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Partnering with Wisconsin utilities

FUTURE FOCUS QUARTER ONE 2025 NEWSLETTER

ADMINISTRATIVE UPDATES

The Future Focus team implemented various process improvements in Q1 2025 including:

- Updated invoicing templates, procedures, and process for providing payment.
- Streamlined drafting scope of work process.
- Made final edits to support the refresh of the Future Focus landing pages.
- Alongside the Marketing team, created new Future Focus submission forms to be more specific and help streamline review.

IDEA SUBMISSIONS IN REVIEW

The following ideas continue to be in review:

- Central 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 ASHPs to maximize efficiency, 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 (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.
- Wastewater Treatment - Strategic Energy Management (SEM): This idea proposes applying strategic energy management (SEM) approaches, system models and operator training to wastewater plants and water systems.

120V HEAT PUMP WATER HEATER STUDY

The 120V Heat Pump Water Heater (HPWH) Study was closed out in Q1 2025 and consisted of research through a field study on 120V HPWHs. This research project assessed 120V HPWH retrofits in 11 residential single-family homes across Wisconsin, in addition to 16 sites across the Midwest with co-funding from other utilities. The project consisted of identifying project sites, installing 120V HPWHs and modeling each project site's energy savings to evaluate their overall performance.

Project launch: March 2023.
Project completion: December 2024

A final project report is available on the Future Focus website. Key takeaways from the research include:

- 120V HPWHs easily replace natural gas units when space is not constrained, and an outlet is present.
- 120V HPWH and gas units are at around operational cost parity, with slight average monthly savings after HPWH installation.
- Hot water runouts occur more often at higher levels of consumption and at lower groundwater temperatures. With a 120V unit, when water runs out, it runs out for longer.
- Units performed efficiently even in the cold groundwater and air temperatures of the Midwest but consumed more energy in winter months. COP was positively correlated with indoor temperature.
- Survey results indicated an increased awareness among participants about personal hot water consumption patterns.
- Participants were satisfied with their 120V HPWH units and cooling and can provide domestic hot water.

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). This research project will assess 3 AWHP retrofits in residential single family and multifamily buildings throughout Wisconsin and 1 residential new construction.

Project launch: January 2025
Project completion: July 2026

Key projects activities in Q1 include:

- Completed installation and began monitoring at the multifamily site.
- Began installation and monitoring heating at one single family retrofit site while waiting on a cooling coil to arrive to complete installation to allow for cooling.
- Completed installation and began monitoring at the second single family retrofit site.

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 for disadvantaged communities while providing employers and trade allies with the highly skilled employees they need. The pilot plans to develop a roadmap that is transferable and scalable with other neighborhood centers, rural community groups and other technical training providers.

Project launch: October 2023
Project completion: December 2026

Key projects activities in Q1 include:

- Seven participants completed Building Performance Institute's Building Sciences Principles Training and two participants attended HVAC training with a manufacturer.
- One participant survey response and two employer survey responses were submitted.
- It was found in Q1 that transportation continues to be the biggest barrier for participants to access employment.
- Five individuals have secured jobs to date.

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 multi-family 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 projects activities in Q1 include:

- Received 25 leads out of the 50-unit goal.
- Onboarded and trained six CBOs (target of 7).
- Completed 20 assessments to-date, measures installed at 15 homes.
- Participant interviews initiated to collect data and identify lessons learned.
- Racine was selected as the second pilot community.

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, whereas 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 projects activities in Q1 include:

- 27 ULT freezers and lab grade refrigerators were sold with program incentives during Q1.
- The program implementer performed outreach with key program participants to review the offerings and gauge what the potential program and sales impacts of tariffs and cancelation of Federal NIH grants.
- Updated the qualified product list due to new ENERGY STAR specifications going into effect on January 1, 2025.

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 projects activities in Q1 include:

- Program launched in Q1 2025
- Substantial interest in the program with 26 applications within the first two months
- Audits have been scheduled for the first six projects

COMMUNITY IMPACT PILOT

The Focus on Energy Community Impact Pilot (the Program) targets Community-Based Organizations (CBOs), utilities and small businesses who service and impact their respective communities. The Program'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 projects activities in Q1 include:

- Green Bay, Eagle River, New London, and Rice Lake selected as 2025 Communities
- Assessment completed in Green Bay, 6 of 10 communities have projects in progress
- Projects completed for 62 with average incentive of $21,865

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 projects activities in Q1 include:

- Fond Du Lac Library is reporting lower savings than anticipated. The implementation team is investigating the reasons for this, but it's likely due to the function of the building
- Aurora Healthcare Clinic is reporting significant savings since the integration has been completed
- Workpapers are scheduled to be completed for this technology by mid-summer

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. Through researching nonparticipant DBE companies in energy adjacent industries, including conducting stakeholder interviews and feedback groups, this project will identify barriers to participation and tools the Portfolio can deploy to improve 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 Q1 include:

- Completed the SOW in early Q1.
- Kicked off the project in late Q1 including onboarding team members, reviewing the onboarding checklist, and nearly finalizing a work plan.

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.

Emerging Technologies reviewed in Q1 2025 are listed below.

- Alternate Form Factor Heat Pumps.
- High Performance and Secondary Windows.
- Integration with DOE Cold Climate Heat Pump Initiative – Phase 2 Field Testing.
- Expanded Scope for Alternate Form Factor Heat Pumps.
- HVAC Smart Tools.

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

ENVIRONMENTAL AND ECOMINIC 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 project 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: December 2025.
- Key project activities in Q4 include:
    - Drafted a Scope-of-Work for the project with project launch anticipated in early Q2.

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 Q1 include:
    - Kicked-off the project in January including onboarding team members, setting up the project across administrative systems, and completing a work plan. A landing page on the website was also created.

REQUESTS FOR CONCEPTS FOR PITCH DAY 2025

Focus on Energy issued a Request for Concepts (RFC) for Pitch Day 2025 in Q1 of 2025. Pitch Day is an opportunity for industry partners and stakeholders to showcase innovative pilot program ideas to a panel of judges in an interactive way. Focus on Energy will seek well-designed, proven, and implementation-ready pilot programs addressing a list of pre-determined concept categories.

VEIC, as the Future Focus Team, coordinated the following for Pitch Day 2025 in Q1 2025:
Establish project timeline and tasks.

- Determine goals and categories with the Programs Team.
- Release soft announcement of the RFC including intake form and submission template.
- Establish scoring process and train relevant team members on process.
- Release the RFC.
- Release bidder communications documents.

Many team members are expected to support review and scoring of Pitch Day 2025 idea submissions in Q2 2025.

MARKET ANALYTICS

The Future Focus team conducted the following Market Scans in Q1:

1. Workforce Development Initiatives in the State
    - This market scan identified various programs and services that support workforce development in Wisconsin. It examines what "workforce development" should include to create high-quality jobs and ensure inclusivity. Also, it offers comprehensive research on organizations that provide training and non-technical services, highlighting existing programs and services available to Wisconsin residents. This information will be used to inform Focus' workforce development strategy.
    - This market scan made the following recommendations for Focus:
        - To ensure an adequate supply of energy-efficiency workers and develop qualified professionals, Focus should prioritize and support training opportunities across the state. Current programming lacks sufficient resources and funding to create an adequate supply of qualified professionals that offer energy efficient products and services.
        - While technical training in Wisconsin is plentiful, determining which specific programs Focus should support will require further review and should be considered alongside industry partners such as Trade Allies, manufacturers, businesses, and training providers.
        - Technical training is not enough for workforce development efforts and requires additional support services to increase program accessibility.
        - Engaging stakeholders will be critical in crafting and executing an effective workforce development strategy.