Dane County Office of Energy & Climate Change: Building a County-Wide Clean Energy Finance Platform

Building a Clean Energy Investment Pipeline in Madison, Wisconsin

AT A GLANCE

Investment Priorities

Building decarbonization — residential envelope upgrades (single-family), energy efficiency and solar for affordable multifamily housing; building decarbonization — commercial/industrial (heat pump and BMS upgrades for small businesses); solar and storage (countywide, financing under development)

Pipeline Value

$29.5M sought across 3 portfolios (pre-development & feasibility). Countywide solar/storage and a Green TIF Capital Match are not yet priced.

Key Partners

Wisconsin Local Government Climate Coalition (WLGCC);Dane County Office of Energy & Climate Change (OECC); Program implementation: Project Home, Elevate; Affordable housing finance: Wisconsin Housing and Economic Development Authority (WHEDA); Lenders: Summit Credit Union, local CDFIs and community banks; Contractors: Wisconsin Heat Pump Coalition, local HVAC contractors; Solar/outreach: MadiSUN, Legacy Solar Cooperative; Workforce: Madison College, MREA, Operation Fresh Start; Utilities: Madison Gas & Electric, Alliant Energy

Community Impacts

560,000 tCO_2e estimated lifetime emissions reductions across the three portfolios:

- Around 400 single-family homes (~10,000 tCO_2e)
- Around 20,000 multifamily units (~500,000 tCO_2e)
- Around 420 small businesses (~50,000 tCO_2e)

Strategic Role

Market Builder | Fund Designer | Financial Intermediary

The Path Forward

Dane County will select a governance and capitalization model for a green bank or equivalent lending entity. OECC will launch the single-family Green Envelope loan through Project Home and coordinate with WHEDA to fold the Affordable Multifamily Stretch Fund into the QAP application process. In parallel, OECC will assess solar market conditions through 2026 before setting a solar financing structure.

THE BIG PICTURE

Dane County, Wisconsin has set a course to cut greenhouse gas emissions in half by 2030 and reach carbon neutrality by 2050. In 2023, it became the fourth county in the United States to achieve 100% renewable offset electricity for all county-owned facilities — a milestone that signals both the County's ambition and its proven ability to execute. But decarbonizing county operations is only a fraction of the challenge. The buildings where 561,000 residents live and work, the small businesses that employ 125,000 people, and the affordable housing units that serve the county's most vulnerable households still rely overwhelmingly on fossil fuels for heat.

The Challenge: Dane County's climate goals demand private capital at a scale that public budgets alone cannot reach. Existing county programs, including the Major Repairs Loan Program for single-family homes and the Affordable Housing Development Fund, are oversubscribed: administrators of the Major Repairs program report receiving 10 to 15 more qualified applications per year than they can fund. Affordable multifamily developers routinely leave energy-efficiency points on the table in the WHEDA competitive process because the incremental capital to achieve them doesn't exist. And Dane County's 13,000 small businesses face heat pump loan rates of 10.5% from conventional lenders — a gap that consistently tips point-of-sale decisions toward cheaper fossil fuel replacements.

The Solution: Through the MIF grant, the Wisconsin Local Government Climate Coalition (WLGCC) and the Dane County Office of Energy & Climate Change (OECC) spent six months designing a suite of revolving loan products that can close these gaps. The team interviewed 26 stakeholders from 19 organizations, surveyed 55 more from 25 organizations, and completed five detailed financing product designs. They also produced a comprehensive analysis of six green bank governance models to identify the most viable institutional home for these products. Rather than starting from scratch, every product is designed to layer into an existing program, lending relationship, or regulatory framework — the Major Repairs program, WHEDA's QAP process, local credit union relationships — making the path to deployment substantially shorter.

"The MIF grant has been a vital catalyst in advancing community conversations around viable green financing solutions in Dane County and beyond. We have incredible local motivation to scale up energy efficiency and renewable energy projects, and this planning grant allowed us to scope the operational framework necessary to turn that motivation into an actionable framework to move forward."

— Kathy Kuntz, Director, Dane County Office of Energy & Climate Change

LAYING THE FOUNDATION: A COUNTY-WIDE CLEAN ENERGY FINANCE ARCHITECTURE

Coalition and Stakeholder Engagement

OECC is not a newcomer to coalition building. The office founded the Wisconsin Heat Pump Coalition after local homeowners reported difficulty finding contractors knowledgeable about heat pumps — and the coalition contractor convenings have since been replicated across the Midwest. OECC has recognized more than 200 public and private entities as Climate Champions, convened a dozen municipalities and three regional utilities to win a $13.2 million EV charging infrastructure grant, and created the Home Energy Guides program in partnership with community organizations including EcoLatinos and The Hmong Institute. WLGCC, founded in 2020, has grown from 3 to 32-member local governments covering 40% of Wisconsin's population and brings a statewide policy and peer-learning platform to the partnership.

For this grant, the team assembled a stakeholder list of more than 60 local experts, completed in-depth interviews with 26 representatives from 19 organizations, and collected survey responses from 55 stakeholders across 25 organizations. Respondents included utilities (Alliant Energy, Madison Gas & Electric, Wisconsin Public Power Inc.), lenders (Summit Credit Union, Founders Community Fund, Clean Tech Partners), affordable housing organizations (Project Home, WHEDA contacts), workforce and training providers (Madison College, Blue Green Alliance, Latino Academy of Workforce Development), and state agencies. Seventy percent of respondents named affordable housing a top three county challenge; 54% named climate change.

Market Building: Five Product Designs and a Green Bank Roadmap

The core deliverable was the development of five detailed financing product designs tailored to Dane County's specific markets. Each product identifies an implementable financial structure, models a repayment pathway, and names the market barrier it is designed to solve. The five products span single-family housing, affordable multifamily housing, small businesses, schools, and municipal TIF-supported redevelopment — creating a county-wide framework for clean energy and efficiency investment.

In parallel, the team produced a comprehensive governance and capitalization analysis comparing six potential models for a Dane County green bank or equivalent lending entity: public, quasi-public, hybrid, and nonprofit structures. The analysis draws on lessons from green banks nationwide and assesses how each governance choice shapes credibility, capital mobilization capacity, and long-term flexibility. This work gives Dane County a concrete institutional roadmap — not just a vision — as it pursues the next phase of investment.

The team also conducted targeted market-building interviews focused on the single-family product: conversations with potential lending partners, energy efficiency and solar contractors, and Focus on Energy (the statewide efficiency program administrator) to assess appetite for a revolving loan product and identify how county financing can be coordinated with IRA rebate programs.

Financing Architecture: Below-Market Capital Designed for Dane County's Markets

A thread running through every product design is the principle that below-market interest rates are not simply a feature — they are a prerequisite. In the single-family product, a 1% APR 15-year loan supplements the County's existing Major Repairs program, which is itself priced at below-market rates consistent with publicly administered affordable housing finance. In the small business product, the 4.5–7.5% effective APR range is specifically calculated to shift the point-of-sale economics of a heat pump purchase versus a fossil fuel replacement — where conventional HVAC loans run at 10.5%. In the multifamily product, a 1% APR 25-year soft loan is structured so that repayment flows directly from verified reductions in tenant utility allowances, meaning the financing never increases resident housing costs.

The team also explored a Green TIF Capital Match — a cross-categorical mechanism that would provide matching loans and credit support for sustainability features in TIF-supported projects, using post-TID loan funds as permitted under Wisconsin law. While the product designs for the three main portfolios do not require a TIF match, such a mechanism could improve project viability and open additional project types, including naturally occurring affordable housing (NOAH). Several Dane County municipalities are exploring similar structures independently.

Policy and Regulatory Context

Wisconsin's governance structure creates meaningful constraints: counties lack home-rule authority, and recent state legislation has preempted a range of local actions, including the ability to exceed state building codes or mandate EV charging in new construction. Despite these limits, Dane County has built a policy environment that actively supports the pipeline. The Regional Housing Strategy reflects near-consensus among rural and urban communities on the need for affordable, energy-efficient housing. A $7 million PRO Housing grant is helping local governments reduce predevelopment costs and streamline permitting. And in December 2025, new Public Service Commission rules took effect that remove the effective mandate for individual meters in multifamily buildings — a change that directly enables rooftop solar and district heating on new multifamily development.

On solar permitting, Dane County now includes ten SolSmart communities, with both the County and Sun Prairie achieving Platinum designation. Sun Prairie became the first Wisconsin municipality to adopt SolarAPP+, which offers instant approvals for eligible residential solar projects, paving the way for additional municipalities. Dane County's ten SolSmart designations represent years of streamlining work that reduces soft costs for the solar pipeline.

DESIGNING A THREE-PORTFOLIO CLEAN ENERGY FINANCE PIPELINE

Portfolio 1: Project Home Green Envelope Loan | Pre-Development & Feasibility | $1.5M
Dane County's Major Repairs Loan Program, operated by Project Home, funds deep upgrades for low-to-moderate-income owners of single-family, duplex, and small multifamily homes. Demand outstrips its budget: administrators report 10 to 15 qualified applicants a year who go unserved. The Green Envelope Loan addresses that gap by embedding a revolving loan fund in the existing program, financing efficient roofing, siding, and windows as energy measures and preparing homes for later weatherization and solar.

A one-time capitalization of roughly $500,000 lets the fund revolve annually. Paired with the County's existing $300,000 allocation, it stretches each County dollar further — cutting the average County contribution per project from $25,000 to $11,200 and raising annual output from about 12 projects to roughly 27. The loans run 15 years at 1% APR, secured by a lien enforceable at sale or transfer rather than foreclosure, and are sold each year at par to impact investors to replenish the fund.

Capital Stack:
- **Secured:** Project Home CDBG funds; Dane County annual allocation ($300,000/year).
- **Sought:** Below-market senior debt ($1.5M, three-year seed via MIF/GGRF); impact-investor loan purchases for fund replenishment.

Revenue / Benefit: Reduced energy costs and improved comfort for around 400 income-qualifying homeowners over the fund's life; improved building envelope readiness for weatherization and solar; estimated 10,000 tCO_2e lifetime (closeout figure — annual basis not specified).

Investment Readiness: Pre-Development & Feasibility. Market-building interviews with lenders and contractors completed; institutional home (green bank model) under review; product design complete.

Portfolio 2: Affordable Multifamily Stretch Fund | Pre-Development & Feasibility | $22M
Dane County's rental market is tight — a 3.5% vacancy rate, with more than 28,000 renter households spending over 30% of their income on housing. The Regional Housing Strategy responds by targeting 1,765 new affordable rental units a year through 2040, a scale of production that offers a rare chance to build net-zero or near-net-zero from the ground up. The obstacle is financial: Wisconsin's competitive WHEDA process awards Qualified Allocation Plan points for green measures, but developers routinely leave those points — and the energy savings behind them — on the table because the incremental capital to reach them doesn't exist.

The Affordable Multifamily Stretch Fund closes that gap. A 1% APR, 25-year soft loan covers the incremental cost of advanced certifications (about $15,000 per unit for envelope and HVAC upgrades) and solar (about $6,000 per unit), layering into and stretching the County's existing Affordable Housing Development Fund (0% over 40 years). Repayment comes from the verified reduction in tenant utility allowances — an approach used by housing agencies in Massachusetts, Ohio, and Minnesota — so the financing never raises tenant housing costs.

Capital Stack:
- **Secured**: Dane County Affordable Housing Development Fund (0%, 40-year soft subordinate); WHEDA 9% and 4% tax-credit equity.
- **Sought**: Below-market senior debt ($22M, three-year seed via MIF/GGRF); tax-exempt bond financing; developer equity; Focus on Energy rebates (estimated $3,000–$4,000 per unit, reducing financed principal).

Revenue / Benefit: Verified tenant utility allowance reductions as primary repayment stream; solar net metering credits ($210–$300/unit/year, depending on utility territory) as supplemental cash flow; estimated ~500,000 tCO_2e lifetime impact across ~20,000 residential units (closeout figure — annual basis not specified).

Investment Readiness: Pre-Development & Feasibility. Financial feasibility modeled at per-unit level (both efficiency-only and efficiency+solar scenarios show repayment surplus); WHEDA coordination needed to integrate into QAP application process; December 2025 PSC metering rule change creates new opportunity for rooftop solar in multifamily new construction.

Portfolio 3: Small Business Heat Pump Loan Program | Pre-Development & Feasibility | $6M

Dane County's 13,000 small businesses employ 125,000 residents, and many run HVAC systems at the end of their life. The barrier is at the point of sale: conventional lenders price heat pump loans at 10.5% APR, a rate that consistently steers building owners toward cheaper fossil-fuel replacements. The Small Business Heat Pump program is built to shift that decision. It offers 7-year loans at a 4.5–7.5% effective APR through established community lenders — starting with those that already run green lending programs — paired with building management system (BMS) upgrades that maximize heat pump performance. The interest-rate differential is sized specifically to make the heat pump the economical choice over a fossil-fuel system.

The program is open countywide, with a carve-out prioritizing LIDACs and rural areas. It integrates with Focus on Energy's trade ally network and Madison Gas & Electric's free on-site energy assessments, so participants receive rebates and financing in one coordinated experience, while the Wisconsin Heat Pump Coalition handles contractor outreach and education. Rather than waiting for "replace on failure" calls, the program identifies candidate buildings up front — through assessor data, permit records, and energy audits — to accelerate the pipeline.

Capital Stack:

- **Secured:** None to date.
- **Sought:** Below-market senior debt ($6M, three-year seed via MIF/GGRF); local lender co-lending (credit unions and community banks using familiar CRA underwriting); Focus on Energy rebates stacked with loan financing.

Revenue / Benefit: Estimated ~420 small businesses served over the fund’s life; long-term operating cost savings vs. conventional HVAC; estimated ~50,000 tCO_2e lifetime impact (closeout figure — annual basis not specified); 25% of investment targeted to LIDACs.

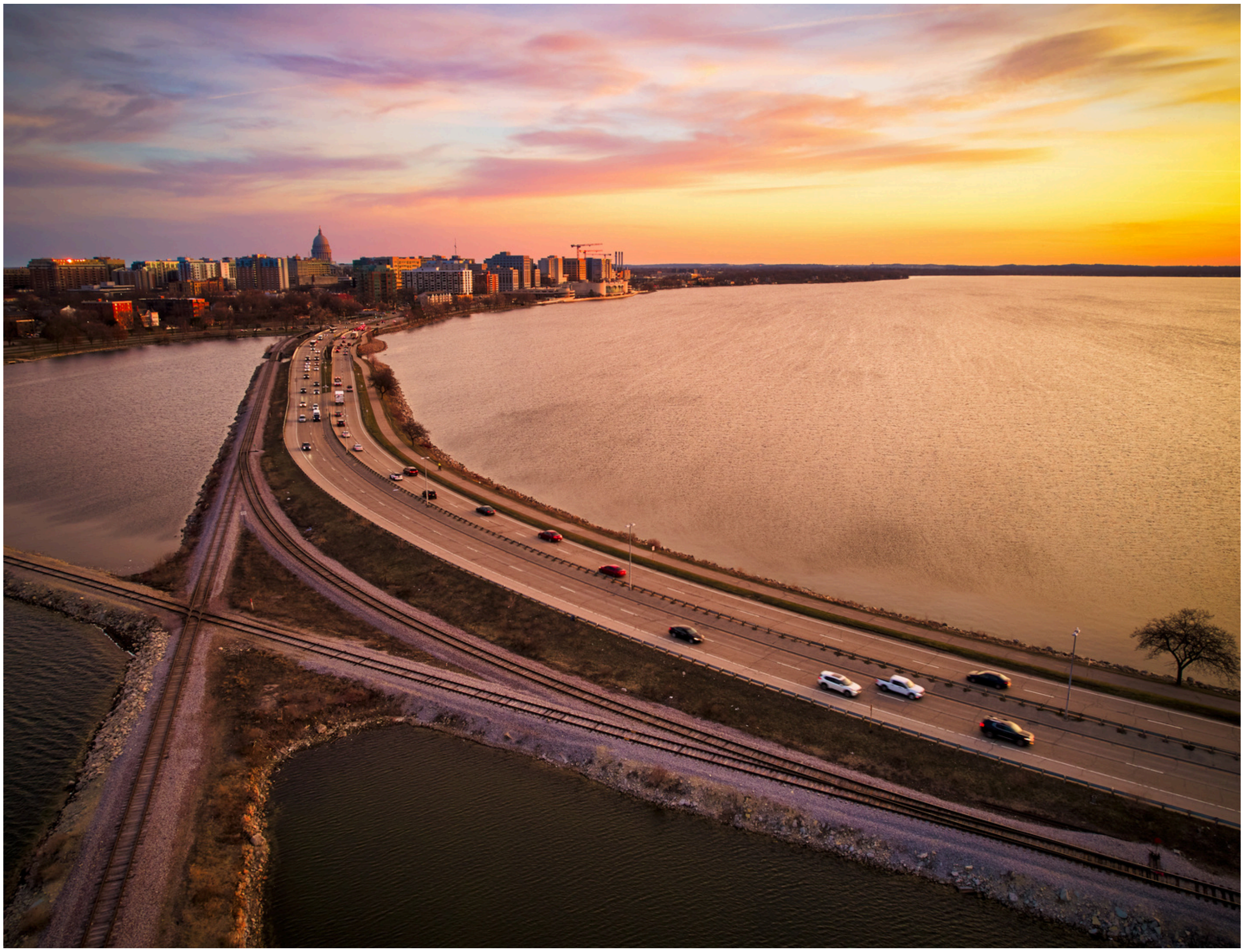
Investment Readiness: Pre-Development & Feasibility. Lender partnerships under development (Summit Credit Union engaged in quarterly county meetings; additional CDFIs identified); contractor outreach strategy through Wisconsin Heat Pump Coalition in place; loan product terms finalized in design phase.

Solar and Storage / Green TIF — Under Development

A fourth portfolio — expanded countywide solar and storage for households and businesses — is part of the plan but not yet priced, because the solar market is too unsettled to size a product against. The residential Investment Tax Credit expired at the end of 2025, the commercial ITC runs only through 2027, and shifting tariff policy is straining installer viability. OECC will monitor these conditions through 2026 before finalizing a financing structure. In the meantime, the Resilient Homes and Small Business portfolios are designed to leave buildings solar-ready, and the December 2025 PSC metering rule change opens new rooftop solar opportunity on multifamily new construction.

A Green TIF Capital Match is also under exploration — a cross-cutting mechanism that would provide loan and credit support for sustainability features in TIF-supported projects. Two Dane County municipalities already tie sustainability requirements to TIF, giving the concept a foothold to build on.

Investment Readiness: Early Concept / Scoping. Market monitoring underway; financing structure to be determined following 2026 market assessment.



IMPACT & NEXT STEPS

The Strategic Gap: Dane County has climate goals, existing programs, and a network of trusted partners. What it lacks — and what this grant was designed to address — is the institutional infrastructure to deploy private capital through those programs at scale. The five product designs and six green bank governance models produced during this grant period convert that gap from a barrier into a roadmap.

The Last Mile: Each of the three costed portfolios is designed to move quickly because it layers into something that already exists — the Major Repairs program, the WHEDA application process, established lender relationships. The next concrete step in each case is institutional: selecting a green bank governance structure, executing lender agreements, and coordinating with WHEDA on QAP integration. These are administrative and legal tasks, not technical ones, and the groundwork laid during this grant period makes them achievable in the near term.

The Multiplier Effect: Each revolving loan product is designed to recycle capital rather than consume it. The single-family fund revolves annually; the multifamily fund is replenished by utility allowance adjustment revenue and targeted loan sales to mission-oriented impact investors; the small business fund redeploys repaid capital into new deals. A one-time $29.5M capitalization across three portfolios is designed to generate a sustained flow of clean energy investment, not a single deployment.

Urgency: The solar market window is narrow. The commercial ITC expires at the end of 2027, and residential credits have already sunset. The multifamily metering rule change is new and not yet widely understood among developers. And the heat pump financing gap is a point-of-sale decision — once a building owner installs a fossil-fuel system, the lock-in can last 15–20 years. Moving the three costed portfolios to deployment in 2026 matters.

A Replicable Model: Dane County's approach — designing clean energy loan products that layer into existing programs, leveraging a trusted county intermediary, and using below-market capital to shift point-of-sale economics for both homeowners and small businesses — is replicable across Wisconsin's 32 WLGCC member communities and beyond. The green bank governance analysis produced during this grant is designed as a transferable resource. What Dane County builds here can become a template for mid-sized counties across the Midwest.

This case study was developed through the Municipal Investment Fund, a partnership between ICLEI USA and CGC to support local governments, Tribes, and their partner not-for-profit organizations in developing public-private partnership plans that accelerate the deployment of capital to clean energy projects.