focus on energy®
Partnering with Wisconsin utilities

FUTURE FOCUS

QUARTERLY NEWSLETTER
Quarter 4 2025

Contents

The FOCUS ON ENERGY® Future Focus Initiative reviews new concepts and technologies that have the potential to expand the range and value of services available to Wisconsinites, as well as help the program achieve desired outcomes of energy savings, customer satisfaction, and/or market transformation. The process also helps test offerings for future expansion/inclusion in the Focus on Energy Program portfolio. The Future Focus team screens new ideas every quarter and administers pilot programs, demonstration projects, emerging technology accelerators, and Environmental and Economic Research and Development projects.

IDEA SUBMISSIONS IN REVIEW

Name	Description
Home Energy Assessment Tool	Proposes a pilot to explore the use of a home energy assessment tool, a do-it-yourself home energy audit product. The company sends a kit (thermal camera attachment for smart phone and black light) directly to the customer, which walks customers through installing the app and completing their own energy assessment. The app produces an individualized report that recommends home energy improvements.
Advanced Refrigeration Control	Proposes research on advanced refrigeration control. This research would explore options with advanced controls in grocery stores' cold storage spaces. This would include advanced controls to enable better use of capacity, control, and load-shifting potential.
Liquid Cooling for Enterprise Data Centers	Proposes research on liquid cooling for corporate or campus (enterprise) data centers. This research would explore the potential for this technology within the Wisconsin data center market.
Pool Heater Heat Pumps (PHHPs) and Other Efficient Technologies for Waterparks	Proposes research on commercial pool heater heat pumps, which represent a high-impact efficiency opportunity in Wisconsin. These systems use ambient air to deliver four to seven times the efficiency of conventional gas pool heaters, offering substantial energy savings and demand flexibility.

CURRENT PILOT PROGRAM AND DEMONSTRATION UPDATES

The Future Focus team continually engages in experimenting and researching new ideas, pilot programs, technologies, and delivery methods to support the viability of Focus on Energy into

the Future. Additional information on each of the projects listed below is available on the Future Focus webpage.

Pilot	Description	Start Date	End Date	Q4 Project Activities
Accessible Efficiency	The accessibility pilot helps low-income seniors (ages 65+) and people with accessibility challenges improve energy efficiency and quality of life using smart home products. Participants will be recruited through community-based organizations. Participants will receive a free consultation to identify their needs. Products will be installed to address participants' needs.	Jan 2025	Dec 2025	• Received all referrals necessary to maximize the number of customers assisted. • Completed final program installations. • Conducted QA/QC with participating customers. • Drafted customer baseline report and pilot summary report.
Air-to-Water Heat Pump (AWHP) Field Study	This field study assesses AWHP retrofits in existing and new construction residential single-family and multifamily buildings in Wisconsin. The field study will consist of two phases. The first phase includes identifying candidate buildings and then sourcing bids and modeling energy savings for an AWHP system in each building. The second phase will include procurement, installation, and monitoring of AWHP systems in each building.	Oct 2023	Sep 2026	• Delivered a Project Update Report detailing each project site, the research conducted, and key lessons learned to date. • Continued monitoring at each project site including heating at all four sites, cooling at two sites, and domestic hot water at two sites. • Accepted to present on the project at the 2026 ACEEE Hot Air and Water Forum.
Community Impact	The Community Impact Pilot targets CBOs, utilities, and small businesses who service and impact their respective communities. The Program's intent is to provide community small businesses with the means to install energy-efficient solutions, increase their ROI, and better serve community members.	Jan 2023	Nov 2026	• Launched first community for 2026 in Waterford, Wisconsin. • Finalized list of five communities remaining for 2026: Prairie Du Sac, Merrill, Waupun, Tomah, and Superior.

Empowering Faith Communities	This pilot seeks to broaden Focus on Energy's customer base by partnering with places of worship. The initiative will include conducting energy assessments and recommending energy-efficiency upgrades using Focus measures. During this effort, the implementation team will host workshops to educate congregations about energy-efficiency opportunities.	Oct 2024	Dec 2026	• Completed all assessments scheduled for the year. • Hosted five workshops at participating places of worship. • First five projects were completed and 12 more were scheduled for 2026.
Focus Force Milwaukee (FFMKE)	The FFMKE pilot aims to transition displaced workers into energy efficiency careers. The pilot offers technical training—including Building Performance Institute (BPI) certification, Building Sciences Principles (BSP), or Building Analyst Technician (BAT) and manufacturer certifications. Wraparound services such as transportation, childcare, case management, and cohort support are also provided. This pilot demonstrates how CBOs and state energy programs can collaborate to build a more inclusive and skilled workforce, including insights into workforce development implementation, program design, and relationship building. Silver Springs Neighborhood Center (SSNC) will provide a roadmap to show how similar organizations can support the energy efficiency workforce based on their findings from the pilot.	Oct 2023	Jul 2026	• Job Placements since launch: 51 participants enrolled; 29 secured full-time jobs, 19 in roles related to energy efficiency. • Technical Trainings completed since launch: Eight individuals completed manufacturer training; 39 completed BPI Building Science Principles; six completed BPI Building Analyst Technician. • Soft Skills Training completed since launch: 42 participants completed soft skills training. • Partnerships: Strengthened collaboration with Auer Steel. Two new candidates were enrolled for January 2026 training. • Barriers: Participants face overlapping challenges including housing, transportation, childcare, health, court obligations, and financial insecurity.

Home Energy Upgrade	This community-focused pilot provides whole home retrofits at no cost to single- and multi-family customers. The pilot targets residential customers in selected communities facing high energy burden and offers comprehensive energy efficiency and safety upgrades to save energy and money on utility bills. The pilot will build partnerships with advocates, CBOs, and local contractors to serve qualified customers.	Jul 2024	Aug 2026	• Added new window and heat pump water heater (HPWH) measures to the program for Q4 2025 and all of 2026. • Completed 34 assessments for Phase II in Racine. • Five projects have been completed for Phase II. • Two CBOs provided leads to exploring additional resources to recruit more customers.
Integrated Controls	This pilot seeks to complete five demonstration projects. This includes both full retrofits involving lighting retrofit plus HVAC control integration and integration-only projects, where networked lighting controls have already been installed, but the system needs to be integrated with HVAC controls.	Nov 2022	Nov 2026	• Presented a project research report to the administrative team. • Completed a pilot summary report, which highlighted implementation challenges and successes of the strategy. • Updated marketing material for potential use in future offerings of the technology.
Life Sciences Midstream	This pilot will incentivize the purchase of energy-efficient ultra-low temperature (ULT) freezers. Standard larger capacity ULT freezer models consume nearly as much energy as the average U.S. household, whereas an ENERGY STAR® unit can cut this usage by more than half. Wisconsin fosters a dynamic biosciences growth market, making it an ideal location for this technology. The pilot is targeting sales of just over 500 units.	Jan 2023	Dec 2025	• 148 units incented throughout 2025. • This pilot was completed in 2025. Focus will continue to offer incentives through the instant discounts program.

EMERGING TECHNOLOGY UPDATES

The Emerging Technology initiative seeks to identify emerging technologies new to Wisconsin that could benefit utility customers. It includes the **Emerging Technology Accelerator**, which looks at new technologies for residential and commercial businesses, and the **Industrial Technology Accelerator**, which focuses on understanding technologies that are most beneficial to industrial operations. Technologies identified undergo an initial screening and if they meet the opportunity threshold, they advance to comprehensive review. Additional information on each of the projects listed below is available on the Future Focus webpage.

Emerging Technology Accelerator Projects

Technology	Description	Target Customer	Status
HVAC Smart Tools	Contractor-held tools to improve heat pump performance and maintenance through qualifying installation checks, real-time field analysis. The project is intended to profile existing tools, how they fit into the current suite of offerings, and potential contractor training.	Residential	Active
High Performance and Secondary Windows	Secondary windows are attached to the interior or exterior of existing windows, creating an insulating pocket of air that reduces air leakage and heat transfer.	Residential	Active
Alternate Form Factor Heat Pumps	Market characterization of cold climate saddlebag and two-way window units, portable units, packaged terminal units, and vertical stack system heat pump technologies. Potential for a phase 2 field study.	Residential, Commercial	Completed in Q4
Cloud Based Smart HVAC Monitoring Systems	A Cloud-based Residential HVAC Monitoring System includes a cloud-connected smart thermostat that, through telemetry, collects real-time data from multiple sensors to monitor performance, predicts and diagnoses operational faults of system components. This project aims to understand the capabilities, performance and energy savings potential of this technology.	Residential	Completed in Q4

Industrial Technology Accelerator Projects

Technology	Description	Target Customer	Status
Venturi Steam Traps	Through design, Venturi traps significantly reduce the amount of steam leakage, trap failure, and maintenance required over standard steam traps.	All C&I	Transitioned in 2025
Energy Efficient Refiner Plates	Low intensity, milled refiner plates. These plates use less horsepower to refine paper stock. In some cases, smaller diameter plates (which also reduces "no-load" hp requirements).	Large Industrial - Paper	Transitioned in 2025
Naturally Pressurized Mold Gating	Naturally pressurized mold gating improves casting yield by keeping the gating system full and reducing turbulence, air entrainment, and defects during mold filling. Higher yield means less scrap and re-melted metal, which lowers the total amount of metal that must be melted and therefore reduces energy use in foundries.	All Industrial - Foundries and metal casting.	Transitioned in 2025
Yankee Hood Air Management System	System that uses exhaust humidity and "0" point sensors to control inlet and exhaust air flows	Large Industrial - Paper	Transitioned in 2025
Fluid Quip	Reconfiguring the operating sequence of whole stillage decanter centrifuges increases wet cake solids and reduces suspended solids in thin stillage. This improves downstream processing efficiency and lowers energy use by reducing pumping, evaporation, and reprocessing loads.	Large Industrial, Wastewater	Identified in 2025
Sael	Water-cooled variable frequency drives (VFDs) efficiently remove heat in warm or enclosed environments. Compared to compressed air or air-cooling approaches, they reduce auxiliary cooling energy and improve overall system efficiency.	All Industrial	Identified in 2025
New Fluid Technology	Solid body vortex pumps are designed to move fluids with lower hydraulic losses than conventional centrifugal pumps. Higher pumping efficiency reduces motor load and electricity consumption, especially in continuous or high-flow applications.	All Industrial	Identified in 2025

Golgix	AI-enhanced, real-time process optimization improves ethanol yields by continuously adjusting operating conditions to reduce losses and inefficiencies. Higher yields mean less energy per gallon of product by lowering reprocessing, recycling, and utility intensity.	All Industrial	Identified in 2025
Advanced Thermovoltaic Systems	Waste heat-to-electricity systems using thermoelectric generators (TEGs) convert temperature differences directly into usable power with no moving parts. This recovers energy that would otherwise be lost, reducing purchased electricity and improving overall system efficiency.	Large Industrial	Identified in 2025
Fox Valve	The Air Jet Booster ejector uses atmospheric air to deepen vacuum levels achieved by a liquid ring vacuum pump without additional mechanical compression. By increasing vacuum efficiency without adding motor load, it reduces overall vacuum system energy consumption.	All Industrial	Identified in 2025
Flint Engineering	IsoMat flat plate heat pipes rapidly transfer heat from hot to cool regions using phase change with no moving parts. Faster and more uniform heat transfer improves thermal efficiency and reduces the energy required for heating or cooling systems.	All C&I, S&G	Identified in 2025
GTI Energy	Advanced hydrogen-flexible, low-emissions matrix burners enable efficient combustion across varying fuel blends, including high hydrogen content. Improved combustion efficiency and fuel flexibility reduce energy losses and support lower-carbon thermal processes.	Large Industrial	Identified in 2025
Buhler	The Prime Masa Nixtamal Process significantly reduces energy and water use by replacing traditional cooking and steeping steps with a more efficient processing method. Lower thermal and water demand directly cuts fuel and electricity consumption per unit of masa flour produced.	Large Industrial	Reviewed in 2025

ENVIRONMENTAL AND ECONOMIC RESEARCH AND DEVELOPMENT PROGRAM

The Environmental and Economic Research and Development (EERD) program seeks to support energy efficiency and renewable energy research that allows Wisconsin to further its efforts towards reducing energy waste, costs, and environmental impacts. Additional information on each of the projects listed below is available on the Future Focus webpage.

Active EERD Projects currently include one project:

Emerging/Transitional Priorities Research

Description: This research project will deliver a transitional roadmap, with the goal of supporting Focus on Energy's statutory obligations and objectives established during the Quadrennial IV period and informing the Quadrennial V (2027-2030) planning process. The research will result in a package of high-leverage interventions and a tactical implementation plan that can best achieve high-level goals for the EERD program and Focus on Energy broadly.
Project Timeline: November 2024 – December 2025

Q4 Project Updates

- The research team completed the "Plan" phase, culminating the project with the development of 14 implementation plans for the priority interventions identified in prior stages and the delivery of a final "roadmap" report.
- The 14 implementation plans were a product of all the research conducted throughout the year and with the input of staff across Focus on Energy and the Wisconsin Public Service Commission (PSC). The final report and accompanying presentation cover the project end-to-end, recapping findings at each stage of the project, and concluding with recommendations for strategically sequencing interventions.
- The research team, along with staff from Focus on Energy and the Wisconsin PSC, presented preliminary project findings at the ASHRAE Building Decarbonization Conference.

OTHER INNOVATION INITIATIVES

Combined Heat and Power Research Project

Description: The Combined Heat and Power Research Project will explore the potential for

natural gas combined heat and power (CHP) in Wisconsin. This will involve gathering and analyzing data on several high-potential customer segments and a focused policy review to map out where CHP currently fits within Wisconsin's regulatory and program landscape.
Project Timeline: September 2025 – December 2025

Q4 Project Updates

- Market characterization and policy briefs were completed and delivered in December.

Pitch Day 2026

Description: Pitch Day 2026 is an opportunity for industry partners and stakeholders to showcase energy efficiency pilot program ideas to a panel of judges in an interactive way. Focus on Energy will release a Request for Concepts (RFC) seeking pilot programs addressing concept categories, which are currently being determined.

Q4 Project Updates

- Began coordination of Pitch Day 2026 RFC, which included the following tasks:
  - Developing timelines and tasks.
  - Establishing administrative processes and drafting communication documents.
  - Brainstorming category ideas with the Focus Programs Team.

MARKET ANALYTICS

Q4 Market Analytics consisted of the development of one memorandum and one market scan.

Focus on Energy Workforce Development Strategy Memorandum

The final version of the Focus on Energy Workforce Development Strategy Memorandum (memo) was completed in Q4. The memo examined workforce development opportunities aligned with Focus on Energy's goals, highlighting opportunities to engage with community-based organizations, Trade Allies, training providers, and other partners in workforce development. The research and analysis conducted in preparing for this memo revealed an industry need for a more coordinated workforce development approach that not only enhances current workforce development efforts but also addresses existing gaps in soft and technical skill training. The workforce development strategy recommendation centers on increasing Trade Ally capacity to complete energy efficiency projects while maximizing benefits for all key stakeholders—including Trade Allies, Training Providers, customers, and community-based organizations-ultimately creating an additional pathway to achieving energy savings.

Two strategy recommendations were developed in the memo:

- **Holistic Approach:** In a scenario where Focus is explicitly directed to lead workforce development for energy efficiency programs, this model outlines a comprehensive strategy for implementation and investment that supports a broad range of stakeholders, including Trade Allies, CBOs, training providers, and other workforce

development partners.
- **Tiered Implementation Approach**: The tiered support approach leverages specific Focus objectives related to CBO and Trade Ally engagement to administer workforce development in the energy efficiency sector. In the absence of a formal directive, this enables Focus to meaningfully implement workforce development initiatives within these key groups while still benefiting key program stakeholders.

Key strategic recommendations to support the energy efficiency workforce fell into four different categories:
- Engage with or leverage existing workforce development activities.
- Develop infrastructure, tools, or resources.
- Build Trade Ally capacity.
- CBO Engagement.

AI-Enabled HVAC Systems Market Scan

The AI-Enabled HVAC Systems market scan was completed in Q4. This market scan aimed to better understand artificial intelligence (AI) - enabled HVAC control systems for commercial building use. Technologies currently on the market were reviewed to determine how they compare in terms of features, cost, installation, and system compatibility.

Key takeaways include:
- AI-enabled HVAC systems can offer energy and cost reduction outcomes.
- Field deployment will depend on goals regarding scale, deployment speed, and predictive control.

GET INVOLVED WITH FUTURE FOCUS

Submit Your Ideas

The Future Focus Initiative seeks to improve the Focus on Energy program and promote a sustainable future for Wisconsin residents and businesses. This initiative is not possible without the support of your ideas and feedback. You can help accelerate energy and money savings by submitting your ideas for a research topic, pilot proposal, program suggestions, or energy-saving measures.

Learn More

For more details on active or completed projects, emerging technology reviews, and past newsletters, please visit our website:
Future Focus Initiative

Contact Us

Any questions about Future Focus projects may be directed to:
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REDUCING ENERGY WASTE ACROSS WISCONSIN

Focus on Energy, Wisconsin utilities' statewide program for energy efficiency and renewable energy, helps eligible residents and businesses save energy and money while protecting the environment. Focus on Energy information, resources, and financial incentives help to implement energy efficiency and renewable energy projects that otherwise would not be completed.