## IDEA SUBMISSIONS IN REVIEW

**The following ideas continue to be in review:**

- Central Heat Pump Water Heater (HPWH) Load Shifting: This idea proposes replacing or supplementing natural gas fired boilers with HPWHs for domestic hot water systems in multifamily buildings for load shifting potential.
- Commercial Envelope Improvements: This idea proposes undertaking a multifaceted strategy to address barriers around high-performance envelopes and start creating a more focused and streamlined approach to high-performance building envelope design and integration into new commercial construction in Wisconsin.
- Residential Envelope Improvements: This pilot idea proposes deploying distributed energy resources in 50-100 homes utilizing a performance path to meet aggressive home heating load targets and installing dual-fuel air-source heat pumps (ASHPs) to maximize efficiency, greenhouse gas (GHG) reduction and fuel flexibility.
- Water Heater Control: This project seeks to capture the demand management potential of electric resistance water heaters in homes and multifamily properties by integrating smart devices that enable remote monitoring and control.
- Heat Recovery for Data Servers: This idea proposes using technology to cool data servers with liquid/oil, rather than air, then use the heat that is taken from the server to heat water for buildings.
- Residential Air-to-Water Heat Pumps (AWHP) (expanded): This project expansion proposes extending monitoring of the AWHP field study to gather cooling data and a second winter of data to more thoroughly understand the impact of controls adjustments.
- Shower Star Timer: This idea proposes using a product that communicates and tracks data about times of showers. This would be used to reduce shower times.
- Natural Gas Leak Detection Pilot: This idea proposes a pilot or conducting research on a small effort focused on behind-the-meter natural gas leak survey and repair.
- Preparing Buildings for Future GridOptimal Buildings: This proposal aims to help project participants during the design phases of a project. Metrics are provided to measure building summer and winter peak demand savings during grid peak hours, quantify hourly upstream grid carbon emissions, characterize renewable self-utilization efficiency, predict demand flexibility potential, and/or evaluate building resilience.

## IDEA SUBMISSIONS IN REVIEW CONTINUED

- Thermentor Heating and Cooling Load: Thermentor is a web-based tool empowering homeowners and contractors to make informed decisions about heat pump adoption and weatherization. It estimates heating and cooling loads and predicts billing impacts using historical energy usage, local weather data, and utility rates—without requiring in-person audits or complex modeling.
- System Health Check Hydronic: This idea proposes cleaning and treating hydronic systems to minimize corrosion and scale buildup which reduces the energy needed to transfer heat.

## AIR-TO-WATER HEAT PUMP STUDY

**The Air-to-water Heat Pump (AWHP) study consists of research via a field study on air-to-water heat pumps (AWHP).** The AWHP study is a field research project focused on evaluating AWHP systems. It will assess three retrofit installations in single-family and multifamily residential buildings across Wisconsin, as well as one installation in a newly constructed home.

Project launch: January 2025
Project completion: July 2026

Key project activities in Q2 include:

- Troubleshooting temperature and humidity monitoring equipment and continued monitoring at the multifamily site.
- Continuing to monitor heating and cooling at one single-family retrofit site while also troubleshooting cooling systems.
- Continued monitoring of heating only at the second single family retrofit site.
- Recruiting a new construction site with installation slated to complete early Q3.

## FOCUS FORCE MILWAUKEE

**This pilot aims to educate and train individuals from disadvantaged communities in Milwaukee for careers in the energy efficiency industry.** The program seeks to develop more career opportunities while providing employers and trade allies with the highly skilled employees they need. The pilot plans to develop a roadmap designed to be transferable and scalable with other neighborhood centers, rural community groups, and other technical training providers.

Project launch: October 2023
Project completion: December 2026

Key project activities in Q2 include:

- Placing six individuals in jobs to date. These include jobs in energy auditing and energy distribution/solar project installation.
- Twenty-five individuals have completed BPI's Building Science Principles Certification.
- Exploring new training pathways/partnerships to align with participant and employer interests.

## EMPOWERING FAITH COMMUNITIES

**This program is intended to increase participation from places of worship and reach new customers by establishing a relationship with their congregation.** The pilot was selected through Pitch Day and launched in Q4 2024. The pilot will explore the energy savings potential and financial resources needed for places of worship and the Community-based Organizations (CBOs) they partner with to complete energy efficiency improvement projects. In addition, the pilot will aim to increase residential program participation of the religious organization's membership by providing trackable coupon codes for the online marketplace.

Project launch: October 2024
Project timeline: December 2026

Key project activities in Q2 include:

- Since launch the program has received 38 applications from places of worship.
- Twenty-one assessments have been completed and first set of project bundles have been sent for consideration.
- Two workshops have been completed for congregations at the places of worship.

## LIFE SCIENCES MIDSTREAM PILOT

**This pilot incentivizes the purchase of energy-efficient, ultra-low temperature freezers and lab grade refrigerators used by biotech and pharma businesses, hospitals and medical centers, and academic research facilities in Wisconsin.** Standard larger capacity ultra-low temperature (ULT) freezer models and lab grade refrigerators consume nearly as much energy as the average U.S. household. An ENERGY STAR® unit can cut this usage by more than 50%. The pilot is targeting the sale of 500 units.

Project launch: April 2023
Project timeline: December 2025

Key project activities in Q2 include:

- Fifty-three lab grade freezers and refrigerators were sold via the program in Q2.

## HOME ENERGY UPGRADE PILOT

**This community-focused pilot will provide whole-home retrofits at no- or low-cost to customers to two communities in Wisconsin.** Black River Falls is the first community for pilot implementation. The pilot will target residential customers in selected communities facing high energy burden to offer comprehensive energy efficiency, weatherization, and safety upgrades in single- and multifamily homes. The pilot will build partnerships with advocates, community-based organizations (CBOs), and local contractors to serve utility customers.

Project launch: June 2024
Project completion: August 2026

Key project activities in Q2 include:

- An Interim Report that included findings from the first of the three Program communities was submitted.
- The Program Trade Ally completed 19 projects in Q2. In addition, 12 assessments on 15 new leads were completed in Q2. All fieldwork in Black River Falls will be completed in Q3.
- In Q2, the Program received new leads from the Black River Falls school district and Black River Falls Municipal Utilities. Program staff attended a utility Open House that generated seven leads. The team also worked with the local utility on a bill insert that went out with utility bills and generated six leads to date.
- The team completed a plan to expand Phase II of the Program to a third community, Kenosha, and is currently in the pre-planning phase for both Racine and Kenosha.
- The team interviewed two potential Trade Allies and three CBOs who may support the two communities selected for Phase II of the Program. The team also refreshed marketing and outreach materials to support Phase II partner outreach.

## COMMUNITY IMPACT PILOT

**The Focus on Energy Community Impact Pilot (the Pilot) targets CBOs**, and small businesses who service and impact their respective communities. The Pilot's intent is to provide high-impact, community small businesses with the means to deploy energy-efficient measures, increase their ROI, and better serve community members. A secondary intent is to demonstrate the success of partnerships between FOCUS ON ENERGY®, CBOs, utilities, and small businesses

Project launch: January 2023
Project completion: December 2025

Key project activities in Q2 include:

- The Pilot successfully closed and disbursed payments for projects in Ashland, Platteville, Wisconsin Rapids, Menasha, and the City of Portage.
- Green Bay and New London communities were both launched in Q2 with Rice Lake expected to kick off early in Q3.
- The marketing team completed success stories for Madison and is planning the first one for Black River Falls.

## INTEGRATED CONTROLS PILOT

**This demonstration project researches the potential for achieving deeper energy savings in networked lighting control (NLC) retrofits by using occupancy signals from the lighting system to enhance HVAC control strategies executed through the building's existing building automation system (BAS).** At the conclusion of the pilot, a summary report, energy saving calculations, and a workpaper will be created to potentially inform future program opportunities.

Project launch: July 2022
Project completion: December 2025

Key project activities in Q2 include:

- Continued data monitoring of project sites to inform savings achieved.
- Held update meeting to discuss energy savings and potential for future measures.
- Started workpaper and final report with completion anticipated in Q3.

## DISADVANTAGED BUSINESS ENTERPRISES RESEARCH PROJECT

**This project will determine the current landscape of Disadvantaged Business Enterprises (DBEs) participation in Focus on Energy and energy programs across the state.** By researching nonparticipant DBE companies in energy-adjacent industries through interviews and feedback sessions, this project will identify participation barriers and recommend tools Focus on Energy can use to enhance the DBE experience. This project will also aim to identify appropriate KPIs for this market segment based on the outcome of research findings.

Project launch: January 2025
Project completion: December 2025

Key project activities in Q2 include:

- Finalized the Project Work Plan.
- Finalized survey questions, interview questionnaire, and in-person stakeholder agenda.
- Delivered the DBE List and DBE List Memorandum.

## ACCESSIBLE EFFICIENCY PILOT

**The Accessible Efficiency Pilot aims to enhance energy efficiency and quality of life for low-income senior citizens (ages 65+) and individuals with accessibility challenges through smart products.** Potential participants will be recruited via partnerships with CBOs. Once enrolled, participants will receive a free consultation to assess their specific needs and how the program's products can help reduce their energy burden and improve their quality of life. The products will be installed directly in their homes to ensure proper setup, followed by post-installation surveys to gauge satisfaction with the program.

Project launch: January 2025
Project completion: December 2025

Key project activities in Q2 include:

- Enrolled, trained, and onboarded the first CBO to provide leads to the program. In addition, the Trade Ally was also enrolled to conduct the installations for the program.
- Updated data collection templates to include fields for customer baseline conditions.
- Paid the first 13 applications with follow up QA/QC meetings held with three of the customers.

## EMERGING TECHNOLOGY UPDATES

**This 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 most beneficial to industrial operations. Technologies identified undergo an initial screening, and if they meet the opportunity threshold, they advance to comprehensive review.

Active Emerging Technology Accelerator Projects currently include:

- Dual-fuel commercial rooftop units (RTUs): A hybrid commercial RTU that employs a heat pump for cooling and for the first stage of heating. A fossil-fuel fired system is used as the second stage of heating. A researcher has developed a draft scope of work, whose initial phase focuses on a market assessment of the technology in Wisconsin, which includes a secondary literature review, market potential analysis, and identification of barriers to adoption.

- Cloud-Based Residential HVAC Monitoring Systems: Cloud-based Residential HVAC Monitoring Systems feature full two-way communication between the system and thermostat gathering information from devices and connected sensors that enable continuous commissioning, remote management, energy efficiency, real-time monitoring, air quality improvements, fault detection, and diagnostics. A researcher has developed a draft scope of work.

- High Performance and Secondary Windows: A proposed study on 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. There is an example of savings calculation in the Illinois TRM.

- Alternate Form Factor Heat Pumps: Alternative form factor heat pumps (AFFHPs) are compact low-cost systems that include cold climate saddlebag and two-way window units, portable units, packaged terminal units, and vertical stack systems. The research addresses the potential of AFFHPs to improve energy efficiency in multifamily and manufactured housing segments.

Emerging Technologies reviewed in Q2 2025 are listed below.

- Smart Shower Timers
- Smart-Enabled Behavioral Devices and Applications

Additional Technologies that have been reviewed through the Technology Accelerators can be found on the Future Focus website.

## 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.**

There are two EERD projects currently in progress.

Trade Ally Technical Assistance Research:

- The primary objective of the research is to support development of a Workforce Development Strategy for the Focus on Energy program by further investigating Trade Ally workforce development needs related to training programming and upskilling Wisconsin's workforce.
  - Project launch: March 2025
  - Project completion: August 2025
- Key project activities in Q2 include:
  - Project kicked-off in early Q2.
  - A workforce partner and Trade Ally interview plan and schedule were created. MREA developed interview questions and methodology, defined objectives and expected outcomes, outlined results tabulation and summary, and worked with Focus on Energy advisors to set interview schedules and identify priority contacts.
  - A total of ten interviews have been conducted with 40 in total expected to be completed in early Q3.

Emerging/Transitional Priorities Research:

- 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 launch: January 2025
  - Project completion: December 2025
- Key project activities in Q2 include:
  - Drafted a comprehensive list of potential interventions based on market trends, quad directives, and input from Focus on Energy and WI Public Service Commission staff.
  - Created document outlining the parameters and attributes of interventions, and methodology for assessing interventions. The team developed a list of eight evaluation criteria for each intervention, including energy savings and GHG savings; grid, equity, and other benefits; equity concerns; and implementation cost and difficulty.
  - Populated database of 45 interventions that were mapped to the affected measures, customer segments, end-use categories, barriers, and related interventions. Interventions were also characterized with fields to support later evaluation and prioritization, including scale potential, enablement of other interventions, and the evaluation criteria noted above.

## MARKET ANALYTICS

**The Future Focus team conducted the following Market Scans in Q2:**

1. National Energy Efficiency Workforce Development Initiatives: This market scan identified common themes among programs, funding opportunities, and organizations actively working on workforce development within energy efficiency trades. Key components of workforce development programs include engaging local stakeholders to ensure strategies and organizations can collaborate effectively, understanding contractors' needs and identifying skills gaps, providing livable wages and support services, increasing career awareness, offering navigational and wraparound services, implementing technical and soft skills training, and ensuring job placement. This market scan is the final of two market scans completed to inform Focus' workforce development strategy.

2. Barriers to Net Positive Energy Schools in Wisconsin: This market scan explored the opportunities and barriers in building net positive energy K-12 schools in Wisconsin. Net positive energy schools have the potential to lower longterm operating costs, create healthier learning environments, and "lead by example" within a community. However, school districts face several barriers in constructing net positive energy buildings, including high upfront costs despite long-term savings, and limited technical expertise in advanced energy systems. Additionally, net metering size caps and buyback rates in Wisconsin may not be high enough for schools to meaningfully offset their energy usage. This market scan also conducted a cost analysis that demonstrated that net zero schools would have a higher value proposition than net positive schools. This research aims to help Focus understand the rising adoption of net positive and net zero energy schools and the feasibility, cost, and community considerations that play into a school district's decision.