenge as well as an opportunity for Wisconsin's local governments.