Public Service Commission of Wisconsin

Rebecca Cameron Valcq, Chairperson
Ellen Nowak, Commissioner
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4822 Madison Yards Way
P.O. Box 7854
Madison, WI 53707-7854

March 8, 2022

To the Parties:

Re: Quadrennial Planning Process IV 5-FE-104

Comments Due:	Address Comments To:
Thursday, March 31, 2022 - 1:30 p.m.	**5-FE-104** Public Service Commission
This docket uses the Electronic Records Filing system (ERF).	P.O. Box 7854 Madison, WI 53707-7854

The Commission memorandum concerning the Focus on Energy Quadrennial Planning Process IV - Phase I, is being provided to the parties for comment. Comments must be received by 1:30 p.m. on Thursday, March 31, 2022. Party comments must be filed using the Commission's ERF system. The ERF system can be accessed through the Public Service Commission's web site at http://psc.wi.gov. Members of the public may file comments using the ERF system or may file an original in person or by mail at the Public Service Commission, 4822 Madison Yards Way, P.O. Box 7854, Madison, WI 53707-7854.

Please direct questions about this docket or requests for additional accommodations for persons with a disability to the Commission's docket coordinator, Jolene Sheil at (608) 266-7375 or Jolene.Sheil@wisconsin.gov.

Sincerely,

Kristy Nieto
Division Administrator
Digital Access, Consumer & Environmental Affairs

Attachment

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PUBLIC SERVICE COMMISSION OF WISCONSIN

Memorandum

March 8, 2022

FOR COMMISSION AGENDA

TO: The Commission

FROM: Kristy Nieto, Administrator
Tara Kiley, Deputy Administrator
Joe Pater, Director, Office of Energy Innovation
Mitch Horrie, Performance Manager, Focus on Energy
Jolene Sheil, Portfolio Manager, Focus on Energy
Division of Digital Access, Consumer and Environmental Affairs

RE: Quadrennial Planning Process IV – Phase I Memorandum 5-FE-104

Suggested Minute: The Commission directed the Division of Digital Access, Consumer and Environmental Affairs to draft an Order consistent with its discussion.

Quadrennial Planning Process

The Commission oversees Wisconsin's statewide energy efficiency and renewable resource programs, known as Focus on Energy (Focus). Wisconsin Stat. § 196.374(3)(b)1. requires the Commission to evaluate and set goals for the Focus programs as part of a Quadrennial Planning Process, among other statutorily identified tasks:

> At least every 4 years, after notice and opportunity to be heard, the commission shall, by order, evaluate the energy efficiency and renewable resource programs under sub. (2) (a) 1., (b) 1. and 2., and (c) and ordered programs and set or revise goals, priorities and measurable targets for the programs. The commission shall give priority to programs that moderate the growth in electric and natural gas demand and usage, facilitate markets and assist market providers to achieve higher levels of energy efficiency, promote energy reliability and adequacy, avoid adverse environmental impacts from the use of energy, and promote rural economic development.

In conjunction with the Commission's obligations to continually evaluate the Focus programs, Wis. Stat. § 196.374(5m)(b) requires that the Commission ensure "that customers throughout the state have an equivalent opportunity to receive the benefits of" statewide energy efficiency and renewable resource programs. Wisconsin Stat. § 196.374(2)(a)2. identifies specific components that must be included in the Focus programs.

The Commission's decisions in the first Quadrennial Planning Process (PSC REF#: 141173) covered the 2011-2014 period for management of the Focus program. The decisions in the Quadrennial Planning Process II (PSC REF#: 215245) were in effect for the 2015-2018 period, and decisions made in the Quadrennial Planning Process III are in effect for the 2019-2022 period. (PSC REF#: 343909.)

Background

On March 19, 2020, the Commission issued a Notice of Investigation in this docket to evaluate the energy efficiency and renewable resource programs (both the statewide Focus on

Energy program and utility voluntary programs) and to determine their appropriate goals, priorities, and measureable targets. (PSC REF#: 386022.)

In the Notice of Investigation, the Commission indicated it would follow a process similar to the one used in the Quadrennial Planning Process III docket while opening this docket earlier in the process to provide sufficient time to conduct an energy efficiency potential study. The potential study was finalized by the Focus Program Evaluator Cadmus Group, Inc. (Cadmus), on September 10, 2021. (PSC REF#: 420467.) In addition, in its Final Decision of March 10, 2021, the Commission authorized funding for Cadmus to conduct a rooftop solar photovoltaic (PV) potential study to inform the Quadrennial Planning Process IV (Quad IV). (PSC REF#: 406592.) A Rooftop Solar PV Potential Study was conducted and finalized by the Cadmus on October 4, 2021. (PSC REF#: 421984).

Six organizations, Clean Wisconsin, RENEW Wisconsin, the Wisconsin Industrial Energy Group, the Midwest Renewable Energy Association, Citizen's Utility Board (CUB), and AXIOM Energy Group requested intervention in this docket. (PSC REF#: 386323), (PSC REF#: 386749), (PSC REF#: 386538), (PSC REF#: 387677), (PSC REF#: 422105), and (PSC REF#: 422139) respectively.)

In its memorandum dated October 26, 2021, Commission staff sought comments on the appropriate Scope of the Quadrennial Planning Process IV. (PSC REF#: 423921.) The Commission received comments from 14 organizations or individuals: Wisconsin Utilities Association (WUA) (PSC REF#: 426016); Citizen's Utility Board (PSC REF#: 426104); VEIC (PSC REF#: 426094); Wisconsin Local Government Climate Coalition (WLGCC) (PSC REF#: 426092); Axiom Energy (PSC REF#: 425980); Clean Wisconsin (PSC REF#: 426056); Slipstream (PSC REF#: 426098); RENEW Wisconsin (PSC REF#: 426038); ACEEE (PSC

REF#: 426071); Rocky Mountain Institute (PSC REF#: 426103); Wisconsin's Greenfire (PSC REF#: 426050); APTIM (PSC REF#: 426099); Evaluation Workgroup (PSC REF#: 426080); and Lila Zastrow and Dave Hendrickson (PSC REF#: 426025).

The Commission issued an Order on December 16, 2021, establishing the Scope of the Quadrennial Planning Process IV in Table 1 below. (PSC REF#: 427426.) There are three interconnected phases to Quad IV planning process and this memorandum will address the topics in Phase I, with Phases II and III following during the summer and early fall of 2022.

Table 1: Quadrennial Planning Process IV – Phases I - III

Phase in Quad Planning	Quadrennial IV Topics	Timeframe
Phase I- Macro Policies and Priorities	1. Alignment of Focus Performance goals and offerings with decarbonization goals 2. Electrification programs and offerings 3. Collaboration between Focus and Utility Demand Response Programs 4. Utility Voluntary Programs 5. Affordability low-income Programs and Offerings	January – April, 2022
Phase II - Micro Implementation Decisions	1. How should overall energy goals be stated and tracked? 2. Emphasis between Energy and Demand 3. Emphasis between Business and Residential 4. Inclusion of Underserved Rural Areas 5. Resource Acquisition and Market Transformation	April – June 2022
Phase II – Cost Effectiveness Decisions	1. Primary and Secondary Cost-Effectiveness Tests 2. Carbon Value 3. Avoided Costs 4. Discount Rate 5. Avoided Transmission & Distribution (T&D) Costs	April – June 2022
Phase II – Budget Issues	1. Energy Efficiency 2. Renewables 3. Environmental & Economic Research & Development Program 4. Other	April – June 2022
Phase II – Other	1. Does the Commission need to approve pilots for behavioral programs?	April – June 2022

This memorandum presents the Commission with various macro policy and priority alternatives. While budget issues will be addressed later in Phase II, the Commission may wish to be mindful that selection of certain alternatives at this phase, such as creating working groups or other coordinating efforts, do carry an administrative cost that may impact future funding decisions given the static nature of the Focus programmatic budget.

I. ALIGNING FOCUS ON ENERGY PERFORMANCE GOALS AND PROGRAM OFFERINGS WITH DECARBONIZATION GOALS

Aligning Focus performance goals and programs and offerings with decarbonization goals could take on a wide range of possible paths to implementation. Stakeholder comments from the Roadmap to Zero Carbon Investigation Docket (Roadmap Docket) and the scoping phase of the Quad IV Planning Process have identified the role Focus may play in reaching Governor Evers' goal of 100 percent carbon-free electricity consumption by 2050.[1] This section of the Quad IV Phase I memorandum seeks the Commission's direction on how it wishes to see this alignment prioritized in alternatives in future phases of this planning process.

The analysis in this section begins with an overview of how carbon emissions reduction benefits align with the purpose of Focus as defined by statute, how the Commission has historically considered the program's role in aligning with broader clean energy initiatives, and how those decisions have shaped the way in which performance evaluation currently accounts for environmental benefits of the program. Next, staff present examples of ways energy efficiency programs in other states are aligning with decarbonization goals as reference for possible ways Focus could similarly adapt to this programmatic objective. This is followed by a discussion of stakeholder input and recommendations for how Focus can align with

[1] *See* Executive Order #38 issued by Governor Tony Evers on August 16, 2019.

decarbonization goals. The section ends with staff's initial review of program considerations in further aligning Focus performance goals with decarbonization goals, followed by Commission decision alternatives.

It should be noted that electrification is referenced throughout this section as a prominent pathway for energy efficiency programs to align with decarbonization goals. Staff present a more detailed discussion of electrification and seek specific Commission direction on this topic in the *Electrification Programs and Offerings* section of this memorandum. The Commission may wish to consider the decision alternatives in both sections holistically as they are highly interrelated.

A. Environmental Benefits in Statute and Administrative Code

Under Wis. Stat. § 196.374(2)(a.)2., the purpose of the Focus program is "to help achieve environmentally sound and adequate energy supplies at reasonable cost." Wisconsin Stat. § 196.374(3)(b)1. states that the Commission's priorities for the statewide program should include "avoid[ing] adverse environmental impacts from the use of energy" alongside priorities to moderate the growth in electric and natural gas demand and usage, facilitate markets and assist market providers to achieve higher levels of energy efficiency, promote energy reliability and adequacy, and promote rural economic development. The statutory provision does not prescribe a specific order in which the Commission must consider the listed priorities.

Wisconsin Admin. Code § PSC 137.05(3) states: "the statewide programs shall deliver programs that result in environmental benefits, as identified by the commission, either on-site or at the generation level." Previously, the Commission has identified the environmental benefits to be targeted by the program and defined how programs can prioritize achievement of those benefits.

B. Decisions from Prior Quadrennial Periods

During Quad I of Focus, the Commission considered the purpose of Focus and its goals. At that time, the Commission determined that the basic purpose of the statewide program was to reduce energy use and demand, recognizing that the programs help Wisconsin meet emissions reduction targets but that their most significant purpose is reducing energy use and demand. (PSC REF#: 141173 at 2-3.) During Quad II, the Commission considered the role of Focus in cost-effectively meeting federal carbon standards. The Commission determined the most reasonable approach was to continue to emphasize energy savings as the primary goal of the program and to continue to track emissions reductions achieved through program activity, rationalizing that this approach would better position the state to meet federal carbon standards. (PSC REF#: 215245.)

Since Quad I of Focus, the Commission has determined it reasonable to account for the monetary value of avoided emissions attributable to program activities within Focus' primary cost-effectiveness test, the Modified Total Resource Cost Test (MTRC). The MTRC includes all the benefits of the traditional Total Resource Cost (TRC) (i.e., avoided costs), but adds as a benefit the dollar value of emissions (carbon dioxide, sulfur dioxide, and nitrogen oxide) avoided through the program.[2] The Commission, with the technical guidance of the Evaluation Work Group (EWG), has set a levelized dollar value for avoided carbon emissions since Quad I of Focus. The value applied for purposes of cost-effectiveness calculation during Quad I was $30 per ton. (PSC REF#: 141173.) This value was approved as a reasonable balance between a market-based value and the long-term societal value of reduced emissions. In Quad II the

[2] Focus' emissions benefits are almost entirely from avoided carbon emissions. The combined monetized benefit of avoided sulfur dioxide and nitrogen oxide emissions accounts for approximately 0.02 percent of the annual total emissions benefits of the program.

Commission directed staff and the EWG to present options for a market-based carbon value. (PSC REF#: 215245.) The value approved for Quad II was $15 per ton. (PSC REF#: 279739.) The $15 per ton market-based value was maintained with the Commission's decisions in Quad III planning. (PSC REF#: 343909.)

Focus' current value of $15 per ton is intended to represent a market-based value associated with regulatory emissions allowance compliance costs as opposed to a societal cost value intended to capture a broader range of impacts of carbon emissions such as increased health care costs, environmental damages, and decreased agricultural productivity. Wisconsin is one of several states quantifying environmental externality costs in its primary energy efficiency program cost-effectiveness test according to a 2018 topic brief from the American Council for an Energy-Efficient Economy (ACEEE).[3] There are three general approaches to applying a carbon value: a value reflecting carbon emissions abatement costs, a social cost of carbon valuing the societal impacts of carbon emissions, and a generalized adder or multiplier to monetized benefits intended to capture the additional benefits of avoided carbon emissions beyond other avoided costs. Informed by the Commission's decisions on how it wishes to address alignment with decarbonization goals, staff will present a carbon value analysis, including Commission decision alternatives for the Quad IV carbon value, in the Quad IV Phase II memorandum. (PSC REF#: 27426.)

To operationalize the Commission's direction to include avoided emissions benefits in the Focus primary cost-effectiveness test, the Focus evaluator estimates carbon emissions reductions achieved by the program each year as part of the annual evaluation cycle. Avoided

[3] American Council for an Energy-Efficient Economy. (2018). *Topic Brief: Cost-Effectiveness Tests: Overview of State Approaches to Account for Health and Environmental Benefits of Energy Efficiency*. https://www.aceee.org/sites/default/files/he-ce-tests-121318.pdf

emissions from electric energy efficiency are calculated using the U.S. Environmental Protection Agency's (EPA) Avoided Emissions and generation Tool (AVERT). AVERT is a spreadsheet based model that uses historical hourly generation and emissions data to determine the individual power plants that are likely to be displaced by energy efficiency or renewable energy during each hour of the year. Avoided carbon emissions from natural gas energy efficiency are calculated using an emissions factor first developed in 2011 derived from a best practice greenhouse gas inventory method developed by the California Energy Commission.[4]

During Quad II, 28.5 million tons of CO_2 emissions were avoided through Focus programs. That pace has continued during the first two years of Quad III, with program activities in 2019 and 2020 leading to approximately 15.7 million tons of avoided CO_2 emissions, cumulatively. In monetized terms, using the current carbon value of $15 per ton, the Focus portfolio generates average annual emissions benefits of approximately $110 million. Emissions benefits have represented about 15 percent of the overall portfolio-wide benefits since Focus began using the $15 per ton value in 2015. The distribution of emissions benefits by sector generally aligns with the savings achieved by the program with about 80 percent of the benefits coming from nonresidential offerings and 20 percent from residential offerings.

Beginning with Quad III, the Focus evaluator also began estimating the value of public health benefits accumulated by reduced emissions attributable to program activity using an EPA method and tool.[5] These benefits are incorporated into the Societal Test, a secondary cost-

[4] California Air Resources Board. (2019). *California Greenhouse Gas Emissions for 2000 to 2017: Trends of Emissions and Other Indicators*.
https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf

[5] The Focus evaluator uses the US EPA's benefits per kilowatt-hour (BPK) tool to estimate the value of health benefits accumulated by reduced emissions attributable to program activity. These are primarily the health benefits associated with avoided particulate generation. The BPK tool links the change in emissions from electric generation sources to measurable decreases in negative health outcomes associated with inhalation of air-borne particulates produced from those generation sources.

benefit test approved by the Commission in the evaluation of Focus for informational purposes. This analysis shows that 2019 and 2020 program activities generated $87,807,752 and $88,335,255 in public health benefits, respectively. The Commission's direction on how it chooses to emphasize or prioritize the program's role in achieving carbon emissions reductions will inform staff's analysis and the decision alternatives presented in the Phase II Micro Policy memorandum regarding Focus' primary cost-effectiveness test and the carbon value applied. If the Commission wishes to place greater emphasis on the carbon reduction benefits of Focus, aligning the choice of a primary benefit-cost test and its components with the underlying policy goals and objectives would be in line with industry best practices.[6,7]

In summary, the Commission has made policy decisions during past Quadrennial Planning Periods that recognize and account for the environmental benefits generated by Focus. Aligning Focus with decarbonization goals, whether corporate carbon reduction goals set by participating utilities, the goal established in Executive Order #38, or other local, national, or international targets requires the Commission to consider maintaining or enhancing its past decisions or establishing new program priorities to support the full stream of benefits this alignment could achieve. The section below presents a discussion of steps other programs and jurisdictions have taken to align their energy efficiency programs with decarbonization goals as well as recommendations from the literature that lay out a framework for programs seeking to align their efforts with mitigating climate change impacts.

[6] The National Efficiency Screening Project. (2017). *National Standard Practice Manual for Assessing Cost-Effectiveness of Energy Efficiency* Resources.
[7] The National Efficiency Screening Project. (2020). *National Standard Practice Manual For Benefit-Cost Analysis of Distributed Energy Resources.*

C. Alignment with Decarbonization Goals in Other Jurisdictions

Increasingly, energy efficiency programs are focused not only on the amount of energy saved, but when and where that energy is saved by aligning performance goals with the recognition of the full spectrum of benefits the programs generate.

Energy efficiency and renewable resource programs throughout the country provide examples of how other jurisdictions have implemented, or have begun the transition toward, alignment with broader climate change initiatives including carbon reduction goals. The states that are furthest along in this transition tend to have underlying legislative directives and support to attain certain energy or emissions targets and have achieved progress toward aligning programs with carbon reduction goals through multi-year processes involving substantial, often formalized, stakeholder engagement.

A recent report from ACEEE establishes what is referred to as a *climate-forward efficiency* framework defining approaches energy efficiency portfolios can adopt to equitably align energy efficiency and decarbonization goals.[8] The framework specifically identifies efforts that align energy efficiency with decarbonization goals as those that:

- Treat energy efficiency as an intentional driver of greenhouse gas (GHG) reduction
- Scale to meet the magnitude of decarbonization goals in policy and utility corporate commitments
- Leverage energy efficiency as a tool to mitigate and adapt to the impacts of climate change by advancing equity, enhancing resilience, and improving health outcomes
- Prioritize energy efficiency investments based on their time, seasonal, and geographic impacts

[8] Specian, M. and R. Gold. (2021). *The Need for Climate-Forward Efficiency: Early Experience and Principles for Evolution.* Washington, DC: American Council for an Energy-Efficient Economy. Accessed from: https://www.aceee.org/research-report/u2106.

- Enable the prioritization of investments across fuels, systems, and sectors, particularly from electrification

The discussion below presents notable examples of how certain states are adjusting their energy efficiency programs to align with evolving and integrated policy expectations to achieve environmental, equity, and economic benefits. Programs in leading states have adapted their performance metrics to align with decarbonization goals using different approaches. A range of metrics have been adopted to reflect the broad set of benefits energy efficiency and renewable resource program alignment with decarbonization goals are intended to achieve.

Table 2. Performance Metrics Aligned with Decarbonization Goals

Performance Metric/Approach	Purpose	Examples of States/Jurisdictions Adopting
Fuel Neutral Energy Savings	Encourages holistic cost-effective efficiency program design that can support beneficial electrification.	New York Massachusetts (maintains separate targets for electric and natural gas savings) Under consideration in Maryland
Total Systems Benefits	Recognizes the time and locational value of savings and incentivizes program administrators and implementers to acquire the type and amount of energy efficiency with the most value to the energy system.	California
Avoided GHG	Sets a common measure of avoided GHG emissions for energy efficiency and electrification programs to measure progress toward GHG goals. For example, a carbon dioxide equivalent (CO_{2e}) metric converting greenhouse gases to a single value equivalent to its total global warming impact.	Massachusetts Vermont Washington D.C. Sacramento Municipal Utility District Under consideration in Maryland

Performance Metric/Approach	Purpose	Examples of States/Jurisdictions Adopting
Technology Deployment/Installations	Promotes market transformation and adoption of emerging technologies or technologies facing significant market barriers.	Vermont Maine

In California, the California Public Utilities Commission (CPUC) recently adopted a Total System Benefits (TSB) metric to replace their energy and peak demand savings goals. [9] This approach seeks to align the state's energy efficiency and carbon reduction goals by converting the combined energy system benefits (e.g., avoided energy, capacity, and T&D costs) and policy benefits (e.g., avoided carbon value) of energy efficiency into a single dollar figure expressed on an annual basis.[10] Setting goals and measuring progress in terms of TSB encourages saving carbon and prioritizes measures that provide customers with the most value even as the penetration of renewables increases and the value of saving energy moves toward times of the day and year when less of the grid's energy is coming from low cost, carbon free sources such solar.

In Massachusetts, legislation passed in 2018 expanded the state's energy efficiency programs to include demand management, storage, and strategic electrification.[11] In March 2021, Senate Bill 9 – An Act Creating a Next Generation Roadmap for Massachusetts Climate Policy (the Climate Act) requires the Secretary of Energy and Environmental Affairs to set a

[9] CPUC. (2020, June 5). *Order Instituting Rulemaking Concerning Energy Efficiency Rolling Portfolios, Policies, Programs, Evaluation, and Related Issues*. Rulemaking 13-11-005. Accessed from: https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M339/K545/339545105.pdf.

[10] TSB are calculated as the product of time-varying energy savings and avoided costs, summed over the lifetime of an energy efficiency measure. Therefore, TSBs are greatest when savings simultaneously maximize the benefits to the energy system and when they displace the most carbon. The TSB metric is primarily used to track resource acquisition performance in programs where the intended goal is to compete with other supply side resources to meet energy needs and reduce carbon.

[11] Massachusetts uses the term strategic electrification as opposed to beneficial electrification.

goal, expressed in tons of carbon dioxide equivalent (CO_{2e}), for its energy efficiency programs every three years, including setting sector specific goals for electric and gas energy efficiency.[12] The Climate Act also led to utility program administrators setting fuel-neutral net savings goals as well as goals for total benefits, expressed in dollars.

In Vermont, energy efficiency programs are structured similar to Wisconsin in that there is a statewide program (Efficiency Vermont) operated by a third-party administrator (Vermont Energy Investment Corporation (VEIC)). Efficiency Vermont's 2021-2023 Triennial Plan features a number of Quantifiable Performance Indicators (QPIs) designed to align the state's energy efficiency programs with its legislatively-established GHG reduction goals. The Efficiency Vermont Program Administrator's performance compensation is directly tied to the QPIs outlined in the Triennial Plan. Performance targets include traditional metrics such as annual and lifetime electricity savings targets as well as summer and winter peak demand savings, a greenhouse gas reduction goal measured in metric tons of CO_{2e}, and an amount of flexible, or controllable load, measured in kilowatts. Efficiency Vermont has also developed other approaches to align its programs with decarbonization goals using data that is correlated to GHG reductions but that do not directly translate into reductions in emissions. For example, the 2021-2023 Triennial Plan highlights Efficiency Vermont's efforts to address market and supply chain issues associated with electric vehicle (EV) adoption by actively supporting the EV market and supply chain and tracking key market indicators such as EV market share, number of EV registrations, and percent of customers interested in purchasing EVs. This effort seeks to engage with EV market actors in the state by developing a network of dealerships within its existing

[12] The Commonwealth of Massachusetts, Executive Office of Energy and Environmental Affairs. (2021, July). *Greenhouse Gas Emissions Reduction Goal for Mass Save.* Accessed from: https://www.mass.gov/doc/greenhouse-gas-emissions-reduction-goal-for-mass-save/download.

workforce partnership framework known as the Efficiency Excellence Network which is similar to Focus' network of participating trade allies. The program is using this data to analyze the status of the EV market in the state over time to inform future program decisions and assess the impacts of future market interventions.[13]

Nine states are encouraging fuel switching or substitution through defined rules or guidelines and another three states have policies in place supporting fuel switching with specific guidance or rules pending. New York and Massachusetts have set fuel-neutral savings goals allowing them to prioritize measures that save the most energy and emissions overall. Wisconsin is one of seven states along with the District of Columbia where there is not a specific fuel switching policy in place but where utilities or program administrators can implement fuel switching projects in certain cases.[14]

In the Midwest, Minnesota and Illinois have each enacted legislation that set energy efficiency initiatives in those states on a transitional course emphasizing decarbonization. In Minnesota, following years of stakeholder collaboration, the bipartisan Minnesota Energy Conservation and Optimization (ECO) Act broadened the definition of energy efficiency programs to include load management and beneficial electrification to encourage investment in activities that emphasize both saving energy and reducing emissions.[15,16] With the passing of the

[13] Vermont Energy Investment Corporation. (2021). *Efficiency Vermont 2021-2023 Triennial Plan*. Accessed from: https://www.efficiencyvermont.com/Media/Default/docs/plans-reports-highlights/2022/Efficiency-Vermont-2022-Triennial-Plan-Update.pdf.

[14] American Council for an Energy-Efficient Economy. (2020). *Policy Brief: State Policies and Rules to Enable Beneficial Electrification in Buildings through Fuel Switching*. Accessed from: https://www.aceee.org/sites/default/files/pdfs/fuel_switch_revised_5-14-20.pdf.

[15] Energy Conservation and Optimization Act of 2021, HF 164, 92nd Legislature (2021-2022).

[16] The Minnesota stakeholder process led to the state adopting specific fuel switching criteria to address concerns that without appropriate guidelines, fuel switching could be a way for utilities to simply pursue increased sales. The ECO Act allows utilities to fuel switch when the fuel switch improvement: 1) results in a net-reduction of source energy on a fuel-neutral basis; 2) results in a net reduction of greenhouse gas emissions; 3) is cost-effective; and, 4) improves the utility's system load factor.

ECO Act, Minnesota utilities can begin to claim energy savings from fuel switching toward their goals, as long as certain criteria are met. In Illinois, the Climate and Equitable Jobs Act (CEJA) passed in 2021 also expands energy efficiency programs in the state to allow utilities to meet their efficiency goals through electrification measures.[17] These efforts both point to the prominent role of electrification in aligning energy efficiency programs with decarbonization goals.

Distributed energy resources (DERs), or small-scale electricity generation assets deployed across the distribution grid, are an important component of the path toward decarbonization. Programs seeking alignment with broader climate change policy goals have also worked to accelerate the deployment of DERs and transform DER markets. For example, in Rhode Island, under the umbrella of the state's Power Sector Transformation Initiative, National Grid and the Rhode Island Division of Public Utilities and Carriers have proposed performance incentive mechanisms (PIMs) to increase adoption of DERs for low-income customers. Coordinated programs that pair DERs with energy efficiency measures can improve customer return on investment by optimizing DER system capacities while generating greater energy savings and emissions reductions.

Staff are not aware of information detailing the time and budget necessary to develop, track, and evaluate new performance metrics such as those discussed in the literature. Comments provided by VEIC in the Quad IV Scoping Phase note that work performed in other states supporting a transition to next-generation energy efficiency programs has taken multiple years to build consensus and appropriately plan for shifting programmatic frameworks. (PSC

[17] Goldberg, L. (2021, October 6). *The Unsung Hero of Illinois' Climate Law: Energy Efficiency*. Natural Resource Defense Council. Accessed from: https://www.nrdc.org/experts/laura-goldberg/unsung-hero-illinois-climate-law-energy-efficiency

REF#: 426094.) The resources required to develop, measure, and track innovative or adapted performance metrics could be significant. Resources to properly evaluate and report on the progress toward achieving performance goals should also be considered when establishing appropriate metrics aligned with decarbonization goals. Focus has a relatively static budget of about $100 million annually. Currently, database and evaluation budgets represent just over four percent of the annual budget. Adopting and tracking progress toward new performance metrics may impact the program's costs, at least initially, by requiring budget allocation for research, planning, and stakeholder engagement to arrive at consensus performance metrics. Accordingly, the Commission's decisions on how it wishes to address alignment with decarbonization goals, or other topics addressed in this Phase I memorandum, will inform staff's analysis of budget issues to be included in Phase II of Quad IV planning.

D. Stakeholder Input and Recommendations

Stakeholders have provided input and recommendations on ways Focus can align with decarbonization goals as part of Commission dockets as well as part of other initiatives occurring in the state.

The Wisconsin Energy Distribution and Technology Initiative (WEDTI), a collaborative effort comprised of a wide range of stakeholder interests, released a report in July 2020 that set a broad recommendation to align Focus with carbon reduction and clean energy goals (WEDTI Recommendation #6). (PSC REF#: 406723.)[18] The WEDTI report specifically calls for the Commission to consider long-term program targets for carbon reduction and clean energy goals, such as goals for 2050, while staying focused on the next 12 years and develop detailed carbon targets for four years at a time. The WEDTI stakeholder group rationalizes that long-term targets

[18] Commission staff were among the stakeholders participating in WEDTI.

will help determine the role of energy efficiency and demand response programs in meeting long-term carbon reduction and clean energy goals. Moreover, WEDTI Recommendation #6 recommends the Commission evaluate how carbon reduction and clean energy benefits can be incorporated into existing and new programs.

The Governor's Task Force on Climate Change (Task Force) was established on October 7, 2019 by Executive Order #52 and was charged with developing policy recommendations to meaningfully mitigate and adapt to the effects of climate change for the benefit of Wisconsin communities. The Task Force offered its policy recommendations in a report published in December 2020. (PSC REF#: 406724.) The Task Force's recommendations were directly informed by the work performed as part of WEDTI. Two of the Task Force's recommendations pertain to actions the Commission could take in aligning Focus with decarbonization goals.

- Recommendation #5 seeks to improve emissions data tracking and reporting to improve decision making to help Wisconsin reach its decarbonization goal. While this recommendation is directed to state agencies generally, the Task Force highlights that improved tracking of GHG emissions could inform new Focus programs. The Commission may consider directing Focus to enhance its tracking of emissions avoided through the program in the decision alternatives section below.

- Recommendation #7 requests the Commission to increase energy use reduction goals to 2 percent annually for electricity and one percent annually for natural gas and other fossil fuels including propane, heating oil, gasoline, and diesel (where reduction of those fuels is caused by electrification and associated with Focus and public utility incentives).

Regarding the Task Force's Recommendation #7, the 2021 Focus on Energy Efficiency Potential Study (2021 EE Potential Study) found that under current funding levels, Focus could achieve gross electric savings of 1.19 percent annually and gross natural gas savings of 0.46 percent annually. (PSC REF#: 420467 at 17.) These levels of savings are comparable to savings

observed during the first two years of Quad III. The 2021 EE Potential Study found that under a scenario where Focus funding doubles, annualized electric savings could reach 1.83 percent of sales and natural gas savings could reach 1.31 percent of sales.

Stakeholder comments received during the scoping phase of Quad IV planning provide specific recommendations that Commission could take to align Focus with decarbonization goals. Several commenters recommended expanding efforts into beneficial electrification (PSC REF#: 426016, PSC REF#: 426038, PSC REF#: 426103, and PSC REF#: 426104). Other comments received recommended coordination with community-led clean energy initiatives (PSC REF#: 426092) and setting carbon emission reductions as Focus' primary performance indicator. (PSC REF#: 426098.)

Recommendations from initiatives discussed above as well as comments received during Quad IV scoping suggest some stakeholder interest in setting a carbon dioxide emissions reduction goal for Focus as a program performance indicator alongside energy savings and demand goals. Setting programmatic carbon reduction goals for energy efficiency programs is relatively uncommon at this time and certain states have found it necessary to first perform robust modeling before setting a goal. For example, Massachusetts's programmatic carbon reduction goal was established after integrated modeling was performed to understand sectoral (e.g., buildings, transportation, generation) emissions contributions and corresponding pathways to achieving the state's overall legislatively mandated goal of net zero emissions by 2050.[19] Vermont spent two years performing primary research in specific project areas including conducting customer pilots to better understand the life cycle GHG impacts of efficient products

[19] Massachusetts Executive Office of Energy and Environmental Affairs and The Cadmus Group. (2020). *Massachusetts 2050 Decarbonization Roadmap*. https://www.mass.gov/doc/ma-2050-decarbonization-roadmap/download

and services and assessed new and innovative GHG reduction strategies related to energy efficiency.[20]

Comments from the Wisconsin Office of Sustainability and Clean Energy in the Roadmap Docket suggest that the Commission create a formal process to collaboratively inform decision making with respect to investment in demand-side management and emissions goals, among other integrated topics. (PSC REF#: 411508.)

E. Program Considerations in Aligning with Decarbonization Goals

As mentioned above, the Focus evaluator uses an EPA tool to convert Focus' life cycle energy savings into estimates of tons of avoided carbon emissions. In following the Commission's historical decisions since Quad I of Focus to emphasize energy savings, the program has not invested significant resources into developing sophisticated GHG emissions calculation and tracking capabilities that may be useful in informing the prioritization of any new or existing offerings to align with carbon goals. Research performed by Cadmus during Quad III provides insights into ways the program could enhance its ability to assess emissions savings including considering more precise calculations of the hourly emissions' savings impacts of measures incentivized by Focus.[21] Pairing Wisconsin climate-appropriate hourly load profiles of certain end uses of energy with hourly grid emissions, both current and projected, would lead to a more detailed understanding of the time-varying value of reduced energy consumption that could be used to inform program planning and implementation. For example, these data could lead to programs offering higher incentives for certain types of measures whose energy use

[20] Vermont Energy Investment Corporation. (2021). *Efficiency Vermont 2021-2023 Triennial Plan.*

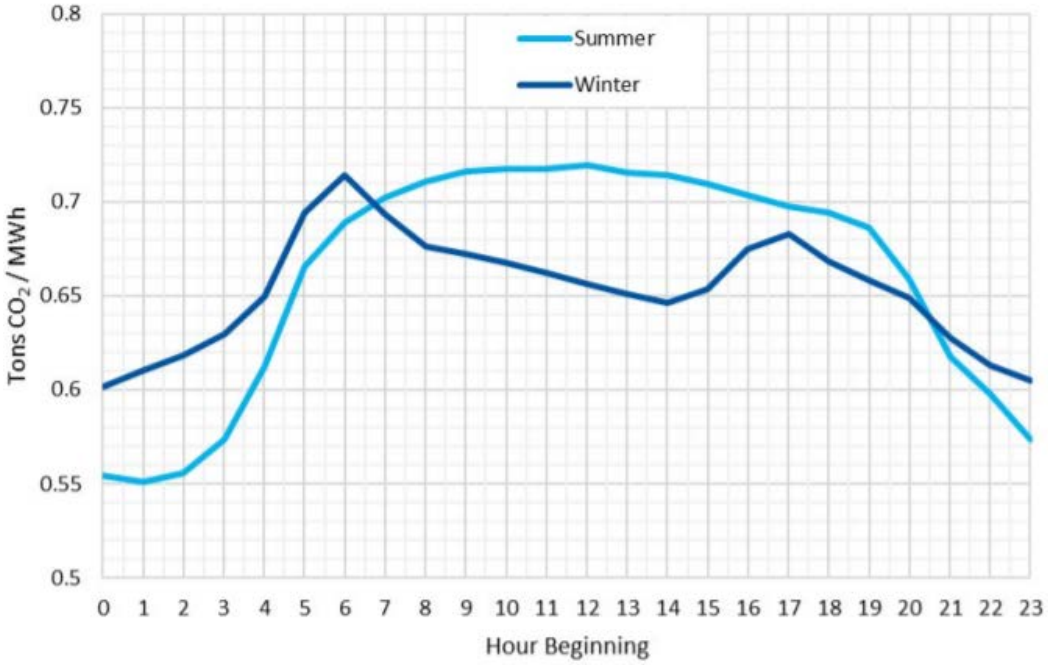
[21] The Cadmus Group. (2021). *Wisconsin's Greening Grid: Effects of Carbon Intensity Changes on the Valuation of Energy Efficiency*. Accessed from: https://www.focusonenergy.com/sites/default/files/inline-files/Potential_Study-Research-Greening_Grid.pdf.

profile overlaps with periods of high carbon intensity of the grid and lower incentives for measures saving energy at times of relatively lower grid carbon intensity. The Commission may wish to direct program evaluation resources toward developing more precise calculations of emissions savings achieved by Focus in alignment with its decision below.

Analysis performed by Cadmus in 2021 shows that carbon intensity is highest during daytime hours in the summer, corresponding to periods of high overall energy demand (see Figure 1 below). However, during some hours of the winter season, grid carbon intensity meets or exceeds the carbon intensity observed during summer months. This finding led Cadmus to recommend Focus consider adopting a winter peak period definition, particularly if more heating electrification occurs and grid stability and resiliency in winter months becomes more important.[22] The Commission's decisions on how it wishes to align Focus with decarbonization goals will inform staff's analysis on the topic of emphasis between energy and demand to be addressed in Phase II of Quad IV planning and whether or not adopting a winter peak period is appropriate for the purposes of evaluating the savings and emissions benefits of Focus.

[22] The Cadmus Group. (2021). *Wisconsin Peak Period Analysis*. Accessed from: https://focusonenergy.com/sites/default/files/inline-files/Potential_Study-Research-Peak_Period.pdf

Figure 1. Wisconsin Average Hourly CO_2 Emissions per MWh by Season



Aligning Focus performance goals with decarbonization goals could lead the program to consider whether to increase its emphasis on supporting the adoption of certain DER technologies. Often, DER programs have a direct intersection with energy efficiency programs as both leveraging a customer relationship model built on a knowledge of markets and technical expertise to design and implement programs that incentivize the adoption of technologies and overcome market barriers. Moreover, bundling of DERs and electrification can improve the cost-effectiveness of the investment in both while achieving measurable reductions in carbon emissions. As more of a building's energy needs are met with electricity, the greater the potential to meet that need with renewable electricity from the DER. This can result in lower utility bills and faster return on investment to the customer.

The most accessible DER technology being adopted today are solar photovoltaic (PV) systems. The 2021 Rooftop Solar Potential Study found there is significant market potential for rooftop solar PV generation capacity in Wisconsin and that solar PV generation is greatest during

times of the day coinciding with the summer peak demand period. (PSC REF#: 421984.) The 2021 Rooftop Solar Potential Study also found that 42 percent of the average summer daily solar generation capacity is captured during the current Focus summer peak period definition of weekdays from 1:00 p.m. to 4:00 p.m. from June through August. The summer peak period also coincides with the times of the year with some of the greatest grid emission intensity, as illustrated in the figure above.

Current Focus incentives for solar PV are relatively low and have decreased during Quad III coinciding with increased customer demand and declining system costs. The 2021 Rooftop Solar Potential Study found that increasing Focus incentives to approximately triple the current amount could have a modest impact on rooftop solar PV market adoption overall, but was most impactful for the single family income-qualified customer segment.[23] Additionally, recent surveys of solar trade allies performed by Cadmus found that most installers felt that increased incentives would lead to greater demand from income-qualified customers. Allocating Focus resources toward programs that increase solar PV adoption for income-qualified customers may be one way to for the program to develop synergies between aligning with decarbonization goals and advancing equity in access to these technologies.

Commission Alternatives – Aligning Focus on Energy Performance Goals and Program Offerings with Decarbonization Goals

These alternatives seek the Commission's direction on how it wishes to prioritize the emissions reduction benefits achieved through Focus offerings and indicate the practical next steps toward that direction. Staff also list optional Quad IV objectives, presented as sub-alternatives, for the Commission to consider should it decide to further clarify how it wants to

[23] The definition of income-qualified used in the Rooftop Solar Potential Study is the same as the definition used for Focus Tier 2 incentives: 80 percent of state median household income.

operationalize its choice of alternatives. These sub-alternatives are presented to inform potential pathways consistent with the Commission's desired programmatic emphasis on carbon emission reductions.

Staff encourage stakeholder input during the comment period for this Phase I memorandum, including specific recommendations on actions Focus can take during Quad IV to better position itself to align with decarbonization goals. Commenters may wish to provide input in support or opposition to the sub-alternatives offered in this section, or make their own suggestions with accompanying rationale, implementation approach, and other supporting information where appropriate.

The interrelationship among topics in this Phase I memorandum may lead the Commission to consider the decision alternatives in other Phase I memorandum sections prior to determining a preference for one or more of the sub-alternatives. On the other hand, the sub-alternatives presented are intentionally broad so as to leave flexibility for more detailed decisions on other topics in this and subsequent memoranda.

Alternative One is appropriate if the Commission determines it reasonable for Focus to take on a larger and more impactful role in meeting long-term carbon reduction goals by prioritizing program offerings for their ability to achieve cost-effective carbon emissions reductions. Selection of Alternative One would signal the Commission's desire to set Focus on an intentional and long-term path to functionally align with decarbonization goals by emphasizing energy savings at times when grid carbon intensity is greatest. It would signal support for investment of resources into offerings and initiatives that transition the program beyond emphasizing just the achievement of energy savings and toward greater programmatic emphasis on carbon reductions and other non-energy benefits associated with the clean energy

transition. Alternative One differs from the Commission's decisions concerning the role of the program in meeting federal carbon emissions goals in Quad I and Quad II of Focus. Whereas the Commission's past decisions have clearly set the program's primary purpose to be achieving energy savings, a selection of Alternative One would signify the Commission finds it reasonable to emphasize the program's ability to attain carbon emissions reductions as well as its ability to reduce energy use and demand.

Staff anticipates that prioritization of the carbon reduction benefits of Focus' programs and offerings consistent with Alternative One would require substantial planning, analysis, and collaboration to commence immediately in Quad IV and may necessitate a phased approach to operationalize over the course of the quadrennium. This may include periodic check-ins with the Commission to ensure coordination of program activities with the Commission's vision for Focus' role in aligning with decarbonization goals.

Operationalizing the direction as set forth under Alternative One may require devoting program resources to perform robust analysis of the time varying energy savings and corresponding grid carbon intensity to foster data driven planning and program implementation. In the interim, the Program Administrator may seek to adapt existing programs and offerings toward a greater emphasis on carbon emissions reductions. Staff envision that collaborative efforts with stakeholders through facilitated processes occurring during Quad IV may be beneficial to ensure appropriate alignment and coordination and to achieve consensus outcomes and recommendations.

Alternative One represents a notable shift in program priorities and the impact to overall program performance is uncertain. Aligning Focus performance goals and program offerings with long-term decarbonization goals may require a longer-term view of program performance.

Some performance metrics, such as those seeking to measure achievement of long-term market shifts, may take years before they can be appropriately measured and attributed to Focus. In addition, if a blend of long-term and short-term achievement is preferred, Focus could look to programs in other jurisdictions which offer examples of shorter-term measures of performance that could be adapted to Focus.

Alternative Two is appropriate if the Commission determines it is preferred for Quad IV to serve as a transitional period for Focus in its alignment with decarbonization goals. This alternative would be appropriate if the Commission believes that additional information, analysis, and planning are necessary in order to better understand the costs, benefits, and opportunities associated with operationalizing a transition toward enhanced alignment with decarbonization goals including exploring program performance metrics that emphasize carbon reduction benefits. Under this alternative, Quad IV may be used as a period to gather information and stakeholder input to develop recommendations for the Commission to consider in further policy decisions defining a pathway for alignment with decarbonization goals in the next Quad. Meanwhile, energy savings would continue to serve as the primary goal of the program during Quad IV. Alternative Two represents a more gradual shift toward alignment with decarbonization goals compared to Alternative One. Alternative Two supports Focus engaging in further research, planning, and consensus building throughout Quad IV on an intentional pathway toward embodying the principles of a climate-forward efficiency program framework.

Alternative Three broadly reflects a continuation of the Commission's past decisions on Focus' role in aligning with carbon emissions reduction goals. That is, Focus would continue to prioritize energy and demand savings and track the resulting avoided carbon emissions

attributable to the activities of the portfolio. Under this alternative, the Commission may also wish to set priorities for more limited research or pilot offerings to explore the ability for Focus to expand its offerings in a manner aligned with exemplary programs in jurisdictions that are further along in the evolution toward a climate-forward efficiency framework. The Commission may wish to consider the decision alternatives presented under other interrelated topics addressed in this Phase I memorandum to inform research or pilot program objectives under Alternative Three. On the other hand, the Commission may wish to take no action in setting specific priorities for exploratory research on alignment with decarbonization goals at this time.

Alternative One: The Focus program should expand and enhance its role in cost-effectively reducing carbon emissions by emphasizing both carbon emissions reduction benefits and energy use and demand savings.

Alternative Two: The Focus program should play a larger role in cost-effectively reducing carbon emissions and Quad IV should serve as a transitional period during which the program continues to emphasize energy savings but also seeks to make measurable progress toward a transition to greater emphasis on reducing carbon emissions.

Alternative Three: The Focus program should continue to be used as a tool to position the state to cost-effectively reduce carbon with energy savings being the primary goal of the program and continued tracking of emissions reductions.

Alternative Four: The Focus program should not play a defined role in positioning the state to cost-effectively reduce carbon. Program priorities should be consistent with other goals established by the Commission.

Sub-Alternatives– Aligning Focus on Energy Performance Goals and Program Offerings with Decarbonization Goals

The Commission may select any or all of the sub-alternatives below to accompany the Alternatives listed above. Alternatively, the Commission may decide to not select any of the sub-alternatives.

Sub-Alternative A: Establish a facilitated stakeholder working group to develop consensus recommendations for evolving Focus to meet the Commission's priority of aligning with decarbonization goals. At minimum, this working group shall develop recommendations for performance metrics intended to align Focus with decarbonization goals. Commission staff shall report findings and recommendations from this process to the Commission.

Sub-Alternative B: Open a separate Commission investigation to better understand Focus' position in aligning with decarbonization goals. This investigation shall, at minimum, analyze the costs and benefits of a programmatic alignment with decarbonization goals as well as appropriate emissions reduction targets. Commission staff shall report the findings of this investigation to the Commission.

Sub-Alternative C: Direct the Evaluation Work Group to develop recommendations to operationalize enhanced measurement and tracking of the program's carbon emissions reduction impacts for the purposes of program evaluation and performance tracking.

Sub-Alternative D: Other objective(s) as identified in stakeholder comments.

Sub-Alternative F: Other objective(s) consistent with the Commission's discussion.

II. ELECTRIFICATION PROGRAMS AND OFFERINGS

Electrification is the process of replacing technologies using fossil fuels with technologies that use electricity as a source of energy to provide the same service. It is a key strategy on the path to decarbonization. Proponents of electrification point to shifts toward more diverse and overall cleaner energy supply as justification to electrify end-uses to achieve accelerated carbon emissions reductions and their associated social, economic, and environmental benefits. Energy efficiency programs are an avenue to advance and transform markets for end-use technologies most commonly associated with electrification, such as space and water heating measures, since in most cases programs are already targeting these technologies for their ability to achieve cost-effective energy savings.

In Wisconsin, eight percent of the state's GHG emissions come from the residential sector, five percent are from the commercial sector, and 11 percent come from the industrial sector.[24] These represent the emissions from direct fossil fuel combustion not associated with electrical generation such as for space and water heating. Electrifying space and water heating in buildings represents an impactful opportunity to reduce GHG emissions in these sectors.

Energy efficiency programs that have expanded into electrification have adopted principles of beneficial electrification. According to the Regulatory Assistance Project, electrification is considered beneficial if it satisfies one or more of the following three core principles without adversely affecting the other two: 1) saves customers money over the long-term, 2) enables better grid management, and 3) reduces negative environmental impacts.[25]

[24] Wisconsin Department of Natural Resources. (2020). *Wisconsin Greenhouse Gas Emissions Inventory Report.* Publication Number: AM-580-2020.
[25] Farnsworth, D., Shipley, J., Lazar, J., and Seidman, N. (2018, June). *Beneficial electrification: Ensuring electrification in the public interest.* Montpelier, VT: Regulatory Assistance Project. Accessed from: https://www.raponline.org/wp-content/uploads/2018/06/6-19-2018-RAP-BE-Principles2.pdf.

In many cases, energy efficiency programs engaged in beneficial electrification have adopted policies and rules to remove barriers associated with incentivizing customers to replace an end-use technology (such as a heating system) with one that uses a different energy source, also referred to as fuel switching. This can include allowing program savings to be claimed on a fuel-neutral basis, refining cost-effectiveness tests to accurately value the present and future benefits of reduced GHG emissions attributable to fuel switching, and clarifying rules or lifting restrictions on incentivizing and claiming savings for projects that fuel switch from unregulated fossil fuels such as propane and heating oil to electricity.

The states furthest along in achieving widespread market adoption for the most common electrification technologies tend to be on an ambitious path toward clean electricity generation supported by legislative directives, have a relatively a low-carbon electricity generation mix, or have a high penetration of heating oil consumption. Many of the states highlighted in the previous section are leaders in the evolution of prioritizing energy efficiency programs towards beneficial electrification.

For jurisdictions where coal is a significant source of electricity generation, in the short-term, electrification may increase carbon emissions, though as carbon intensive generation is replaced by cleaner renewable energy sources, carbon emissions would be less. Arguments in opposition to electrification warn against electrifying prematurely while a significant portion of the grid is still powered by fossil fuel sources. Conversely, there is an opportunity cost of forgoing electrification of equipment and appliances with long effective useful lives as the grid is transitioning towards a more renewable supply. For example, a missed opportunity to electrify home space heating and water heating equipment today means that the next available opportunity for that home to electrify can be decades in the future.

The Commission may wish to weigh its decisions on electrification programs and offerings with the potential for cross-subsidization between customer classes and potentially between electric and natural gas utility customers. The Commission is required under Wis. Stat. §196.374(5m)(a) to ensure equitable opportunities for each customer class to receive grants and benefits in proportion to the amount recovered from that customer class. As a result, Focus currently allocates approximately 60 percent of its budget to programs for business customer classes and 40 percent to programs for residential customers consistent with the historical proportion of funding collected from each customer type. (PSC REF#: 343909 at 9.) Moreover, utility operating revenues used to determine annual program contributions from investor-owned utilities (IOUs) show that between 75 and 80 percent of annual program funding comes from electric contributions and between 20 and 25 percent of annual program funding comes from natural gas contributions. The Commission will need to ensure that any emphasis on electrification aligns with Focus' statutory obligations.

A. Current Treatment of Fuel Switching for Focus

Wisconsin Stat. § 196.374 establishes the statutory purpose and requirements of Focus. There are no prior Commission orders taking a position on allowing Focus to incentivize measures that result in fuel switching. Under Wis. Stat. § 196.374(1)(d) the definition of an energy efficiency program is "a program for reducing the usage or increasing the efficiency of the usage of energy by a customer or member of an energy utility, municipal utility, or retail electric cooperative."

Historically, Focus' Policy Manual language on fuel switching only addressed opportunities to incentivize the switch from electricity to natural gas by previously noting that it is more efficient to heat water with natural gas than with electricity. The current Focus Policy

Manual includes language identifying that a fuel switching project may be eligible for Focus incentives if it reduces overall energy use at the customer site, is cost-effective, and the fuel to which a customer is switching is purchased from a participating Focus utility.[26]

The Policy Manual language does not specifically prohibit the program from incentivizing fuel switching from an unregulated fuel such as propane or heating oil to electricity, although any net energy savings achieved in these circumstances are not currently claimed by Focus. Focus has historically recognized that when a customer installs a measure requiring a switch in fuel from a non-participating energy provider (e.g., propane provider) to a fuel supplied by a participating utility, any reduction in energy consumption resulting from this switch is not energy that would have otherwise been supplied by the participating utility. That is, although this action may result in a net decrease in energy consumption for the customer on a fuel-neutral basis, there is a net increase in the energy the customer purchases from the participating utility. This inability to claim the savings benefits of fuel switching from an unregulated fuel to electricity creates a disincentive to promote propane or heating oil electrification even when there is a net decrease in energy use because existing performance goals require achieving minimum savings targets for kWh and therms.

Fuel neutral savings goals are an emerging approach being adopted in states that have created policies promoting beneficial electrification. The concept of fuel neutral savings, or net energy savings, is presented throughout this memorandum. Fuel neutral energy savings are expressed in British Thermal Units (BTUs). As a measurement of the amount of energy required to raise one pound of water one degree Fahrenheit, all forms of energy (e.g., electric energy and

[26] Focus on Energy. *2021 Focus on Energy Policy Manual (PM): Supplement 1*. July 2021. Accessed from: https://www.focusonenergy.com/sites/default/files/inline-files/2021_Focus_Policy_Man_w_Supplement_FINAL_7.1.21.pdf

thermal energy) can be converted to BTUs. Thus, fuel neutral savings occur when there is a net reduction of energy use after considering the change in energy consumption of all forms of energy impacted. Fuel neutral savings goals address the aforementioned disincentive to fuel switch from unregulated fuels that accompanies kWh and therm specific savings targets. By allowing programs to claim the net reduction in energy use regardless of fuel type, electrification measures can be directly compared to all other measures from a purely energy saving perspective and contribute to the achievement of program energy saving goals. Adding the additional non-energy benefits associated with electrification such as avoided carbon emissions can further illustrate the value of beneficial electrification measures compared to other options.

Beginning in Quad II, the Commission has set an overall savings goal for Focus in millions of British Thermal Units (MMBTU) with minimum savings requirements for electricity and natural gas. (PSC REF#: 215245 and PSC REF#: 343909.) Focus' overall energy savings goal was established to give the Program Administrator flexibility to adapt to changing market factors by allowing a small portion of the overall goal to be met using any combination of kWh or therm savings while maintaining portfolio cost-effectiveness and equity in benefits between electric and gas customers as required by Wis. Stat. § 196.374. Focus' overall energy goal is therefore primarily intended to address difficulties in achieving cost-effective savings from a particular fuel rather than to remove barriers to fuel switching. This framework differs from purely fuel-neutral savings goal being adopted in jurisdictions to encourage achievement of beneficial electrification goals.

B. Current Offerings Aligned with Electrification

The most common energy end uses that can be electrified today are transportation, building space heating, water heating, and cooking. Focus has a long history of providing

residential and nonresidential customers with incentives and technical assistance to improve the efficiency of their space and water heating. Focus also currently offers incentives for efficient commercial kitchen equipment. Vehicle and transportation system energy efficiency has historically been outside the purview of Focus. As discussed above, Efficiency Vermont presents one example of a statewide energy efficiency program directly supporting efforts to accelerate the adoption of EVs using its experience with contractors in other industries. Staff have not developed decision alternatives to specifically address Focus' role in transportation electrification as part of this Phase I memorandum. As a condition of its decision in this section, the Commission may wish to direct staff to further investigate Focus' ability to support EV adoption.

Heat pumps are the most common building electrification technology prioritized by stakeholders in comments received in both the Roadmap Docket and in the Quad IV scoping phase and are a prevalent pathway for energy efficiency programs engaging in electrification programs and offerings. Heat pump technologies are most commonly associated with building electrification of space and water heating. Air source heat pumps (ASHPs) and ground source heat pumps (GSHPs) are the most common types of heat pumps. In the case of ASHPs, electricity is used to move heat from outdoors to indoors through a compressor when in heating mode and from indoors to outdoors when in cooling mode. GSHPs rely on steady underground temperatures to transfer heat between a building and the ground to provide efficient space heating and cooling.

Focus currently offers incentives for ducted ASHPs, ductless ASHPs, known as ductless mini-splits, GSHPs, and heat pump water heaters (HPWHs). Residential customers installing an ASHP supplementing a new or existing natural gas furnaces may be eligible for a $1,000

incentive. Residential customers installing an ASHP supplementing a new or existing propane or heating oil furnace may be eligible for a $300 incentive.[27] Through November 2021, Focus has incentivized the installation of 1,169 ducted ASHPs in Quad III. The Focus Program Administrator (APTIM) launched a measure for an ASHP replacing a natural gas furnace in early 2021. Through November 2021, the program had incentivized 155 ASHPs under this measure.

Ductless mini-splits are typically installed to meet cooling and partial heating needs in single zones within a single family home (often in a bonus room or addition not served by ductwork), multifamily units, or small business. Consequently, they are not typically considered electrification measures because they are often not replacing a fossil fuel energy source at the customer site. Nevertheless, they could serve to support an evolving market by assisting customers and contractors in becoming more familiar with heat pump technologies. Ductless mini-splits are currently offered through Focus' Midstream Solution. The Midstream Solution provides a program delivery structure designed to attain energy savings while simultaneously achieving market transformation for targeted measures with particular market barriers. The Focus Midstream Solution provides incentives to distributors who then work with contractors to participate in the program and pass along the discounts to customers on qualifying equipment. Quad III data through November 2021 shows that Focus has incentivized more than 1,500 ductless mini-split heat pumps. APTIM notes promising year-over-year growth in incentives processed for ductless mini-splits, with 55 percent of the Quad III incentives processed in 2021 alone.

[27] In these applications, Focus only claims electric savings from a baseline heat pump to a more efficient heat pump. Any savings associated with reduced propane use are not claimed by the program.

Focus also currently incentivizes Heat Pump Water Heaters (HPWHs)[28] for both residential and nonresidential customers. HPWHs were introduced to the program as a pilot measure within the Focus Home Performance with ENERGY STAR program at the beginning of Quad III. Only a small number of HPHWs were installed as part of the pilot, causing APTIM to explore other program delivery options. HPWHs were transitioned to the Focus Midstream Solution in 2020 in an effort to boost adoption by working with distributors to promote the technology through direct market intervention. This transition required extensive planning and coordination among various market actors and has been somewhat slow to materialize. The Midstream Solution was just launching in early 2020 when the impacts of COVID-19 forced delays in the rollout of the program. No HPWHs were incentivized through the Midstream Solution in 2020 and only nine HPWH measures had been processed for incentive as of November 2021. Incentives for HPWHs have been most active in the Residential New Construction Solution. Thirteen residential builders installed 87 HPWHs in 2020, with two builders representing more than 70 percent of the installed units. In 2021, Focus began offering bonus incentives for HPWHs installed through the Residential New Construction Solution. The Residential New Construction Solution incentivized 339 HPWHs in 2021, corresponding to about 14 percent of the homes certified. The Program Administrator also notes that one large home builder in the state has agreed to make installation of HPWHs standard practice in all their new homes.

[28] The Focus program currently incentivizes HPWHs to replace a natural gas energy source or to replace a less efficient electric water heater.

C. Heat Pump Adoption Opportunities and Barriers in Wisconsin

Certain barriers are currently impacting the ability of Focus to successfully deliver programs and offerings that accelerate heat pump adoption in the state. This section presents a discussion of barriers relevant at this time. Staff note that this section does not attempt to present a comprehensive discussion of barriers and opportunities for all forms of beneficial electrification in Wisconsin. Rather, this section focuses specifically on heat pump adoption opportunities and barriers.

It is notable that heat pump technologies, and specifically cold-climate heat pumps, are rapidly advancing and efforts performed in other jurisdictions to field test the performance of these technologies are emerging in the literature and at industry conferences. Additional work is required to understand the savings and cost-effectiveness of electrification measures in Wisconsin. This work may include further development of Technical Reference Manual (TRM) workpapers for fuel switching applications, refining cost-effectiveness calculations to account for avoided costs associated with unregulated fuels, and testing equipment performance through pilot efforts.

According to a recent Focus Environmental and Economic Research and Development Program (EERD) report, modern cold-climate ASHPs can operate in conditions down to -20°F and are more than three times as efficient as standard electric heating systems in moderate temperatures.[29] However, as the outdoor air temperature decreases, system efficiency also decreases. This consideration affects the economics of space heating with ASHPs such that, dependent on a variety of factors including energy costs and building envelope characteristics,

[29] Center for Energy and Environment and Elevate Energy. (2021). *Focus on Energy EERD Report: Air Source Heat Pumps in Wisconsin Multifamily and Single Family Applications*. Accessed from: https://www.focusonenergy.com/sites/default/files/inline-files/2021/EERD_ASHP_Project-Final_Report.pdf.

there is a switchover outdoor temperature whereby it becomes more cost-effective for customers to use a back-up heating source such as a natural gas or propane furnace. In Wisconsin's climate, a home's winter heating load is as much as two times its summer cooling load. As a result, ASHPs installed to serve heating and cooling needs in northern climates are typically sized to meet a portion of a home's heating load with a back-up heating option operated during particularly cold periods to maximize cost-effectiveness and heating performance. This consideration can lead to tradeoffs when sizing heat pumps to serve the dual purpose of meeting a home's heating and cooling needs.

The relatively low natural gas costs experienced in recent years have made the economics of converting space heating from natural gas to electricity unattractive for residential customers in many scenarios. However, at current fuel prices and HVAC equipment costs, it can be cost-effective for certain customers to electrify their space and water heating appliances. Fuel switching for space heating tends to be most cost-effective for customers moving from propane or heating oil; for customers replacing both a natural gas furnace and a central air conditioner with an ASHP; for customers bundling heat pumps with rooftop solar; and for most new home construction.[30] Focus EERD research found that when an ASHP replaces or supplements a home's existing propane furnace, as the proportion of the annual heating load met with electricity increases, the customer's annual heating costs decrease, potentially saving customers over $500 annually. In contrast, due to the relatively low average price of natural gas, the opposite is true when an ASHP replaces or supplements an existing natural gas furnace. As the proportion of the homes annual heating load met with electricity increases in that circumstance,

[30] Billimoria, S., Guccione, L., Henchen, M. and L. Louis-Prescott. 2018. *The Economics of Electrifying Buildings: How Electric Space and Water Heating Supports Decarbonization of Residential Buildings*. Rocky Mountain Institute. Accessed from: https://rmi.org/wp-content/uploads/2018/06/RMI_Economics_of_Electrifying_Buildings_2018.pdf.

the higher the customer's annual heating costs. Recent seasonal spikes in natural gas prices were not modeled for the EERD study. Higher natural gas prices, all else equal, would improve the cost-effectiveness of ASHP electrification. Furthermore, the EERD study did not model the customer bill impacts of using the ASHP to meet annual cooling needs. Since ASHPs are an efficient means of space cooling, accounting for those energy savings is likely to increase the economic utility to the customer and have net positive system impacts to the grid during summer peak periods.

The cost-effectiveness of space heating electrification is also influenced by the underlying efficiency of the building being electrified. Electrifying inefficient homes (i.e., homes with poor insulation and air sealing) may result in increased energy usage and higher utility bills for the customer. Electrification becomes more economical in homes that have already weatherized or have onsite solar. Bundling insulation, air sealing, and other building envelope improvement measures with HVAC electrification measures can optimize the sizing and performance of the heating and cooling systems. However, bundling these measures can be cost prohibitive for some customers even when financing and up-front incentives are available.

HPWHs are currently cost-effective as an alternative to standard electric water heaters and are estimated to save an average household of four about $330 per year ($3,500 lifetime) on its electricity costs.[31] Replacing a propane water heater with an electric HPWH is not cost-effective under current program policies because any reduction in propane use is not currently claimed. Focus does not currently collect information on the type of water heater being replaced with a HPWH to streamline delivery of these measures through Midstream Solutions. Thus cost-

[31] Focus on Energy. *Heat Pump Water Heaters Home Performance with Energy Star*. Accessed from: https://www.focusonenergy.com/sites/default/files/inline-files/The%20Benefits%20of%20Heat%20Pump%20Water%20Heaters.pdf.

effectiveness in natural gas replacement applications are not well understood by the program at this time. Savings for retrofit HPWHs are calculated using a blended assumption for the existing (i.e., baseline) fuel used to heat water at the customer site.

The 2021 EE Potential Study concluded that residential measures which reduce electric water heating loads comprise a considerable portion of the available cost-effective savings potential. The fact that HPWHs have emerged as a cost-effective measure since the prior potential study was conducted in 2016-2017 is among the primary factors contributing to this finding.

Expanding the adoption of heat pump technologies in Wisconsin will require overcoming certain market barriers. The Focus EERD study notes considerations applicable to the Wisconsin market including lack of knowledge and familiarity with the technology both among consumers and HVAC contractors and low natural gas prices impacting customer payback. Contractors interviewed as part of the study also mentioned concerns about the performance of the technology in cold climates and hesitation in promoting products that can be more complicated to install and difficult to explain to customers. An additional market barrier is a lack of products available in the U.S. market. A recent ACEEE report highlights the need for the U.S. heat pump market to expand to include more product options for consumers that can deliver high efficiency performance at a lower cost.[32] The Commission's decisions on how it wishes to emphasize or prioritize beneficial electrification programs and offerings will inform staff's analysis in addressing the Quad IV Planning Phase II scope topic of Resource Acquisition and Market

[32] Amann, J., R. Srivastava, and N. Henner. 2021. *Pathways for Deep Energy Use Reductions and Decarbonization in Homes*. Washington, DC: American Council for an Energy Efficient Economy. Accessed from: https://aceee.org/research-report/b2103

Transformation. Focus' statewide scope and existing trade ally network make it well-suited to play a role in the HVAC market transformation needed to address certain market barriers.

The U.S. Department of Energy's Initiative for Better Energy, Emissions, and Equity (E3 Initiative) is engaged in work to accelerate cold climate heat pump adoption by developing and demonstrating advancements in heat pump technologies.[33] Focus is a participant in the E3 Initiative's Residential Cold Climate Heat Pump Technology Challenge (CCHP Technology Challenge) as a program partner organization.[34] This effort presents a collaboration opportunity for Focus extending into Quad IV that can inform future program planning for cold climate heat pump offerings. The CCHP Technology Challenge will engage in field testing of equipment during the winter of 2022/2023 and/or the winter of 2023/2024 with the intention of deploying pilot programs with its partners in 2024.

Staff are not aware of studies modeling the lifetime emissions reduction potential of building electrification in Wisconsin based on planned additions and retirements of electric generating capacity in the state. The lifetime carbon emissions reduction potential of beneficial electrification is highly dependent on the underlying carbon intensity of the electric grid. In the near-term, heat pump adoption may increase the total GHG emissions of customers switching their home heating to an electric heat pump. As the grid transitions toward cleaner energy sources, total emissions over the lifetime of the equipment will decrease. The 2020-2026 Strategic Energy Assessment shows that statewide emissions from electricity generation decreased by 18.5 percent between 2005 and 2018 despite an overall growth in electricity generation. Emissions are projected to decrease further by 2026 to 44.2 percent lower than 2005

[33] U.S. Department of Energy. *Energy, Emissions and Equity (E3) Initiative.* Accessed from: https://www.energy.gov/eere/buildings/energy-emissions-and-equity-e3-initiative.
[34] The Commission's Office of Energy Innovation - State Energy Office is also a participating partner in the CCHP Technology Challenge.

levels. (PSC REF#: 397611 at 78-81.) Updated information is currently being compiled for the 2022-2028 Strategic Energy Assessment.

Work performed in Minnesota by the Center for Energy and Environment (CEE) explores the costs, emissions, and energy consumption of electrification of home heating in the state under different scenarios of grid carbon intensity.[35] Similar modeling and analysis reflecting Wisconsin specific energy costs, climate, and grid futures could provide insights into the emissions reduction impacts of residential heating electrification.

Activities in other states provide examples of the range of ways energy efficiency programs are approaching electrification programs and offerings and seeking to address market adoption barriers for heat pumps. One example is the Michigan Public Service Commission's (MPUC) recent approval of heat pump pilot programs for two Michigan utilities, indicating a desire to take a measured approach to programs and offerings for heat pumps. In 2020 the MPUC approved a Detroit Edison (DTE) heat pump pilot program for low-income households with existing electric heat[36] as well as a Consumers Energy Company heat pump pilot program for both income-qualified and non-income-qualified customers with existing heat from "non-commission regulated fuels such as propane," to test the efficacy, performance, and customer experience of cold climate heat pumps, among other factors.[37] Efficiency Vermont's 2021-2023 triennial plan similarly describes that program's intent to work with utility and weatherization

[35] Center for Energy and Environment. *Beneficial Electrification: Heating Minnesota Homes*. Accessed from: https://mncee.shinyapps.io/bene_elec/.
[36] In the Matter, on the Commission's Own Motion, Regarding the Regulatory Reviews, Revisions, Determinations, and/or Approvals Necessary for Consumers Energy Company to Fully Comply with Pub. Act 295 of 2008, as amended by Public Act 342 of 2016. No. U-20372, (March 5, 2020). Accessed from: https://mi-psc.force.com/sfc/servlet.shepherd/version/download/068t000000AGDjVAAX.
[37] In the Matter, on the Commission's Own Motion, Regarding the Regulatory Reviews, Revisions, Determinations, and/or Approvals Necessary for DTE Electric Company to Fully Comply with Pub. Act 295 of 2008, as amended by Public Act 342 of 2016. No. U-20373, (March 5, 2020). Accessed from: https://mi-psc.force.com/sfc/servlet.shepherd/version/download/068t000000AGDkOAAX.

agencies to explore options for bundling weatherization and electrification through limited program offerings for low-income customers in 2022 and 2023. Elsewhere, programs are adopting quantifiable performance targets for heat pumps. Beginning with the 2019-2020 program years, Efficiency Maine, the statewide energy efficiency program administrator, adopted a goal to install 100,000 heat pumps over five years.[38] In addition, the New York State Energy Research and Development Authority (NYSERDA) aims to increase the number of skilled laborers needed to support accelerated heat pump adoption by setting goals to train 14,000 workers across the heat pump supply chain, including 4,200 workers to sell, design, and install systems. NYSERDA has also set goals to increase the stock of heat pumps 50 percent above 2019 levels and increase penetration of high-performance cold climate heat pumps to 90 percent of all heat pumps shipped for space conditioning in New York.[39]

The Commission may determine that dedicating program resources to beneficial electrification programs and offerings that result in overall reductions in energy use and serve a role in addressing the environmental impacts of climate change is consistent with the program's purpose as well as prior Commission decisions on program priorities.[40] The Commission has designated Focus funding for initiatives that similarly serve the core functions of the statewide energy efficiency and renewable resource program but that also address broader environmental challenges facing the state. During Quad II of Focus, the Commission designated $15 million in program funding for an integrated anaerobic digester that, upon completion, would inject

[38] An Act to Transform Main's Heat Pump Market to Advance Economic Security and Climate Objectives. 129th Maine Legislature. May 21, 2019.
[39] *In the Matter of the Clean Energy Fund Investment Plan, Matter Number 16-00681. Clean Energy Fund: Clean Heating and Cooling Chapter*, (May 7, 2021). Accessed from: https://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=16-00681.
[40] See the *Aligning Focus on Energy Performance Goals and Program Offerings with Decarbonization Goals* section of this memorandum for additional context on the program's role in achieving environmental benefits.

renewable natural gas (RNG) into an interstate pipeline. (PSC REF#: 331578.)[41] The RNG produced by this project will be used to create compressed natural gas for vehicles, resulting in decreased consumption of fossil fuels. In its decision, the Commission acknowledged that anaerobic digesters produce benefits not only by supplying a renewable alternative to fossil fuels but also "address other challenges facing the state of Wisconsin such as manure management and water quality." (PSC REF#: 294032 at 10.)

D. Stakeholder Comments

Multiple commenters in the Roadmap Docket identify opportunities for Focus to contribute to carbon emissions reductions through building electrification and specifically deploying heat pump technologies. (PSC REF#: 411392, PSC REF#: 411448, PSC REF#: 411476.) Two commenters in the Quad IV scoping phase identify electrification as a strategy that can be implemented to enhance Focus' alignment with Wisconsin's decarbonization goal. (PSC REF#: 426016 and PSC REF#: 426103.) RENEW Wisconsin also proposed that the Commission specifically clarify its policy position on fuel switching from heating oil or propane from its policy position on fuel switching from natural gas, noting that there are distinct customer segments within the residential class that electrification programs and offerings may warrant different approaches. (PSC REF#: 426038.) This consideration is consistent with approaches adopted in other states where stakeholders have sought clarity from regulators on how energy efficiency programs can approach the energy savings and other non-energy benefits associated with fuel switching from unregulated fuels. The Wisconsin Utility Association's comments in the Quad IV scoping phase identified the need to ensure that any program initiatives promoting

[41] At the time of this memo the approved integrated anaerobic digester project is under construction and is scheduled to be fully operational in late 2022.

electrification should be done pragmatically to avoid unintended consequences such as higher customer utility bills, negative impacts to grid operations, inequities for certain customer segments, and increased emissions. (PSC REF#: 426016.)

Overview of Alternatives – Electrification Programs and Offerings

The first set of alternatives pertain specifically to Focus' role in supporting electrification in circumstances where customers switch from unregulated fuels to electricity provided by a participating Focus utility. The second decision seeks the Commission's direction on how it wishes to emphasize beneficial electrification in Quad IV in general.

Throughout this section staff refer to the ability of Focus to provide direct market support for beneficial electrification. Direct market support can take on a variety of forms. Incentives are one way the program could directly support markets. However, direct market support may also involve other uses of program funds to address market barriers for technologies associated with beneficial electrification in other ways. As one example, direct market support may include allocating program budget to aspects of workforce development to educate and train contractors on the benefits of ASHPs. The example from Vermont presented in the *Aligning Focus on Energy Performance Goals and Program Offerings with Decarbonization Goals* section above illustrates how one statewide energy efficiency program has leveraged its existing contractor network framework to support an emerging market in service of new programmatic objectives.

Commission Alternatives – Fuel Switching from Unregulated Fuels

The decision alternatives address two areas where staff are seeking Commission direction specific to fuel switching from unregulated fuels to electricity provided by a participating Focus utility:

1) The ability of Focus to incentivize measures or otherwise provide direct market support to promote fuel switching from unregulated fuels to electricity provided by a participating utility through its own programs and offerings; and
2) The ability of Focus to claim the savings and associated social, economic, and environmental benefits from fuel switching measures it incentivizes or otherwise provides direct market support through its own programs and offerings.

Under Alternative One, the Commission would authorize Focus to directly support beneficial electrification in circumstances where fuel switching from unregulated fuels to electricity provided by a participating utility occurs. Alternative One would authorize Focus' ability to support beneficial electrification from unregulated fuels through its own programs and offerings and the program would claim savings and associated benefits as it does with other energy efficiency measures. For these and all subsequent decision alternatives, fuel neutral savings refers to the MMTBU savings that occur after accounting for the decrease in energy consumption from unregulated fuels and the increase in energy consumption from electricity.

Alternative Two would be preferred if the Commission determines it is not reasonable for Focus to directly support and claim savings and other associated benefits for offerings promoting fuel switching from unregulated fuels. A choice of Alternative Two would represent a continuation of current program practice.

There are some avenues for Focus to support fuel switching from unregulated fuels beyond just implementing its own programs and offerings. For instance, Focus could support fuel switching from unregulated fuels by engaging in public or private partnerships with entities seeking to advance beneficial electrification in the state. Focus' role in such partnerships could include providing support through its network of implementers and trade allies, communication

channels, or other means. The Commission could consider using Alternative Three to direct staff to investigate opportunities for such partnership in Quad IV or other avenues in support of fuel switching from unregulated fuels consistent with its priorities for Focus.

Alternative One: Allow Focus to directly support beneficial electrification where fuel switching from unregulated fuels to electricity provided by a participating utility occurs through its own programs and offerings. Focus shall claim all fuel neutral energy savings and other associated social, economic, and environmental benefits, as approved by the Commission, for its own beneficial electrification programs and offerings.

Alternative Two: Do not allow Focus to claim savings and other benefits from directly supporting beneficial electrification where fuel switching from unregulated fuels to electricity provided by a participating utility occurs through its own programs and offerings.

Alternative Three: Other action consistent with the Commission's discussion.

Alternative Four: Take no action.

Commission Alternatives – Emphasis on Electrification Programs and Offerings

Decisions in this section build off of the Commission's decisions in the prior section. For example, if the Commission determines it is appropriate for Focus to support beneficial electrification where fuel switching from unregulated fuels to electricity provided by a participating utility occurs, the decisions in this section would also apply to those circumstances, as well as in circumstances where a customer is switching from natural gas to electricity. With the decision alternatives below, staff present the Commission with a range of options to understand the level of emphasis it wishes to place on beneficial electrification programs and offerings in Quad IV planning.

Alternative One is appropriate if the Commission finds it reasonable to set Focus on a deliberate path toward developing and implementing beneficial electrification offerings during Quad IV and beyond. Selection of Alternative One would send a signal of the Commission's intention for Focus to achieve long-term and sustainable transformation of markets toward energy end uses most appropriately suited for beneficial electrification. A choice of Alternative One would also lead staff toward development of micro-policy decision alternatives in Phase II that clearly align with this direction. Alternative One would also indicate to staff the Commission's desire to be presented with options for measurable Quad IV performance goals related to electrification programs and offerings in Phase III of the Quad IV Planning Process. Alternative One represents the most aggressive option for integrating electrification offerings during Quad IV whereby the program's approach would be to implement offerings at a broad scale based on current knowledge and evaluate their performance on an ongoing basis to guide program direction. This alternative would be consistent with a choice of either Alternative One or Alternative Two in the *Aligning Focus Performance Goals and Program Offerings with Decarbonization Goals* section above.

Alternative Two is appropriate if the Commission finds it reasonable to use Quad IV as a transitional period toward the development of beneficial electrification programs and offerings. Alternative Two represents a less aggressive integration of beneficial electrification offerings during Quad IV compared to Alternative One. Selection of this alternative would signal the Commission's direction to perform intentional research, pilot activities, planning, and stakeholder outreach during Quad IV. These activities could set the stage for specific programmatic recommendations that the Commission can consider in further clarifying its priorities and direction for beneficial electrification during Quad IV and in planning for Quad V

of Focus. Selection of Alternative Two would indicate to the Program Administrator, implementers, and other key market actors that the Commission supports investment of program resources that set Focus on a course toward assuming a larger role in promoting beneficial electrification statewide. A choice of Alternative Two would lead staff toward the development of micro-policy decision alternatives in Phase II that clearly align with Commission direction in support of beneficial electrification. Finally, a choice of Alternative Two would also indicate to staff the Commission's desire to be presented with options for key performance indicators to measure progress towards an intentional integration of beneficial electrification offerings into Focus operations during Quad IV. This alternative would be most consistent with a choice of Alternative Two in the *Aligning Focus Performance Goals and Program Offerings with Decarbonization Goals* section above.

Selection of Alternative Three, on the other hand, would signal to the Program Administrator, implementers, and other key market actors the Commission's interest in gathering information and conducting more foundational research to better understand the opportunities for Focus to engage in beneficial electrification statewide. Selection of Alternative Three would not conflict with Focus' ability to incentivize beneficial electrification as is currently outlined in the Focus Policy Manual. With a selection of Alternative Three, the Commission may wish to establish specific research objectives to be addressed during Quad IV. This may include forming pilot initiatives that would be evaluated for their ability to scale to statewide offerings. This alternative would be consistent with a choice of Alternative Two or Alternative Three in the *Aligning Focus Performance Goals and Program Offerings with Decarbonization Goals* section above.

Alternative Four is appropriate if the Commission prefers that Focus play a limited role in support of beneficial electrification during Quad IV. Selection of Alternative Four would signal to the Program Administrator, implementers, and key market actors that program resources should only be devoted toward support of beneficial electrification during Quad IV insofar as that support directly aligns with other program priorities as established by the Commission. Choice of Alternative Four would largely represent a continuation of Focus' current level of emphasis on beneficial electrification where the practice is not prohibited but performance targets would not be set to achieve particular outcomes and foundational planning and research to understand opportunities for beneficial electrification would not be prioritized. Alternative Four is consistent with a choice of either Alternative Three or Alternative Four in the *Aligning Focus Performance Goals and Program Offerings with Decarbonization Goals* section above.

Alternative One: Focus shall design and implement beneficial electrification initiatives during Quad IV of Focus that seek to expand and enhance Focus' role in supporting and promoting beneficial electrification statewide while achieving measurable results.

Alternative Two: Focus shall use Quad IV as a transitional period to position the program to take on a larger role in promoting beneficial electrification statewide.

Alternative Three: Focus resources shall be used in a limited capacity to support foundational research to better understand and assess the role the program can serve in the advancement of beneficial electrification statewide during Quad IV.

Alternative Four: Focus shall not engage in initiatives to incentivize or otherwise promote beneficial electrification during Quad IV beyond what cost-effectively aligns with the achievement of the Commission's priorities and goals as established elsewhere in the Quad IV Planning Process.

Alternative Five: Other action consistent with the Commission's discussion.

III. UTILITY VOLUNTARY PROGRAMS

The Commission's September 23, 2021 Order in the Roadmap to Zero Carbon Docket (PSC REF#: 421399) along with its December 16, 2021 Final Decision in Quadrennial Planning Process IV scoping phase (PSC REF#: 427426) established utility voluntary programs as one of five macro policies and priorities scope topic to be addressed during Quad IV Planning.

The analysis in this section begins with a review of utility voluntary programs in statute including a discussion of the Commission's oversight role as well as a brief summary of the Commission's process for approving voluntary programs as outlined in Wis. Admin. Code ch. PSC 137. This is followed by stakeholder recommendations from recent energy planning initiatives along with input received in Commission dockets pertaining to utility voluntary programs. Next, staff summarize the active utility voluntary programs, current status of coordination efforts among utilities and Focus staff, and revisit and update certain aspects of staff's analysis of utility voluntary program issues from Quad III Planning. Finally, staff present policy alternatives for the Commission to consider in setting direction for utility voluntary programs during the Quad IV period.

A. Utility Voluntary Programs in Statute and Administrative Code

Under Wis. Stat § 196.374(8), an IOU that contributes its required funding to Focus "in any year is considered to have satisfied its requirements" for supporting energy efficiency and renewable resource programs. Under Wis. Stat. § 196.374(2)(b)2., however, an IOU "may, with commission approval, administer or fund an energy efficiency or renewable resource program that is in addition to" Focus programs. Wis. Stat § 196.374(2)(b)2. further states that the

Commission may not order an IOU to administer or fund an energy efficiency or renewable resource program in addition to their requirements to fund Focus.

The Commission's duties pertaining to utility voluntary programs include ensuring coordination between statewide programs and utility voluntary programs, as well as evaluating both the statewide programs and utility voluntary programs and setting or revising goals, priorities, and measurable targets for the programs at least every four years. Wis. Stat. § 196.374(3)(a) and (b)1.

Wisconsin Admin. Code ch. PSC 137.08 defines the administrative process for a utility requesting to fund voluntary energy efficiency or renewable resource programs as well as the factors the Commission must consider in deciding whether to approve a voluntary program. The Commission is required to consider each of the following eight factors when deciding to approve a voluntary utility program: 1) whether the program is in the public interest, 2) the likelihood the program will achieve its goals, 3) the inclusion of appropriate energy efficiency or renewable resource measures, 4) the adequacy of the budget, 5) the balance of services available to customer segments, 6) the cost-effectiveness of the program, 7) the adequacy of the energy utility's evaluation, measurement, and verification plan, and 8) the level of coordination with the statewide program and other utility voluntary programs and the potential for disrupting the ability of other energy efficiency or renewable resource efforts in the state from meeting the Commission's goals, priorities, and measurable targets.

B. Active Utility Voluntary Programs

Four of the five major IOUs currently implement voluntary energy efficiency programs. The scale of the combined voluntary program budgets is considerably less compared to the statewide program. The combined Commission approved operating budgets for these programs

for the 2022 program year is approximately $5.4 million. By contrast, 2020 Focus expenditures (the most recent year of verified expenditures at the time of this memorandum) totaled $95.6 million. The combined utility voluntary program budgets have increased by more than 50 percent since the end of the 2015-2018 quadrennial period (Quad II). At the end of Quad II, the combined budgets of utility voluntary programs were approximately $3.5 million. Figure 1 below shows the approved combined voluntary program budgets from 2018 to 2022.

Figure 2. Annual Utility Voluntary Program Budgets, 2018-2022

Active utility voluntary programs can be organized into three general categories based on their primary priority: 1) programs complementing and enhancing current Focus offerings designed to increase savings and participation, 2) programs designed to assist low-to-moderate income customers while complementing Focus offerings, and 3) assessment of emerging technologies to deliver new energy efficiency solutions. Table 3 below lists the active utility voluntary programs by the aforementioned categories. Additional description of these programs is also provided below.

Table 3. Active Voluntary Utility Programs

Primary Program Priority	Voluntary Utility Programs	2022 Program Year Combined Budget
Complement and Enhance Focus Offerings	• Northern States Power Company Wisconsin's (NSPW's) Commercial and Residential Community Conservation Programs • We Energies' Voluntary Design Assistance Program (VDAP)	$3,022,883
Assist Low-to-Moderate Income Customers	• NSPW's Tribal Community Pilot • We Energies' Residential Assistance Program • Wisconsin Power & Light's (WP&L's) Enhanced Low-Income Weatherization Program • Wisconsin Public Service Corporation's (WSPC's) Residential Assistance Program	$1,635,000
Assess Emerging Technologies	• WP&L's Home Energy Monitoring Pilot	$767,203

Two IOUs currently operate programs designed to increase participation in Focus to generate additional savings while building upon the existing Focus program delivery framework. NSPW's Commercial and Residential Community Conservation Programs (CCPs) provide bonus incentives on top of Focus incentives to eligible customers in its service territory. The Commercial CCP focuses on small-and-medium sized non-residential customers participating in Focus' Business and Industry Solution and offers bonus incentives equal to 50 percent of the Focus incentive, up to $4,000 per customer premise. NSPW operates its Mid-Market Program (MMP) as a component of its Commercial CCP. The MMP relies on staff resources at the utility working in close coordination with Focus business programs staff to engage directly with targeted small and mid-sized business customer segments to drive participation in Focus programs. MMP participants receive a bonus incentive equal to 75 percent of the Focus incentive, up to $4,000 per customer premise. NSPW's Residential CCP offers bonus incentives equal to 75 percent of the Focus incentive (combined incentives capped at 90 percent of the total

project cost) to eligible residential customers completing projects under Focus' Residential Trade Ally Solution. We Energies' VDAP provides opportunities for design assistance incentives in new construction and major renovation projects in its service territory once the annual Focus Design Assistance Program budget has been exhausted, therefore extending program participation opportunities to projects that otherwise would have been excluded due to Focus budget limitations.

Other voluntary utility programs have been designed and implemented to assist low-to-moderate income customers. We Energies, WPSC, and WP&L each operate voluntary utility programs providing weatherization services to residential customers at or below 80 percent of statewide median income (SMI). These programs have similar designs whereby the utility programs cover the remainder of the full project costs after Focus incentives are applied. For each of these programs the Commission has historically determined that it is reasonable that they not demonstrate cost-effectiveness in recognition that they provide opportunities for customers facing disproportionate barriers to participate in energy efficiency programs and result in benefits to the customers (e.g., long-term bill reductions, health and safety improvements) that would otherwise be difficult to achieve due to financial constraints and awareness limitations.[42]

Finally, WP&L has operated a Home Energy Monitoring Pilot program since 2018. This effort seeks to gain insights into home energy use patterns using disaggregated load data and to identify opportunities for customers with access to real-time energy use data available via smartphone app or website to engage with energy efficiency programs and offerings. Participating customers receive detailed information on their energy usage which they can use to make behavioral changes to save energy as well as to identify inefficient technologies that could

[42] Additional detail on utility-administered income-qualified programs can be found in the *Affordability – Programs and Offerings for Low-Income Customers* section of this memorandum.

be eligible for incentivized replacement through Focus offerings. The program has deployed hundreds of Sense Home Energy Meters (Sense Meters) at single family homes in the WP&L service territory. Beginning in 2022, WP&L plans to expand the pilot to explore the potential for customers with Sense Meters to shift energy use off peak during demand response events after receiving in-app messaging prompts.

C. Stakeholder Input and Recommendations

In the September 2021 Roadmap Docket memorandum to the Commission, staff note that one commenter suggested that increased utility voluntary program efforts could capture additional cost-effective savings to complement Focus offerings and that performance incentive mechanisms (PIMs) could be investigated as an opportunity to encourage additional IOU investment in energy efficiency. (PSC REF#: 419938 at 19-20.) The Commission's Order in the Roadmap Docket directed a workshop to facilitate a greater understanding and engagement on issues related to performance-based regulation (PBR) of which PIMs are a common feature. (PSC REF#: 421399.)

The Wisconsin Utilities Association's (WUA) comments in the Quad IV scoping phase pointed to the potential for PIMs to encourage additional IOU investment in energy efficiency, noting the workshop on PBR as an opportunity for the Commission to provide guidance to utilities on PIMs. (PSC REF#: 426016.) Recommendation #7 of the WEDTI Report also supports allowing utilities to earn on their investments in voluntary programs, though that report recommends statutory revisions as the tool to achieve this outcome. (PSC REF#: 406723.)

The Commission held a workshop on PBR on January 11, 2022. At this workshop stakeholders gathered to learn about principles of PBR including PBR efforts underway in other states. Workshop breakout groups focused their discussion on appropriate methods and

strategies for using PBR to support better performance outcomes for Wisconsin utilities on five separate areas: equity and affordability, energy efficiency, carbon reduction, distributed energy resources, and demand response. Stakeholders participating in the energy efficiency breakout group highlighted considerations that may require closer review as the Commission engages further on the topic of PIMs. This group noted that energy efficiency efforts can achieve multiple objectives and PBR should consider separate categories of metrics for initiatives addressing issues beyond just saving energy such as affordability and grid management. Furthermore, the energy efficiency breakout group noted there could be challenges in balancing appropriate incentive levels with program costs in a manner that encouraged further investment in energy efficiency.

The WUA's comments received during the Quad IV scoping phase also stated a preference for the Commission to continue to make decisions related to utility voluntary programs within each individual utility docket for those programs. (PSC REF#: 426016.) However, the WUA's comments also pointed to an interest in receiving more information about the Focus Program Administrator's plans for program implementation to help utilities consider the design of complementary voluntary programs in their respective service territories.

D. Utility Voluntary Program Coordination with Focus

Wisconsin Stat §196.374(3)(a) requires the Commission to maximize coordination of program delivery between the statewide program and utility-administered programs. Additionally, in accordance with Wis. Admin. Code § PSC 137.08(3)(c), all requests to administer or fund utility voluntary programs must include a description of how the utility will coordinate its program with Focus and other utility voluntary programs including the potential for disrupting Focus' ability to meet the Commission's goals, priorities, and measurable targets.

The Commission considers the level of and approach to coordination with Focus when deciding to approve a utility voluntary program within each individual utility program docket. Past Commission decisions have ordered coordination plans and agreements as conditions of its approval of certain utility voluntary programs (for example, PSC REF#: 423096 and PSC REF#: 350483).

In practice, Commission staff encourage and engage in ongoing coordination with utility staff prior to submission of formal requests to fund and administer utility voluntary programs to ensure coordination with Focus and other required information are adequately considered. Furthermore, the Program Administrator employs utility relations staff to maintain coordination with utilities including engaging in regular communication to provide data on program participation in their service territories, updates on program offerings, and any upcoming changes to program operations that may impact their customers. This type of coordination occurs both regularly as part of annual forums where the Program Administrator presents program updates collectively to utility partners and informally as customized opportunities are identified whether for utility voluntary programs or other efforts that may be more suitable for customer service conservation (CSC) activities.

One recent example of early coordination between Focus and utility staff on a utility voluntary program is NSPW's Tribal Community Pilot approved by the Commission to begin in 2022. (PSC REF#: 423059.) This initiative seeks to enhance Focus program participation opportunities for tribal communities in the NSPW service territory, specifically targeting low-to-moderate income households and rural businesses in these communities. NSPW and Focus staff began collaborating to identify barriers and opportunities for this pilot well in advance of a formal utility voluntary program request to ensure proper coordination and support for the effort.

There is also evidence of IOUs learning from each other and adapting successful voluntary program models from other service territories to their own service territories. Both WP&L and WPSC have developed voluntary programs to deliver whole-home energy efficiency projects for low-to-moderate income customers in their respective service territories by modeling programs after the We Energies Residential Assistance Program (RAP). The We Energies RAP has been active since 2014, the WP&L Enhanced Low-Income Weatherization Program has been active since 2018, and the WPSC RAP has been active since 2019. Focus staff note that each of these programs demonstrate effective coordination with Focus and its network of trade allies.

Utilities may face certain challenges when planning and implementing utility voluntary programs. Challenges can include lack of energy efficiency staff at the utilities to support the programs, lack of financial incentive to implement programs amidst competition for utility budgets, and concerns with meeting rigorous evaluation performance requirements such as demonstrating strict measures of cost-effectiveness. Some utilities have expressed interest in opportunities where existing Focus infrastructure (e.g., data tracking, evaluation, and administrative processes) could be leveraged to reduce utility administrative burdens as well as exploring opportunities through programs designed to achieve objectives aligned with broader utility goals beyond just measurable and cost-effective energy savings (e.g., integration with demand response initiatives or addressing needs of low-to-moderate income customers).

The Roadmap Docket staff memorandum notes that utility voluntary programming was reviewed within the scope of the 2017-2018 Quadrennial Plan and that that analysis could be reviewed and updated for Quad IV planning. (PSC REF#: 419938 at 20.) During planning for Quad III of Focus, staff devoted considerable effort to envisioning foundational policies and practices for collaboration between Focus and participating utilities as well as laying groundwork

for potential guidelines for defining appropriate utility voluntary programs. Some progress has been made on the opportunities and challenges staff identified in their Quad III analysis, however, revisiting decisions related to utility voluntary programs from Quad III planning may be valuable. In particular, given the potential for macro-policy issues addressed in this memorandum to direct Focus into new program priority areas, staff's focus in this section centers on determining the Commission's interest in establishing a collaborative framework between Focus and utilities.

Since staff's Quad III analysis, additional opportunities for Focus and utility coordination have emerged. As discussed above in this memorandum, opportunities for electrification programs and offerings are becoming more prevalent as utilities continue on a path toward more renewable generation and as ASHPs are demonstrating improved performance in cold climates. The WUA's comments in the Quad IV scoping phase indicates that utilities are interested in working collaboratively with their customers "to avoid negative impacts of an overly aggressive approach to electrification, such as high costs, significant power grid build-out, equity concerns, and in some cases higher emissions". (PSC REF#: 426016.) Thus, there may be interest from utilities to take an active role in Focus programs and offerings that promote beneficial electrification during Quad IV.

Opportunities for collaboration on targeted marketing supported through online platforms are also emerging. For example, Focus' Online Marketplace, which offers free or discounted energy efficient products primarily to residential customers, has seen considerable traffic and sales since launching in late 2019. Customers statewide have completed more than 80,000 purchases for more than 200,000 energy efficient products from Focus' Online Marketplace since it first launched. In addition, in 2021 nearly 100,000 online orders were placed for free

energy-saving packs. Website traffic data shows that the number of visitors to the Online Marketplace is growing. In 2021 there were nearly 350,000 user sessions compared to about 185,000 in 2020. Online retail platforms represent potential avenues for customer engagement that could offer collaboration opportunities with utilities. Analysis performed by the Online Marketplace vendor, Techniart, identified that many customers are already reaching the Focus Online Marketplace after first visiting their utility's website. This analysis found that about 15 percent of the visitors referred to the Online Marketplace from an external website, were directed from the website of one of the five major IOUs.

Results from the 2021 EE Potential Study show that the residential sector in particular could benefit from additional investment in energy efficiency as current Focus budget levels and funding allocation policies do not allow for the program to capture a proportionate share of available cost-effective savings compared to the nonresidential sector. (PSC REF#: 420467 at 81.) This finding reinforces the notion that there are opportunities for additional cost-effective savings that are beyond what can be supported with the current Focus budget. Further exploration of performance-based regulation approaches for measuring utility voluntary program activity and designing incentive mechanisms could help further assess whether PBR can help facilitate achievement of those savings.

Finally, diminishing savings opportunities for residential lighting as a result of successful program market intervention and evolving federal efficiency standards are leading to a growing interest in exploring new program models and emerging technologies. In a number of cases, it may be appropriate for utilities to take leadership in implementing these new opportunities. Programs requiring access to customer data to effectively design, implement, and evaluate these programs may be particularly promising as utility voluntary programs because customer data

sharing arrangements can be logistically challenging and/or excessively costly for the statewide program. For instance, testing opportunities for behavioral programs where access to customer billing data is critical to assessing performance may be an appropriate purpose for utility voluntary programs. Such programs may also integrate well with utility load management objectives which are specifically excluded from the statutory definition of energy efficiency programs that can be operated by Focus. Collaboration between utilities and Focus and among utilities themselves to share lessons learned could lead to program efficiencies that improve the value of the utilities' investments in voluntary programs for its customers. This collaboration could also spark ideas on program aspects most appropriate for Focus to scale statewide.

E. Proposed Guidance for a Collaborative Framework

In its Quad III analysis, staff proposed guidance for a collaborative framework to improve overall coordination between Focus and utilities and in particular to enhance coordination for bi-directional data sharing opportunities, to identify opportunities to coordinate on behavioral programs, and to serve as a platform for sharing ideas for voluntary programs. The proposed framework would be managed through a steering committee comprised of Commission staff, the Focus Program Administrator, the Focus Program Evaluator, and participating utility representatives. The Commission found it reasonable to take no action to incorporate utility voluntary programs into a collaborative framework. (PSC REF#: 343909 at 12.)

In light of the opportunities and challenges presented in Quad IV, together with the priorities the Commission chooses to establish, the Commission could find that the collaboration framework purpose, structure, and roles from the Quad III staff memorandum could be

appropriate in planning for Quad IV. The key tenets of that framework are laid out in Table 4 below.

Table 4. Proposed Focus-Utility Collaborative Framework

General Purposes of the Framework	• Maximize the mutual benefits to Focus and participating utilities • Identify data sharing opportunities to improve customer experiences and program efficiency • Identify new and innovative program ideas and determine appropriate roles for implementing each program • Explore the use of PBR techniques to measure program performance and incent program activity • Coordinate marketing and programming activities to maximize efficient use of resources and value to customers
Framework Structure	• Steering committee comprised of Commission staff, Program Administrator staff, Program Evaluator staff, and participating utility staff[43] • Meet at least quarterly to ensure ongoing collaboration • Consider forming working groups to address specific collaboration topics as necessary
Definition of Roles	• Program Administrator staff lead coordination of activities with statewide reach such as Focus Core programs and general marketing • Program Administrator staff and utility staff share responsibilities with respect to improving access to information collected by the other party • Commission staff serve as facilitator and provide guidance to ensure alignment with Commission priorities and to support voluntary program proposals for Commission approval

[43] Multiple utility representatives should be selected to ensure broad representation from utilities of different sizes and types that serve different geographic regions of the state.

As noted in the discussion above, certain voluntary programs have already benefited from collaboration between Focus and utility staff at the program planning phase in the absence of any Commission ordered framework. Alternative One would establish a formal Focus-utility coordination framework as part of the quadrennial plan and would be appropriate if the Commission concludes it is a reasonable approach to foster structured coordination in identifying opportunities for utility voluntary programs as a promising avenue toward generating general benefits to Focus and its participating utilities. Further, the Commission may determine that a formal collaboration process is appropriate to address concerns it may have regarding a lack of demonstrated Focus-utility coordination from certain utility voluntary program dockets.

With Alternative Two, the Commission may wish to adopt a formal collaboration framework but make modifications to the proposed guidance for this framework to better align with its priorities.

The Commission may prefer a less prescriptive approach by encouraging Focus and utilities to be more proactive in coordination efforts without formalizing a particular framework. This approach would be consistent with the Commission's position in Quad III planning to not adopt a formal collaborative framework but would signal the Commission's interest in seeing additional coordination occurring between Focus and utility staff. Encouraging collaboration rather than establishing a formal framework may be preferred if the Commission believes that collaboration that occurs organically between an individual utility and Focus to identify opportunities for customized programs is a more effective option to fostering coordinated voluntary program offerings.

Alternative Three serves as one example for the Commission to consider that could encourage collaboration without establishing a formalized framework. Under Alternative Three

the Program Administrator would proactively develop and maintain a menu of options for promising programs that could be shared with utilities based on particular program gaps or emerging opportunities. These options could be regularly updated to stay current with active programs and as new programs and offerings are considered and/or deployed.

Under Alternative Four, the Commission may wish to consider other approaches it believes could be appropriate for encouraging new and innovative utility voluntary programs that differ from those offered in the other decision alternatives. Under Alternative Five, the Commission may wish to take no action.

The Commission may wish to consider how its decisions under other topics addressed as part of this Phase I memorandum may impact a decision to establish the proposed formal collaborative framework discussed in this section. For instance, decisions that set Focus in new directions (e.g., prioritizing carbon emissions reductions or developing electrification programs and offerings) may invite new opportunities for collaboration that could be enhanced through more deliberate coordination, whether by formalized process or other means. On the other hand, a formal collaborative framework with utilities to explore opportunities for these new directions may be redundant should the Commission determine that other stakeholder collaboration processes, such as the facilitated stakeholder working group involving utility representatives as outlined under Sub-Alternative A in the *Aligning Focus on Energy Performance Goals and Program Offerings with Decarbonization Goals* section are appropriate.

Commission Alternatives – Focus and Utility Collaboration

Alternative One: A formal framework for enhanced collaboration between Focus and utilities shall be established, based on the guidance described in this memorandum.

Alternative Two: A formal framework for enhanced collaboration between Focus and utilities shall be established, with modifications to the guidance described in this memorandum.

Alternative Three: A formal framework for enhanced collaboration between Focus and utilities shall not be established. Instead, the Focus Program Administrator shall develop and maintain a menu of options for utility voluntary programs to be shared with participating Focus utilities.

Alternative Four: Other action consistent with the Commission's discussion.

Alternative Five: Take no action.

IV. COLLABORATION BETWEEN FOCUS AND UTILITY DEMAND RESPONSE PROGRAMS

Demand response programs provide customers with incentives to reduce energy demand during peak periods and create financial savings for electric providers and customers. Demand response programs are most commonly deployed in the summer months, to reduce peak energy usage during the highest-demand periods of the year. Programs may also be operated at other times of a year to support a balance between demand and available supply, such as to reduce usage during smaller winter peak periods or to address demand on days when available generation is limited due to plant outages. [44]

A wide range of initiatives can be categorized under demand response, including time-of-use rates, demand bidding, behavioral demand response, and timed water heating. In Wisconsin,

[44] This summary is adapted from the Demand Response section of the PSC's Final Strategic Energy Assessment: 2020-2026. (PSC REF#: 397611.)

electricity providers have pursued demand response through two primary mechanisms: direct load control programs and interruptible load tariffs.[45]

- **Direct load control** gives electricity providers the ability to control the use of customer equipment, such as residential air conditioners, to reduce load on the system. In return, participating customers receive a financial incentive. While direct load control programs historically operated through remote shut-offs of participant technologies, new program models control usage through customers' smart thermostats, using software to set thermostats at a higher temperature during peak demand periods, and in many cases, providing "pre-cooling" before peak demand hours to help customers remain comfortable during the event.
- **Interruptible tariffs** enable participating customers (typically industrial customers) to receive a lower energy charge by agreeing to allow the electricity provider to interrupt load during periods of peak demand.

Wisconsin Stat. § 196.374(1)(d) specifically excludes load management from the definition of energy efficiency programs that can be operated by Focus. Wisconsin Stat. § 196.374(1)(f) defines a load management program as a program to allow an energy utility, municipal utility, wholesale electric cooperative, retail electric cooperative, or municipal electric company to control or manage daily or seasonal customer demand associated with equipment or devices used by customers or members. This definition is consistent with the description of direct load control summarized above and conforms with the purpose of demand response programs as discussed throughout this section. These statutory definitions were set in place in

[45] Smart Electric Power Alliance. *2019 Utility Demand Response Market Snapshot.* Accessed from: https://sepapower.org/resource/2019-utility-demand-response-market-snapshot/.

recognition that Focus, as a statewide energy efficiency and renewable resource program, lacks certain capabilities to perform load management and that these activities are most appropriately suited as utility operations.

Consequently, Focus' role in collaborating with utility demand response programming to date has primarily been through complementary programs and offerings to support utility objectives while also achieving measurable energy savings. For example, Focus can drive the adoption of demand response capable technology, such as offering incentives for smart thermostats, but Focus is not positioned to actually run the demand response programs that the technology enables. The decision alternatives presented at the end of this section seek the Commission's direction on how it wishes to address the intersection of Focus and utility demand response programs in Quad IV.

A. Current Focus Integration with Utility Demand Response Programs

Focus has found ways to support utilities who are implementing demand response programs through collaborative efforts. The discussion below describes Focus' role in supporting active initiatives at a number of large IOUs in the state. The concept of leveraging the Focus Online Marketplace as a tool to enhance Focus' integration with utility demand response programs is discussed throughout this section. The Focus Online Marketplace is a statewide e-commerce platform that provides instant rebates for qualified energy saving products. As discussed in the *Utility Voluntary Programs* section of this memorandum, Focus' Online Marketplace analytics show that utilities are already serving as an avenue for directing their customers to the Focus Online Marketplace. This demonstrates evidence of existing foundational links between Focus' online offerings and utility websites that may present opportunities for enhanced collaboration and integration with utility demand response programs.

Focus' efforts to integrate its offerings with utility demand response programs have primarily centered on marketing and rebates for smart thermostats. In 2021, Focus completed an EERD study exploring opportunities for behavioral and technology-based solutions capable of achieving load mitigation benefits and measurable energy savings. [46] Among the objectives of this study was to provide recommendations on next steps for how the program can better integrate the most promising measures into the Focus portfolio. The study noted the following: "Smart thermostats currently represent the most immediate and least risky opportunity to administer an integrated EE [energy efficiency] and demand response (DR) measure." However, other measures recommended for further research to explore opportunities for integration with demand response programs include residential HPWHs, strategic energy management for wastewater treatment plants, and residential customer sited battery storage.

Madison Gas & Electric (MGE) has implemented a demand response program called MGE Connect® which offers customers a $50 gift card for enrolling in the program and an additional $25 gift card for every summer season the customer participates in the program after the first year. Eligible participants include residential customers who have installed an eligible smart thermostat to control their air conditioning.[47] Focus began supporting the implementation of this program in January 2021 by providing data to MGE on which customers had purchased a smart thermostat through the Focus Online Marketplace, retail channel, or the HVAC Trade Ally Solutions path. This data gave MGE insights into who may be a good candidate to enroll in the program. Focus also provided marketing support including content and collateral for

[46] Illume Advising, LLC. (2021). *Load Shaping Research: Case Studies FINAL*. Prepared for Focus on Energy. Accessed from: https://www.focusonenergy.com/sites/default/files/inline-files/Focus_Loadshaping_Report_Final_2021_01_15.pdf.
[47] Madison Gas and Electric. *MGE Connect*®. Accessed from: https://www.mge.com/saving-energy/for-homes/heating-and-cooling/mge-connect.

promotional efforts. The MGE Connect® program was fully subscribed in 2021 and Focus' engagement offers insights into the potential for further collaboration opportunities with both MGE and other participating Focus utilities. Through this collaboration, Focus and MGE have also begun exploring opportunities for developing a customized landing page on the Focus website to direct MGE customers to the MGE Connect® program enrollment page. Cost-sharing and customer experience considerations are among the challenges that have been encountered in these discussions thus far. MGE is also working with stakeholders to expand this program to include additional technologies such as controlled water heaters, heat pumps, and battery electric storage. (PSC REF#: 427687.)

WP&L is working to launch three new demand response programs. The bring-your-own-thermostat, controlled water heating, and thermal energy storage pilot programs, branded as Alliant Energy Smart Hours[48], will provide new ways for residential and small business customers to participate in demand response. (PSC REF#: 427760.) In an effort to simplify the enrollment process WP&L collaborated with Focus to attempt to allow their demand response software provider the ability to process program enrollments for customers purchasing a smart thermostat on the Focus Online Marketplace. Through these discussions and the documentation of the technical challenges, it has been determined that the software provider for WP&L is currently unable to pursue this integration due to workload issues. Focus will continue to support Alliant in this area as needed for the launch of the program.

WP&L's Home Energy Monitoring Pilot voluntary program discussed in the *Utility Voluntary Programs* section above provides an additional illustration of efforts to coordinate utility demand response with Focus offerings. Under the approved pilot program plans for the

[48] Alliant Energy. *Smart Hours*. Accessed from: https://www.alliantenergysmarthours.com/.

2022-2023 period, WP&L intends to analyze participating customer behavioral changes in energy use during a series of demand response events using the home energy monitoring technologies deployed in their homes. WP&L and Focus have developed a coordination plan for this program and have already collaborated to add a smart plug capable of interfacing with the home energy monitoring device to Focus' Online Marketplace. These smart plugs may allow for greater savings during demand response events by allowing customers to monitor and control devices connected to the smart plug remotely.

NSPW has launched a demand response program, AC Rewards[49], offering annual bill credits for customers enrolling their smart thermostats into the program. (PSC REF#: 364845.) Under the AC Rewards program, customers receive email notifications of control events during the cooling season and can choose to either participate or opt out of the event. Focus and NSPW have collaborated by sharing marketing collateral and performing cross promotional activities aiming to increase awareness of the program. For example, as a feature of its voluntary energy efficiency program, NSPW offers a 60 percent bonus incentive in addition to the Focus incentive for customers purchasing a smart thermostat from Focus. NSPW markets this bonus incentive directly from its AC Rewards website for Wisconsin customers. Focus staff note the potential for additional collaboration opportunities where Focus could further support NSPW's demand response efforts. These opportunities may include enhanced marketing and promotional activities, coordinated data sharing, and exploring a customized Online Marketplace landing page for NSPW customers interested in purchasing a smart thermostat and enrolling in the demand response program at the same time.

[49] NSPW. *AC Rewards Smart Thermostat Program*. Accessed from: https://wi.my.xcelenergy.com/s/residential/heating-cooling/ac-rewards.

The EERD Load Shaping study referenced above recommends several research options for the program to consider as next steps toward enhancing Focus' ability to support greater demand savings. Among these options, the study authors recommended that Focus perform interviews or focus groups with utilities, Commission staff, and other stakeholders to collect feedback on their interest and ability to benefit from measures emphasizing demand savings. Other recommended efforts include:

- Perform customer surveys on awareness and knowledge of demand issues and savings to inform demand response program designs, processes, and strategies for Wisconsin;
- Review the Focus database to assess summer coincident demand savings by program, measure, year, end-use, and partner utility to reveal traditional energy efficiency measures with promising summer coincident demand savings potential;
- Investigate and prioritize measures that reduce winter peak to better prepare Focus to coordinate with utilities interested in managing winter peak demand;
- Review and refine the program's coincident demand savings estimates for load shaping measures.

Performing some or all of these tasks may be appropriate foundational steps in assessing potential opportunities, challenges, and strategies for aligning Focus offerings with utility demand response programs. Commission direction to place greater emphasis on collaboration with utility demand response programs during Quad IV may lead to the program prioritizing the efforts outlined above, or other efforts identified through utility outreach efforts. Certain components of the research and analysis recommended may be most appropriate to be performed

by the Focus Evaluator while other tasks may be appropriate as research projects funded under Focus' EERD program. Setting the Quad IV EERD budget is among the topics to be addressed during Phase II of Quad IV Planning.

B. Stakeholder Comments

WEDTI Recommendation #8 highlights the need to integrate energy efficiency and demand response programs in order to support better management of the electric system and align with state carbon reduction/clean energy goals (PSC REF#: 406723.) Specific to Focus, WEDTI recommends that the program place greater emphasis on offerings achieving demand savings and to consider collaborative opportunities with utilities that support beneficial electrification. The WEDTI recommendation identifies the Focus potential study as an opportunity to quantify demand savings opportunities for Focus that could inform planning and implementation of programs to achieve greater demand savings. The WEDTI report's recommendation for Focus to place greater emphasis on demand savings is informed by previous Commission decisions that have led to the program prioritizing the reduction in energy use while also recognizing the value of demand savings to customers. (PSC REF#: 215245 at 5 and (PSC REF#: 343909 at 6.) The program's emphasis between energy and demand savings is among the micro-implementation topics to be addressed in Phase II of Quad IV planning.

Multiple commenters in the Roadmap Docket specified their interest in establishing performance-based regulation to encourage increased activity on demand-side activities such as demand response and energy efficiency. (PSC REF#: 411405, PSC REF#: 411443, PSC REF#: 411471, PSC REF#: 411491.) As outlined below, a collaborative effort between Focus and utilities to develop a process framework for supporting demand response programs may be beneficial for the development of these programs.

The Governor's Task Force on Climate Change also made a related policy recommendation in a report published in December 2020. (PSC REF#: 406724.) Recommendation #9, Support Load Management, recommends the PSC establish programs to incentivize load management, including demand response. While Focus does not have the statutory responsibility to operate demand response programs, it could be influential in their development by marketing utility programs and offering incentives for compatible technologies.

C. Integration and Collaboration Considerations

If the Commission decides to place more emphasis on the integration between Focus and utility demand response programs, the biggest challenge will likely be technical integration. Each utility is investing in its own technology to implement demand response programs with customers and efforts to integrate with each utility is likely to present unique challenges and opportunities. The options and opportunities for enhanced integration of Focus offerings with utility demand response programs could be explored in Quad IV, acknowledging that it remains likely that each utility will have unique circumstances which may require additional work to better understand the unique technical opportunities and barriers. As an initial step, Focus could perform outreach with participating utilities to identify interest and ability to benefit from the integration of Focus offerings and demand response efforts within utility territories. This work would also be an opportunity to identify and document technical barriers to inform a range of program support options that Focus could offer to utilities.

Marketing and promotional collaborations will remain a valuable investment in an effort to cross-market promotional offers with Focus and utilities. Low-cost investments such as sharing marketing collateral and developing dedicated landing pages for each demand response program from the Focus website could prove to be valuable in driving enrollment in these

programs. In addition, opportunities to enhance data sharing between Focus and utilities could be explored to identify potential paths to support utility demand response programs. The example of sharing smart thermostat participation data in support of MGE's demand response program is one example of how this collaboration is already occurring. Focus' brand recognition along with its statewide network of trade allies and energy advisors could be helpful resources for utilities interested in expanding the reach of their demand response programs.

Staff note that efforts are already underway to improve data sharing capabilities between Focus and utilities. Commission and Program Administrator staff are in the process of developing an online utility portal that will support sharing program materials such as marketing collateral and data reports through a secure channel accessible to utility staff. This effort is occurring simultaneous to the development of enhanced database reporting tools for Focus using Microsoft Power BI. Combined, these initiatives will strengthen Focus' ability to collaborate with utilities and support program operations using data-driven insights.

Should the Commission wish to expand and enhance Focus' role in supporting utility demand response programs, staff propose the development of a process framework to guide and inform this collaboration. The overarching purpose of a process framework as discussed in this section is to serve as a resource for enhanced collaboration between Focus and its utility partners on utility demand response programs by identifying a range of options that could be employed to address both technical and promotional considerations associated with integrating demand response programs with Focus programs and offerings.

The concept of a process framework is similar to the menu of options for utility voluntary programs introduced in the *Utility Voluntary Programs* section of this memorandum and it may be a natural fit to be folded into that effort or the broader collaborative framework also proposed

in that section depending on the Commission's interest. For example, if the Commission prefers to establish a formalized collaborative framework between Focus and utilities (Alternative One in the *Utility Voluntary Programs* section of this memorandum), a working group devoted to addressing collaboration with utility demand response programs may be appropriate. Alternatively, if the Commission prefers to not establish a formal collaborative framework and instead elects to direct the Focus Program Administrator to develop and maintain a menu of options for utility voluntary programs (Alternative Three in the *Utility Voluntary Programs* section), a feature of that effort could include the development of a process framework designed to enhance the integration of Focus programs and offerings with utility demand response programs.

Development of a process framework would require Focus to, among other potential activities: 1) invest resources in assessing its own offerings and measures for their ability to achieve demand savings; 2) work proactively with utilities to assess their interest and ability to collaborate on their demand response initiatives; 3) examine and characterize technical capabilities for system integration with utility demand response programs; and 4) improve its understanding of customer interest in and awareness of technologies with energy saving and demand response capabilities. The process framework would function as a roadmap of the potential pathways for enhanced integration of Focus' infrastructure with utility demand response programs. An improved understanding of the opportunities available may be a valuable initial step in the engagement between Focus and utilities and lead to more effective and efficient collaboration.

From a technical standpoint, a process framework may identify the steps necessary to integrate the Focus Online Marketplace with a utility's demand response program enrollment.

As one example, the ability for a customer to auto-enroll in a utility demand response program with a qualified product purchase from Focus is not currently implemented although this concept has been identified as an avenue for further exploration should the Commission wish to place greater emphasis on the integration of Focus offerings and utility demand response programs.

From a promotional standpoint, a process framework may explore opportunities to create dedicated landing pages on the Focus website with content related to each available utility demand response program. Other promotional opportunities identified by Focus staff through the experience already gained with collaborating with utility demand response programs include enhanced marketing and promotional activities to drive customer participation. Additionally, Focus' efforts to improve its data sharing and reporting capabilities with utilities through a data sharing portal and development of more sophisticated data reporting tools may support innovations in targeted marketing to customers that may be candidates for utility demand response programs.

A process framework could be used as a tool in the initial engagement between Focus and a utility demand response program. With an understanding of the various ways Focus could support their demand response programs, utilities may be able to more efficiently determine a preferred collaboration approach in a manner aligned with load management strategies and providing the greatest value to customers.

Commission Alternatives – Collaboration between Focus and Utility Demand Response Programs

Alternative One is appropriate if the Commission would like Focus to direct program resources to performing foundational research and analysis to assess utility interest in demand response program collaboration opportunities, identify program offerings with the greatest potential to support utility load management strategies, and better understand customer

awareness of and interest in demand response. This work would serve to inform the development of a process framework to support the collaboration between Focus offerings and utility demand response programs. Under Alternative One, Focus would build off its prior experience supporting utility demand response programs and seek to document and address key technical and promotional barriers to better support integration with utility demand response programs. A process framework would be developed with utility input to serve as a roadmap for utilities interested in leveraging various aspects of Focus' infrastructure (e.g., database tracking, marketing, marketplace and website resources, contractor network) to enhance their demand response programs.

Alternative Two is appropriate if the Commission believes that Focus' current level of support for utility demand response programs is sufficient and the Program Administrator should continue to provide support to utilities ad-hoc. Under Alternative Two, Focus would continue to support utility demand response programs through generally low-cost activities such as data sharing and cross-promotional marketing based on utility interest. Focus performing its own assessment of opportunities to integrate with utility demand response programs would not be prioritized under Alternative Two.

Alternative Three is appropriate if the Commission prefers Focus to take on a different role in collaborating with utility demand response programs than those presented in this memorandum.

Alternative One: Focus should expand and enhance its role in collaborating with utility demand response programs in Quad IV by developing a process framework consistent with the discussion in this memorandum.

Alternative Two: Focus should continue to play a supporting role for utilities but not make any additional investment into enhancing collaboration in support of utility demand response programs.

Alternative Three: Other action consistent with the Commission's discussion.

Alternative Four: Take no action.

V. Affordability – Low-Income and Income-Qualified Programs and Offerings

Previous sections of this memorandum mentioned two initiatives in Wisconsin focused on climate change and the clean energy transition that included recommendations for the role of customer equity and affordability (the WEDTI Initiative (PSC REF#: 406723)) and the Governor's Climate Change Task Force Report (PSC REF#: 406724).) More recently the Commission made decisions on two dockets that include the issue of customer equity and affordability, the Roadmap Docket (PSC REF#: 421399) and the Scoping Phase of the Quadrennial Planning Process IV docket. (PSC REF#: 427426). A number of commenters in these dockets expressed interest in increasing Focus' emphasis on supporting customer equity and affordability. Commenters noted that Focus does not currently set formal goals related to service for customers facing affordability challenges, and suggested that exploring formal goals and adjustments to program offerings could enhance program impacts for those customers.

A. Background

Equity for Focus is defined in Wis. Stat. § 196.374(5m)(a) as follows: "The commission shall ensure that, on an annual basis, each customer class of an energy utility has the opportunity to receive grants and benefits under energy efficiency programs in an amount equal to the amount that is recovered from the customer class under sub. (5)(a)." In the second Quadrennial process, the Commission operationalized the equity requirement as approximately 60 percent of Focus funding coming from business customer classes, and 40 percent from residential customer classes. (PSC REF#: 215245.) This percentage aligns with the available cost-effective savings potential by sector in the 2021 EE Potential Study (PSC REF#: 420467) and historical spending, prior to any potential studies being completed. Therefore, the budgets for business and residential programs are set using these same proportions. Within these parameters, Focus has historically offered some form of income-qualified programs, currently defined as customers with household incomes between 60 and 80 percent of state median income (SMI). These programs are distinct from the Department of Administration's (DOA) Weatherization programs which serve low-income customers at 60 percent of SMI or below.

To understand how the current "low-income programs" in Wisconsin are related, some historical context may be useful. Beginning in the 1980's, demand side management programs (also referred to as energy conservation programs) and low-income programs for utility customers were operated by the state's electric utilities, with oversight by the Commission.[50] With the advent of utility restructuring nationwide in the mid-1990's, there was increased activity both at the Commission and in the Legislature, aimed at analyzing what would happen to

[50] This summary is taken from: *Utility Public Benefits*, Legislative Fiscal Bureau Informational Paper 87, by Darin Renner, January 2007. Please refer to this paper for a comprehensive discussion of the history of utility energy conservation and low-income programs.

these "public benefit" programs should Wisconsin utilities be restructured.[51] The result after several years of analysis and debate was the passage of 1999 Wisconsin Act 9 (referred to as Act 9 as well as Reliability 2000).[52]

Act 9 provisions created two statewide public benefits programs. One program awarded grants for the following three types of activities: (1) energy conservation and efficiency (demand side management) efforts; (2) environmental research and development; and (3) renewable resources development. A second program provided assistance to low-income utility customers. This type of assistance included low-income weatherization services, payment of arrearages and the early identification and prevention of home energy crises.

Both programs were located at DOA, which formed the Division of Energy with two bureaus in 2000, to manage the two statewide public benefit programs. The Wisconsin Energy Bureau managed the Energy Conservation and Efficiency Program; the Environmental Research and Development Program; and the Renewable Resources Program. These three programs were bundled together and kept the name "Focus on Energy" which was the name of the pilot DOA administered in the Wisconsin Public Service Corporation territory between 1998 and 2000. The low-income weatherization services and bill payment assistance programs, which had been located in DOA's Division of Housing, were relocated to the Division of Energy in the newly named Energy Services Bureau.

Similar to the current income-qualified programs offered by Focus, between 2001 and 2011, Focus offered "Targeted Home Performance with ENERGY STAR." This program worked

[51] *Ibid.* Public goods are those goods whose value cannot be limited to individuals but instead are of value to, and are consumed by, society as a whole (for example, the availability to all members of society of reliable utility service at reasonable cost). Public goods provided by public utilities are termed public benefits. Because these public goods benefit society as a whole, they will exist only if society demands them, such as through government mandate or regulation.

[52] Wisconsin Legislature: 1999 Wisconsin Act 185

with the next tier of income-qualified customers (which currently is 60 to 80 percent of SMI) while the Energy Services Bureau's low-income programs worked with households that had incomes at or below 60 percent of SMI.[53] The program worked with both private contractors and the state's weatherization agencies to provide "whole-house" energy efficiency services and emergency furnace and water heater replacement subsidies. The average annual incentive spend over the ten years of the program was $1.8 million and the average number of customers served each year was 347.[54]

B. Current DOA Low-Income Energy Assistance Programs[55]

With the passage of 2005 Wisconsin Act 141, oversight of the Focus program moved to the Public Service Commission in July 2007 while the low-income programs remained at DOA. Currently, low-income energy assistance programs are operated by DOA through its Division of Energy, Housing, and Community Resources (DEHCR). There are two components to the DOA operated programs, referred to in whole as "Home Energy Plus", which are funded by state public benefits funds as well as federal funds: 1) The Wisconsin Home Energy Assistance Program (WHEAP) which helps low-income households to pay energy and heating bills and to identify and prevent energy crises, and 2) The Weatherization Assistance Program which helps reduce high-energy costs in homes occupied by low-income families. In addition, program funding is utilized for emergency furnace repair and replacement services, which are provided to households experiencing a heating crisis. Weatherization services provided include: attic,

[53] DOA moved to 60% of SMI for Weatherization and Energy Assistance in federal fiscal year 2010 because it aligned more closely to what U.S. DOE moved to with the American Recovery and Reinvestment Act (ARRA) funding for weatherization at the 200% FPL and it includes more customers.
[54] 2001-2011 Summary Report: *Targeted Home Performance with ENERGY STAR*, WECC, June 6, 2012.
[55] Summary taken from the Department of Administration's Energy Services, Legislative Fiscal Bureau Informational Paper #88 by Angela Miller, January 2021.

sidewall, and floor insulation; nonemergency repair or replacement of furnaces; water heater insulation; and water heater, refrigerator, and window replacements. Services are offered to families or individuals with household incomes of no more than 60 percent of the SMI. Both homeowners and renters who meet WHEAP eligibility criteria may receive weatherization services at no cost – the program pays for 100 percent of all improvements. However, a 15 percent contribution by property owners is required in rental properties with two or more units where the property owners pay heating costs and the owners are not themselves eligible for WHEAP. Local program operators give priority to homes occupied by elderly and the disabled and houses with high-energy consumption. DEHCR administers the program through contracts with community agencies and local governments. These agencies seek out eligible households, determine the types of work on each dwelling that will provide the greatest energy savings for the cost, and hire and supervise employees to install weatherization materials.

The Division also provides funding for emergency furnace repair or replacement services for low-income homeowners through weatherization program agencies. Eligibility for emergency furnace repair and replacement is determined by WHEAP agencies, which make referrals for furnace repair and replacement to weatherization program agencies. Table 5 below shows the number of units weatherized and emergency furnace repair and replacements for the last three years.

Table 5: Number of Units Weatherized and Furnaces Replaced and Repaired

Activity	2019	2020	2021
Units Weatherized	4,953	4,950	4,296
Furnaces Replaced	2,407	2,076	2,066
Furnaces Repaired	2,672	2,408	2,569

C. Sources of funding for the DOA Weatherization Program

The weatherization assistance program is supported by three main sources: (1) funds from the U.S. DOE; (2) funds from the state utility public benefits program (collected by utilities via a line item on customer bills); and (3) an allocation of 15 percent of funds from the Low Income Home Energy Assistance Program (LIHEAP). Table 6 below provides a breakdown of the Low-Income Weatherization Program's main funding sources for the last three years.

Table 6. DOA Weatherization Funding Sources & Expenditures from 2019-2021

Funding Source	**2019**	**2020**	**2021**
U.S. Department of Energy	$10,056,393	$11,244,641	$10,695,959
Public Benefits (Utility Bills)	$49,095,616	$49,420,347	$49,420,347
LIHEAP 15% Transfer	$15,710,815	$15,915,471	$15,742,557
TOTAL FUNDING	**$74,862,824**	**$76,580,459**	**$75,858,863**
Expenses			
Weatherization	$59,478,728	$62,811,509*	$46,696,074
Emergency Furnace Replacement	$10,945,755	$10,030,650	$10,539,781
TOTAL EXPENDITURES	**$70,424,483**	**$72,842,159**	**$57,235,855**

*Contract extended to 15 months due to pandemic

In addition to the major sources of funding above, municipal utilities and retail electric cooperatives have the option of implementing the low-income energy assistance program on their own or jointly with other utilities.[56] However, any customer receiving benefits through a community program may not also receive benefits from the state (although such customers are eligible for federally-funded heating assistance). Municipal utilities and retail electric cooperatives must collect fees averaging $8 annually per meter from customers to fund the community energy assistance program, however, the low-income assistance may not exceed 1.5% of the total bill, or $375 per month, whichever is less. Similar to the Focus programs, a municipal utility or cooperative has the option of retaining the fees assessed to its customers to

[56] Summary taken from the Department of Administration's Energy Services, Legislative Fiscal Bureau Informational Paper #88 by Angela Miller, January 2021.

support the community program in its service areas, or it may instead send the fees collected to DOA and participate in the state weatherization program.

DEHCR reported that $3,323,300 was remitted to DOA in State Fiscal Year (SFY) 2019-2020 by municipal electric utilities or retail electric cooperatives that participate in the DOA-operated program. Also according to DEHCR, in 2019-2020, 16 of the state's 24 retail electric cooperatives and 67 of the state's 81 municipal electric utilities elected to participate in the DOA operated programs.

Finally, the DOA Weatherization program is expected to receive additional federal funds of approximately $130 million as a result of the Bipartisan Infrastructure Law. DEHCR reports that U.S. DOE has not yet issued final guidance or final funding allocations. It is anticipated that these funds would need to be spent over a five-year period.

D. 2020 Focus Program Revenue and Expenditures[57]

For comparative purposes, Focus revenue and expenditures for 2020 are shown in Table 7 below. Revenues for 2021 were $99,635,086 and 2022 revenues were calculated to be $100,059,255.[58] During the second Quadrennial Planning Process (PSC REF#: 215245), the Commission established that 60 percent of revenues should be collected from business rate classes and 40 percent from residential rate classes. While low-income and income-qualified customers contribute to the Focus program (and to DOA's Low-Income Programs) when paying their utility bill, customer income data is not collected by utilities and therefore it is difficult to calculate the total amount of low-income customers' contributions to Focus. This lack of

[57] Information taken from the 2020 Annual Report to the Legislature on Energy Efficiency and Renewable Activities in Wisconsin 2020 ReportToLegislature.pdf (wi.gov)

[58] IOU revenues are calculated based on a three-year rolling average, with the most recent year being three years ago. For example, the budget for 2021 is based on utility revenue generated in 2018, 2017 and 2016. The 2021 and 2022 figures include IOU, municipal electric, and electric cooperative revenues.

detailed data is also an issue when trying determine how much of the Focus (non-income qualified) residential incentives are paid to low-income and income-qualified customers, which is discussed below.

Table 7: Focus on Energy Revenues and Expenditures in 2020

REVENUE	
Investor Owned Utilities	$95,850,696
Municipal Electric Providers/Electric Cooperatives	$3,284,313
Education and Training Revenue	$22,701
TOTAL REVENUE	**$98,887,710**
EXPENSES	
Residential Programs	$35,791,756
Non-Residential Programs	$46,656,940
Environmental and Economic Research & Development Program (EERD)	$110,000
Rural Programs (includes propane initiative)	$6,305,112
Evaluation	$4,609,292
Other Program Support[2]	$2,148,323
TOTAL EXPENSES	**$95,621,423**
Carry-Over Funds[3]	$8,427,480
Focus Contractual Obligations[4]	$18,640,010

[1] Taken from the SEERA *Expense Report, Expenses through December 31, 2020.*
[2] Includes Fiscal Agent; Compliance Agent; Commission; SEERA; consulting services; software; SPECTRUM development and maintenance; bank fees and depreciation.
[3] Carry-Over funds remaining at the end of the contract period were obligated to programs in the 2021 and 2022 calendar year.
[4] Contractual Obligations refer to contracts with customers for the receipt of incentives when a project is installed/completed. Large projects can take up to 16 months from start to finish and therefore span one or more calendar years. This amount is taken from SPECTRUM.

During Quad III, the Commission established specific budget set-asides for Renewable programs and the Rural program. As a result, the 2022 budget breakout by line-item is shown in Table 8 below.

Table 8 – Focus 2022 Budget by Line-Item

Program	Budget
Core Residential and Business Efficiency Programs	$75,797,055
Renewable Programs	$5,500,000
Rural Programs	$8,500,000
Program Administrator Budget	$7,162,200
Environmental & Economic Research & Development	$100,000
Contracts for Required and/or Support Services*	$6,500,000
TOTAL	**$103,559,255**[+]

*Evaluation, Fiscal Agent, Compliance Agent, Database, PSC Staff Allocation
[+] Total Includes $3.5 million in Quad II carryover which the Commission allocated for Rural Programs

During 2019, prior to the start of the COVID-19 pandemic, demand for Focus programs was extremely high due to several factors including a strong pipeline of industrial projects that were approved in 2017 and 2018, but not completed until 2019, and higher than typical demand for the Small Business and Multifamily Programs. APTIM took several steps during 2019 in an effort to slow demand including: eliminating a three-year rolling average that had been used for large industrial projects; lowering the project cap amount; and lowering the annual customer cap to $400,000. In addition, when planning for 2020, the popular Appliance Recycling program was discontinued in part due to budget constraints. The pandemic has slowed demand in 2020 and 2021 due to supply disruptions, labor shortages, and economic uncertainty. However, these issues are expected to return closer to previous levels during Quad IV, and Focus could again experience high demand requiring adjustments to program offerings and incentive amounts to manage its fixed budget.

E. Current Focus Income-Qualified Programs

Since 1999 Wisconsin Act 9 created two distinct programs, it has been a deliberate strategy for Focus to offer a set of programs targeted at customers that do not qualify for the DOA Weatherization program but still face significant income limitations which makes weatherizing their homes difficult. By defining the eligibility criteria, Focus and DOA have avoided confusing customers and market providers while making the best use of finite resources by not duplicating efforts. Another important difference between the DOA Weatherization Program and the programs operated by Focus is that the Focus programs do not pay for 100 percent of the costs, due to cost-effectiveness requirements.

The name and program design of these Focus "income-qualified" programs have changed over time, but they all have targeted customers at the 60 to 80 percent of SMI. Currently, there

are three different programs each with a different delivery path. One program uses the Trade Ally network for delivery, is referred to as Tier 2, and offers higher incentives for air sealing; insulation; and heating and cooling equipment. This program requires verifying a customer's income in order to be eligible.

Two other program offerings, described below, are intended to make it easier for income-qualified customers to participate, and therefore, do not require an income verification step. So while Focus is "targeting" customers at the 60 to 80 percent of SMI, it is most likely reaching customers at 60 percent or below SMI as well, thereby complimenting the DOA weatherization programs without duplicating efforts. This also means that estimates for Focus dollars spent on income-qualified and low-income customers are most likely lower than what is actually being spent.

The first of these programs started in 2018, when Focus began a pilot partnership with Second Harvest Food banks to distribute 10,000 4-packs of LED bulbs. These efforts were halted in 2019 due to budget constraints, but were renewed and expanded in 2020. The program implementer issued an RFP to identify manufacturer partners to support food banks which resulted in three Memorandums of Understanding (MOUs) being signed with Greenlite, TechniArt, and Cree. In 2021, the Foodbank program continued with Greenlite and TechniArt working with food banks including Second Harvest, Feeding America, and Channel One Regional to serve over 800 individual food pantry locations across the state. In mid-2021, this effort was expanded to include nonprofits, identified by utility partners. Chosen nonprofits were researched by the program to ensure they served income-qualified populations, with some participants being the Salvation Army Dane County, the Urban League, and Centro Hispano. For example, MGE worked with African and Hispanic Community Festivals as well as smaller

events in disadvantaged communities. All LED bulbs provided through the food bank and nonprofit paths were free to the customer and ENERGY STAR certified.

The second program offering intended to make participation easier began in 2019 when Focus began working with dollar discount and thrift stores based on results from the 2018 impact evaluation which suggested Focus shift to markets or areas with a higher percentage of renters and multifamily households.[59] As a result, dollar discount stores were targeted to ensure customers throughout Wisconsin have access to reduced cost LED bulbs. Many rural communities have a dollar discount store and many urban areas have these stores or thrift stores in several neighborhoods. The dollar discount and thrift store effort remained mostly unchanged in 2021. The primary businesses participating in this path are Dollar Tree (which includes Family Dollar), Goodwill, and Habitat for Humanity. Market research on residential lighting performed by the Focus evaluator specifically identified thrift and dollar store distribution channels as serving primarily income-qualified customers.

To better track efforts in 2021, a new income-qualified offering was created that combined the dollar discount and thrift store and food bank measures, both of which were a continuation of previous years' efforts in one form or another. Income-qualified specific retail lighting measures were created to accurately attribute higher life-cycle savings to Focus, helping offset increased cost of acquisition to serve this customer base.[60]

[59] Focus on Energy Calendar Year 2018 Evaluation Report: Volume I

[60] The Focus program receives higher life cycle attribution for the income-qualified retail lighting measures. Market research performed by the Focus evaluator using Consortium for Retail Energy Efficiency Data (CREED) shows lower market shares of LED in stores primarily serving low-income areas (e.g., thrift stores and dollar stores). Therefore, the baseline light bulb sold in these distribution channels are more likely to be inefficient compared to other retail distribution channels and greater life cycle savings are applied accordingly. .

F. Focus Incentive Expenditures on Income-Qualified Programs

In 2021, incentive expenditures for the Tier 2 and other Income-Qualified programs under Direct to Customer Solutions represented 14 percent of total incentive expenditures in the Residential Portfolio (core efficiency programs, rural, and renewables.) The breakdown by program is shown in Table 9 below.

Table 9. 2021 Total Residential Incentives and Income-Qualified Incentives by Program

Program	Total Incentive Expenditures	Income-Qualified Incentive Expenditures	% of Total
Trade Ally Solutions – Tier 2	$6,243,874	$870,300	14%
Direct to Customer	$10,635,827*	$2,025,733	19%
Other Residential Incentives+	$3,894,191	-	-
Total Residential Portfolio	**$20,773,892**	**$2,896,033**	**14%**

**Estimated final incentive spend*
+Includes other core efficiency programs, rural, and renewables incentive expenditures

It is important to note that 14 percent is a low-end estimate of income-qualified and low-income customers served by Focus. This is because the numbers do not account for participation by income-qualified or low-income customers that ordered a free energy pack from Focus, purchased products from the Focus Online Marketplace, or purchased LEDs from participating retailers (like the Home Depot). These programs do not ask for income information, therefore there is no precise way to estimate participation by income-qualified or low-income customers.

In 2022, Focus is offering the same Tier 2 and income-qualified programs and is planning to offer two new programs: 1) the Affordable Housing Solar PV Pilot,[61] with a budget of

[61] APTIM began planning for this pilot during the fourth quarter for 2021. Focus will work with organizations such as: Habitat for Humanity, Urban League and Housing Authorities to add solar to new homes constructed for income-qualified residents. It is expected that 60-80 projects will be completed in 2022.

$797,628; and 2) an income-qualified community pilot with a budget of $550,000.[62] If incentive spend for 2022 is in the same range as it was in 2021 for all programs listed above plus the pilots, the total incentive spend would be approximately 19 percent of total incentive expenditures in the Residential Portfolio.

G. Utility Voluntary Low-Income Qualified Programs

Currently, three IOUs have requested and received Commission approval to operate voluntary efficiency programs for Income-Qualified customers including: We Energies, WPSC, and WP&L.[63]

We Energies operates the Residential Assistance Program (RAP) which provides bonus incentives to income-qualified customers participating in Focus' Home Performance with ENERGY STAR Program, which provides weatherization services such as insulation and air sealing and supports installation of efficient heating and cooling devices such as furnaces. RAP provides funding to cover all remaining project costs, beyond the Focus incentives, that would otherwise be paid by the participant, up to a cap of $8,000 per project. RAP also pays the full costs of other efficient and safety measures identified during inspection of participant homes, including leak repairs, carbon monoxide detectors, and LED light bulbs. WPSC also began operating its Residential Assistance Program (RAP) in 2020 and is modeled after the We Energies Program.

[62] Details and program design are being developed at this time but is expected to use energy burden maps for targeting communities to participate.

[63] Northern States Power Company- Wisconsin offers the *Residential Community Conservation Program* voluntary program as well. This program is designed to provide additional incentives to NSPW's residential customers participating in Focus' Home Performance with Energy Star program, both Tier 1 and Tier 2. The bonus incentive was equal to 60% of Focus on Energy's incentive to eligible residential customers and the combined total incentive (from Focus on Energy and NSPW) could not exceed 90% of total project costs. However, Tier 1 and Tier 2 customer participation is not broken out so is not included in total dollar amounts.

Since 2018, WP&L has offered the Enhanced Low-Income Weatherization Program (ELIWP). This program is also modeled on We Energies RAP program and provides bonus incentives to income-qualified customers participating in Focus' Home Performance with ENERGY STAR Program, at the Tier 2 level which serves customers at or below 80 percent of SMI level. The program provides weatherization services such as insulation and air sealing as well as supporting installation of efficient heating and cooling devices such as furnaces. ELIWP provides funding to cover all remaining project costs, beyond the Focus incentives, that would otherwise be paid by the participant, up to a cap of $8,000 per project. ELIWP also pays for the full costs of other efficient and safety measures identified during inspection of participant homes, including leak repairs, carbon monoxide detectors, and LED light bulbs. There are no formal savings goals but the program targets customers with especially high natural gas usage, in order to prioritize customers who may be able to achieve the largest energy savings benefits. The goal is to reduce gas usage by an average of 200 therms per year per household. The program is designed to serve 50 customers per year which makes the annual savings goal about 10,000 therms annually. The 2020 program evaluation indicates that the program served 50 customers. (PSC REF#: 414799.)

The combined budgets for the three 2020 voluntary programs for Income Qualified customers totaled $1.6 million. Table 10 below shows the budget and goals by utility.

Table 10. Utility Voluntary Income-Qualified Programs, Budget and Goals

Utility	Annual Budget	Annual Goal
We Energies RAP	$925,261	150 Homes
WPS RAP	$300,000	45 Homes
WP&L ELIWP	$410,00	50 Homes
TOTAL	**$1,635,261**	**245 Homes**

H. Stakeholder Input

Stakeholders have provided input and recommendations on ways Focus could set goals for income-qualified programs as part of Commission dockets and other initiatives mentioned in the introduction.

During the Roadmap Docket process, a number of commenters separately expressed interest in increasing Focus' emphasis on supporting customer equity and affordability. Commenters noted that Focus does not currently set formal goals related to service for customers facing affordability challenges, and suggested that exploring formal goals and adjustments to program offerings could enhance program impacts for those customers. (PSC REF#: 411501). One approach originally offered by the WEDTI report was to allocate a specified percentage of the Focus residential budget to low-income programs, in order to reserve adequate minimum funding levels for those programs. (PSC REF#: 406723 at 24.)

These comments were echoed in some responses to the Quadrennial Planning Process IV Scoping Memorandum as well. For example, CUB recommended that the Commission's examination of low-income policy issues within Focus be structured to also consider broader equity, accessibility, and affordability and whether specific goals or key performance indicators can or should be developed around those principles for Focus as a whole. (PSC REF#: 426104.)

Rocky Mountain Institute (PSC REF#: 426103) and Slipstream (PSC REF#: 426098) mentioned that in order to reach a broader set of customers and better leverage Focus' resources, the Commission should consider how it can stack funding with other state programs to provide comprehensive retrofit services for low-to-moderate income residents. These efforts would include establishing goals, metrics, and reporting to achieve greater equity in participation, benefits delivery, and transparency regarding results.

While others commented on reducing the energy burden for vulnerable populations, they also mentioned that the Commission would have to balance this policy objective with others such as setting energy use reduction goals for Focus, while maintaining cost-effectiveness with the current budget. (PSC REF#: 426099) (PSC REF#: 426094).

Finally, the WUA mentioned its members' long history of working with stakeholders to make targeted programs available to their low-income customers. They stated that these members believe that such programs remain important to provide much-needed resources to low-income customers; however, WUA members continue to believe a balance needs to be achieved so that all interested customers can receive the benefits of Focus on Energy programs that they fund through their energy bills. (PSC REF#: 426016).

I. Other Commission Initiatives on Affordability

The Commission has taken multiple recent affordability-related actions that provide reference points for further work on affordability-related considerations, including several related to managing customer costs associated with the transition to zero-carbon generation. Recent example include:

- In its Financing Order of November 17, 2020, (PSC REF#: 400098), the Commission approved Wisconsin Electric Power Company's application use environmental trust bonds to finance environmental costs associated with the retired Pleasant Prairie coal plant, in order to reduce the associated costs to customers by an estimated $40 million.

- In its Order of June 8, 2021, (PSC REF#: 413323), the Commission allocated $500,000 of State Energy Program funds for the Office of Energy Innovation to develop and implement Wisconsin's Inclusive Solar Community Offering (WISCO), a new program that partners with two Wisconsin electric cooperatives (Vernon and Pierce Pepin) to implement two community solar installations with rates designed to serve low-to-moderate income households.

- In February 2021, the Commission announced that it would begin requiring investor-owned utilities with at least 15,000 customers to file as part of their

annual reports, energy burden analyses, which assess the cost of utility bills as a percentage of household income for each county in the utility's service territory. The first set of energy burden analyses were submitted in mid-2021 as part of utilities' 2020 annual reports.

- The Commission has collected a broad range of affordability-related information in docket 5-UI-120, its investigation to address safe, reliable, and affordable access to utility services during the COVID-19 pandemic. The Commission required regular reporting from utilities related to customer arrears, deferred payment agreements and terms, and utilities' plans for communicating with customers.

- To build upon these starting points, the Commission ordered staff in the Roadmap docket to conduct further analysis on customer affordability issues. (PSC REF#: 421399 at 11-12.) In December 2021, the Commission was awarded technical assistance from the U.S. Department of Energy's national laboratories,[64] which it will use to help address the order point by pursuing improved collection and analysis of energy burden data, and identifying further policy and program options for assisting customers with affordability challenges.

As further work progresses on these initiatives, staff and the Commission can consider any potential opportunities for alignment and coordination with Focus' own efforts.

J. Balancing Equity with Other Program Goals

When determining what the Focus program should do in the income-qualified space it is important to recognize that historically, energy efficiency programs like Focus have gauged success on achieving energy savings goals and resulting emissions reductions in a cost-effective manner. TRC, like other quantitative metrics, requires collection of various quantitative data inputs to complete the analysis. While the cost-benefit of programs is important and helps to ensure appropriate use of customer dollars, it does not always take into consideration the qualitative benefits of implementing programs that focus on equity.

[64] "DOE Announces Technical Assistance for State Regulators to Address Challenges Related to a Transforming Electric Grid." December 21, 2021. https://www.energy.gov/eere/articles/doe-announces-technical-assistance-state-utility-regulators-address-challenges.

Generally, programs designed for resource acquisition are intentionally optimized to spend the least amount possible to gain the most value. This is usually realized in the short-term, such as first-year energy savings. However, income-qualified customers tend to be more expensive to serve because they cannot afford the upfront costs necessary to purchase more efficient equipment. This results in the program having to offer higher incentives (like Tier 2) in order for these customers to participate. There are also additional administrative costs associated with reviewing and approving customer eligibility for Income-Qualified programs, developing targeted marketing materials and implementing alternative delivery mechanisms. Therefore, resource acquisition programs may systematically underserve income-qualified communities unless they are specifically designed with equity at the forefront. Income-qualified programs can remedy this by prioritizing the unique needs and barriers of income-qualified customers.

While resource acquisition and equity-focused programs can coexist, there is inherent tension requiring clear strategic direction and intentional program design. California is on a path to address this tension. In a recent filing, the California Public Utility Commission (CPUC) stated, "Overall, we find it important to reduce the conflict between cost effectiveness and other equally or more important policy objectives, such as equity and support for the energy efficiency market. Furthermore, we acknowledge that while a TRC ratio appropriately compares the benefits and costs of a program targeted primarily at delivering grid benefits, it may not be the most appropriate tool for judging whether energy efficiency funding was prudently spent on programs which support equity or market support goals."[65]

[65] https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M378/K256/378256443.PDF

K. Developing Key Performance Indicators for Income-Qualified Programs

Historically with Focus and other energy efficiency programs across the country, priorities have been defined by a percent of budget or a specific dollar amount devoted to a particular priority. The current $5.5 million for renewables and $8.5 million for rural programs are two examples. However, managing these specific set-asides can take considerable time and therefore add to administrative costs, particularly if the decisions on dollar amounts are in a Commission Order. Budget carve-outs for programs can also have interactive effects which are difficult to predict. For example, the interplay between Core energy efficiency and Rural Programs has proven to be somewhat complex. Increased marketing of rural offerings and participation in rural offerings has led to increased uptake of rural Core offerings. The Rural Programs budget is a minimum of $8.1 million for each year of the quadrennium. Of this, the Industrial portion specifies funding only for staffing grants and a Large Customer request for proposals. All rural zip code incentives for measures installed at customer sites are paid from the Core budget. In 2019, industrial projects in rural eligible zip codes accounted for 38 percent of the total savings from all statewide industrial customers and 40 percent of the statewide industrial incentive spend. Of the rural industrial savings, 17 percent came through the rural program; the remaining 83 percent was funded with incentives from the Core budget. While increased participation accelerated energy efficiency project implementation, it also increases administrative complexity when there is more than one budget category involved. (PSC REF#: 386917). Also, on the flip-side, if demand for the programs with budget set-asides does not materialize, dollars are unavailable for programs with high demand.

In order to reduce administrative complexity, a shift to setting Key Performance Indicators (KPIs) may be preferred. With this method, KPIs are set to reflect program priorities

making the Program Administrator accountable to determine the budget amount and operational strategy necessary to achieve the KPIs.

Other efficiency programs are establishing metrics and KPIs focused on equity to complement more traditional goals focused on resource acquisition, such as MWh savings. Equity measurement frameworks can include a mix of quantitative goals and qualitative approaches depending on priorities. Equity measurements can be grouped into categories, such as:[66]

- **Participation:** This category assesses how customers are engaging with the product, program, or service. How well does the program remove participation barriers such as health and safety or split incentives?
- **Accessibility:** This category assesses how effective the program is at identifying and removing barriers prohibiting income-qualified customers from fully engaging in the product, program or service. Are program materials in the languages spoken in the community? Are those with different abilities able to engage with the program? Are program resources only available during working hours?
- **Impact:** This category assesses whether the impacts of the program are equitable by analyzing the share of impacts for a targeted group compared to the share of impacts for the total program-eligible population. If targeted program impacts represent less than the target population's share relative to the total population, the targeted group is likely underserved. Energy savings and program spending are common impact metrics.
- **Community Engagement:** This category assesses how well the organization is engaging with income-qualified customers to involve them in all aspects of decision-making and participation. How well did the program team engage with this community during the design, delivery, and evaluation stages of the program?
- **Capacity:** This category assesses how well the organization is prepared to serve income - qualified customers. Does the organization have sufficient internal knowledge, skills, and resources to address needs?

[66] Categories provided by Encolor, a DEI consulting firm, via the Program Administrator.

For example, the Energy Trust of Oregon used internal data and its DEI Data Baseline Analysis to develop most of their ten DEI goals and targets which are both qualitative and quantitative. Two examples for its KPIs are:

1. Increase customer participation in renewable energy programs for all underserved populations by 20% by the end of 2020.

2. Increase customer participation in energy-efficiency programs for all underserved populations by 20% by the end of 2020, with strategies and sub-goals for residential, commercial, and industrial sectors.[67]

Another example is EmPOWER Maryland's energy efficiency programs. A stakeholder working group is currently collaborating on development of a proposed set of equity metrics for the program and has developed several consensus recommendations for equity metrics to adopt for the program beginning in 2024.[68] A few examples include:

1. GHG abatement attributable to the LMI community - reported as part of EmPOWER Maryland's overarching goals.

2. Percent of LMI eligible customer participation – reported metric using a combination of actual data along with samples and statistical data or information from purchased data bases if necessary.

In programs that have historically underserved some communities, making visible progress can take time and it may not happen within the program cycle in which success is typically determined. Therefore, developing KPI's that assess "leading and lagging indicators" can be an effective way to assess incremental progress more frequently. These indicators are defined here as follows:

- Leading indicators are predictive and can help assess if the program activities are leading towards the desired results.

[67] Energy Trust of Oregon. *2021 Diversity, Equity and Inclusion Operations Plan.* Accessed from: https://www.energytrust.org/wp-content/uploads/2021/03/2021-DEI-Operations-Plan.pdf
[68] MD Future Programming Work Group, Consensus Proposal on Equity Metrics, Dec 14, 2021

- Lagging indicators are how programs are typically assessed, using annual impact evaluations, and measuring what has been accomplished or produced.[69]

The advantage of having a combination of leading and lagging indicators is the flexibility and focused direction this approach could provide to implementers. Flexibility in the ability to add and remove leading indicators based on data collected in the field. As more is learned about the wants and needs of the customers being served, metrics can be adjusted to better serve them. It also helps the programs to more systematically focus on what really drives change instead of measuring outputs that have little value to long term success.

Commission Alternatives – Affordability and Income-Qualified Programs

These alternatives seek the Commission's direction on how it wishes to proceed on the topic of Focus' role in the delivery of affordability or income-qualified programs. Staff also list optional Quad IV objectives, presented as sub-alternatives, for the Commission to consider in further clarifying its priorities under the decision alternatives.

Alternative One is appropriate if the Commission wants Focus to continue offering programs in the income-qualified area, but wants the Program Administrator to explore offering more programs in the 60 percent of SMI that the DOA Weatherization program currently operates. Such programs would have to be coordinated with DOA and the contractors working on weatherization programs in order to avoid confusion in the marketplace. The issue of cost-effectiveness tests would also have to be considered in Phase II due to the higher cost of acquisition to achieve energy savings associated with the delivery of these programs.

[69] Parker, Q., Blackwell, J. (2021). *Building Equity into your Program Design*. Association of Energy Services Professionals. https://www.aesp.org/page/AESPTraining

Alternative Two is appropriate if the Commission wants Focus to continue to offer programs in the income-qualified area, and recognizes DOA's role in the low-income weatherization space but wants the Program Administrator and DOA to explore areas where Focus may fill in gaps. For example, in the past, Focus has agreed to fund a certain number of emergency furnace replacements when the wait-time is too long for the low-income customers served by DOA. Depending on the programs offered and the amount of Focus budget devoted to these programs, certain cost-effectiveness considerations may be relevant given the higher cost of acquisition to achieve energy savings associated with the delivery of these programs.

Alternative Three is appropriate if the Commission wants Focus to continue to offer programs in the income-qualified area but wants Focus to explore community-based pilots in targeted areas of the state. The targeted areas could be selected by determining geographic locations (rural, urban or tribal) with high-energy burden. Partners in these pilots could include key community-based organizations working with targeted customers, utility partners, local contractors and local governments. These pilots would result in energy savings with the added benefits of increased sustainability and resiliency. The Program Administrator would report back to the Commission on the details of viable pilot opportunities identified.

Alternative Four is appropriate if the Commission wants Focus to continue to offer programs in the income-qualified area. Alternative Five is appropriate if the Commission wants Focus to take a different approach or a different combination of approaches.

Alternative One: The Focus program should continue to offer income-qualified programs but explore more offerings that cross into the 60 percent of SMI currently operated by DOA.

Alternative Two: The Focus program should continue to offer income-qualified programs but coordinate with the DOA weatherization programs to further fill potential gaps in its low-income offerings.

Alternative Three: The Focus program should continue to offer income-qualified programs and should additionally explore developing a community based pilot(s) in one or more targeted communities.

Alternative Four: The Focus program should continue to offer income-qualified programs at the 60 to 80 percent SMI.

Alternative Five: The Focus program should take steps pursuant to the Commission's discussion.

The Commission may select any or all of the sub-alternative below to accompany the Alternatives listed above. Alternatively, the Commission may decide to not select any of the sub-alternatives.

Sub-Alternative A: Direct the Focus Program Administrator to convene a stakeholder group that includes community based organizations that work with marginalized communities to gather input on effective methods to reduce barriers in order to effectively reach these customers.

Sub-Alternative B: Direct the Focus Program Administrator to develop KPIs for income-qualified programs for the Commission's consideration in Phase III of Quad Planning.

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Key Background Documents

Attachment 1: Summary of 5-FE-104 Focus on Energy Quadrennial Planning Process IV, Phase I Decisions **(DL: 1857759)**

Attachment 1: Summary of 5-FE-104 Focus on Energy Quadrennial Planning Process IV, Phase I Decisions

Issue	Decision	Other Decision(s) in Alignment
Alignment with Decarbonization Goals	Alt. 1 (most accelerated option): Expand and enhance Focus' role in cost-effectively aligning with the state's carbon goal	Electrification, Fuel Switching, Alt. 1 Electrification, Fuel Switching, Alt. 2
		Electrification, Emphasis, Alt. 1 Electrification, Emphasis, Alt. 2
	Alt. 2: Transition Focus toward intentional alignment with the state's carbon emissions goal	Electrification, Fuel Switching, Alt. 1 Electrification, Fuel Switching, Alt. 2
		Electrification, Emphasis, Alt. 1 Electrification, Emphasis Alt. 2 Electrification, Emphasis, Alt. 3
	Alt. 3 (status quo): Focus continues to position the state to meet its carbon goal by emphasizing energy savings and tracking carbon reductions	Electrification, Fuel Switching, Alt. 1 Electrification, Fuel Switching, Alt. 2
		Electrification, Emphasis, Alt. 3 Electrification, Emphasis, Alt. 4
	Alt. 4 (least accelerated option): Focus does not play a defined role in aligning with the state's carbon goal	Electrification, Fuel Switching, Alt. 1 Electrification, Fuel Switching, Alt. 2
		Electrification, Emphasis, Alt. 4
Electrification, Fuel Switching from Unregulated Fuels	Alt. 1: Allow Focus to directly incentivize and support fuel switching from unregulated fuels	Decarbonization, Alt. 1 Decarbonization, Alt. 2 Decarbonization, Alt. 3
		Electrification, Emphasis, Alt. 1 Electrification, Emphasis, Alt. 2
	Alt. 2 (status quo): Do not allow Focus to claim savings and other benefits from fuel switching from unregulated fuels through its own programs	Decarbonization, Alt. 1 Decarbonization, Alt. 2 Decarbonization, Alt. 3
		Electrification, Emphasis, Alt. 1 Electrification, Emphasis, Alt. 2
Electrification, Emphasis	Alt. 1 (most accelerated option): Focus shall implement beneficial electrification offerings in Quad IV and achieve measurable results	Decarbonization, Alt. 1 Decarbonization, Alt. 2
		Electrification, Fuel Switching, Alt. 1

Issue	Decision	Other Decision(s) in Alignment
		Electrification, Fuel Switching, Alt. 2
	Alt. 2: Transition Focus toward emphasis on beneficial electrification; perform research, planning, pilots and stakeholder outreach	Decarbonization, Alt. 1 Decarbonization, Alt. 2
		Electrification, Fuel Switching, Alt. 1 Electrification, Fuel Switching, Alt. 2
	Alt. 3: Focus shall assess its role in beneficial electrification by performing limited research in Quad IV	Decarbonization, Alt. 3
		Electrification, Fuel Switching, Alt. 1 Electrification, Fuel Switching, Alt. 2
	Alt. 4: Focus shall only engage in beneficial electrification if it supports other Commission goals	Decarbonization, Alt. 3 Decarbonization, Alt. 4
		Electrification, Fuel Switching, Alt. 1 Electrification, Fuel Switching, Alt. 2
Utility Voluntary Programs	Alt. 1: Establish a formal collaboration framework between Focus and Utilities following guidance in memo	Collaboration w/Utility DR, Alt. 1 Collaboration w/Utility DR, Alt. 2
	Alt. 2: Establish a formal collaboration framework with modifications	Collaboration w/Utility DR, Alt. 1 Collaboration w/Utility DR, Alt. 2
	Alt. 3: Do not establish a formal collaboration framework; direct Focus to develop and maintain a menu of voluntary program options	Collaboration w/Utility DR, Alt. 1 Collaboration w/Utility DR, Alt. 2
Collaboration with Utility DR Programs	Alt. 1: Focus shall develop a process framework to support enhanced collaboration	Utility Voluntary Programs, Alt. 1 Utility Voluntary Programs, Alt. 2
	Alt. 2 (status quo): Focus should maintain its current approach to supporting utility demand response programs	Utility Voluntary Programs, Alt. 3

Issue	Decision	Other Decision(s) in Alignment
Affordability - Low-Income – Income-Qualified Programs	Alt. 1: Focus should explore offerings for customers below 60 percent SMI	Decision alternatives for other Phase I issues do not conflict with the decision alternatives for this issue. Decisions on this issue will directly align with multiple decisions in Phase II of Quadrennial Planning Process IV.
	Alt. 2: Focus should continue its income-qualified programs and coordinate with DOA to fill gaps in its low-income offerings	
	Alt. 3: Focus shall explore developing community based pilots in one or more targeted communities	
	Alt. 4 (status quo): Focus shall continue to offer income-qualified programs at the 60 to 80 percent SMI	

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