



Public Service Commission Report to the Legislature

**Energy Efficiency and Renewable Resource Program
Activities in Wisconsin**

Calendar Year 2022

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WISCONSIN UTILITIES' ENERGY EFFICIENCY AND RENEWABLE RESOURCES PROGRAM SUMMARY (FOCUS ON ENERGY)

Focus on Energy (Focus) works with eligible Wisconsin residents and businesses to install cost-effective energy efficiency and renewable energy projects. Focus technical assistance and financial incentives help to implement projects that otherwise would not be completed, or to complete projects sooner than scheduled. Focus efforts help Wisconsin residents and businesses control the state's growing demand for electricity and natural gas, manage rising energy costs, promote in-state economic development, and protect our environment.

Additional information regarding Focus can be found at www.focusonenergy.com

HISTORY

Originally formed by the Wisconsin Legislature in 1999 and funded by the Utility Public Benefits fund, Focus delivers energy efficiency and renewable energy services for [residential](#) and [business](#) customers throughout the state. In 2001, the Department of Administration rolled out the *Focus on Energy Program* statewide. In partnership with consumers, utilities, businesses, non-profit organizations, and all government levels, the programs help residents and businesses make smart energy choices and reduce energy waste.

Under [2005 Wisconsin Act 141](#) (Act 141), oversight of Focus was transferred to the Public Service Commission (Commission). Act 141 requires investor-owned electric and natural gas utilities to spend 1.2 percent of their annual gross operating revenues on energy efficiency and renewable resource programs. The utilities formed a non-profit board called the Statewide Energy Efficiency and Renewables Administration (SEERA) to fulfill its obligations under Act 141. Act 141 also requires municipal utilities and retail electric cooperatives to collect an average of \$8 per meter to fund energy efficiency programs. Municipal utilities and retail electric cooperatives can collect the dollars and participate in the Focus program or can elect to operate their own Commitment to Community programs.

Per Act 141, Focus aims to:

- Reduce the amount of energy used per unit of production in Wisconsin, while improving energy reliability;
- Enhance economic development and make Wisconsin firms more competitive;
- Reduce the environmental impacts of energy use;
- Expand the ability of markets to deliver energy efficient and renewable energy goods and services to consumers and businesses; and,
- Deliver quantified financial returns on public investments in energy improvements.

2019-2022 QUADRENNIAL PERIOD RESULTS

An award-winning, nationally-recognized program, Focus works with both public and private sectors and encourages Wisconsin residents and businesses to make informed energy decisions. By providing incentives, technical resources, and information, Focus aids residents in lowering their cost of living and businesses in improving their bottom lines. This drives millions of dollars in energy savings, and helps to improve our state’s environmental health and preserve our natural resources. Highlights from the 2019-2022 quadrennial period include:

- Focus generated \$4.44 for every dollar invested, including economic benefits.
- Residents and Business that participated in Focus will save \$3.5 billion on their energy bills over the lifetime of their installed measures.
- Energy savings from Focus participants will save \$296 million in health care costs for Wisconsin residents by reducing harmful particulate emissions from power plants.

Table 1 shows energy savings for each of the four years as well as total energy savings for the quadrennium. The 40 billion kilowatt-hours (kWh) and 1.3 billion therms in energy savings accounted for 29,241,524 tons of avoided carbon dioxide which is the equivalent of taking six million cars off the road for one year. Reduced savings in 2021 and 2022 reflected the persistent global impacts of the COVID-19 pandemic, including supply chain disruptions and workforce shortages, that in some cases have delayed project completion until subsequent years.

Table 1: Quadrennial Verified Gross Lifecycle Savings by Calendar Year

Year	kWh	kW	Therms	MMBtu
2019	11,692,416,671	100,481	390,237,486	78,918,274
2020	11,331,862,798	100,953	321,783,600	70,842,676
2021	9,354,784,626	92,157	344,702,531	66,388,778
2022	7,966,075,175	82,736	254,653,466	52,645,595
TOTAL	40,345,139,270	376,327	1,311,377,083	268,795,323

Figure 1 below shows the verified gross lifecycle savings achievement (2019-2022), compared to the Program Administrator’s (Aptim Government Solutions, LLC (APTIM)) goals.

Figure 1: Administrator’s Achievement of Four-Year (2019-2022) Verified Lifecycle Savings Goal



2022 FOCUS ENERGY SAVINGS – OVERALL PROGRAM RESULTS

Focus programs were restructured beginning in 2021 to better serve customers and improve administrative efficiencies, through three separate program delivery channels maintained for 2022:

- The residential channel serves single-family, individual multifamily units, and multifamily buildings consisting of one to three units.
- The nonresidential channel serves multifamily (common areas and buildings with four or more units), commercial, industrial, schools, government, and agribusiness customers.
- The midstream channel serves residential and nonresidential customers via distributors of eligible equipment.

These three channels are further broken out into Solutions and Offerings in Table 2 below.

Table 2: 2022 Focus Program Solutions and Offerings

Sector	Solution	Offering
Residential	Direct to Customer	*Online Market Place *Packs *Retail/*Rural Retail
	Trade Ally Solutions	*Heating and Cooling (Tier I & Tier II) *Air Sealing & Insulation *Renewable Energy, Residential Solar PV
	Pilots	*Save to Give *Trade Ally Solutions-Multifamily SEM
	New Construction	*Residential New Construction
Residential & Non-Residential	Midstream	*HVAC *Commercial Kitchen
Non-Residential	Business & Industry	*Agribusiness *Commercial and Industrial *Large Industrial
	Schools & Government	*Schools include K-12 Public & Private; Colleges & Universities Public & Private *Government includes Local, State, Federal and Tribes
	New Construction	*Design Assistance/Review *Prescriptive
	Trade Allies	*Renewable Energy, Non-Residential Solar PV

Some of the highlights for 2022 include:

- For every dollar invested in energy efficiency, Focus provided \$2.36 in benefits in avoided energy costs and reduced emissions; when economic benefits are added, the ratio increases to \$4.55 to 1.
- Customer satisfaction levels remained high. Across all Focus programs, customer satisfaction was measured at 9.5 on a 10-point scale.

Table 3: Verified Gross Lifecycle Energy Savings: January 1 - December 31, 2022

Portfolio	Participants	Verified Gross kWh*	Verified Gross kW*	Verified Gross Therms*	MMBtu	Benefit Cost Ratio
Non-Residential	3,902	5,444,218,647	51,148	161,671,468	34,742,821	2.93
Residential	961,836+	2,483,080,424	31,133	87,905,255	17,262,796	1.55
Midstream	1,649	38,776,105	455	5,076,743	639,978	1.38
FOCUS TOTAL	967,387	7,966,075,175	82,736	254,653,466	52,645,595	2.36

+ This number includes the 745,035 Retail Lighting and Appliance participants.

* Verified gross savings numbers are savings that have gone through an engineering review by evaluators to determine whether the reported gross savings were reasonable.

Expenditures

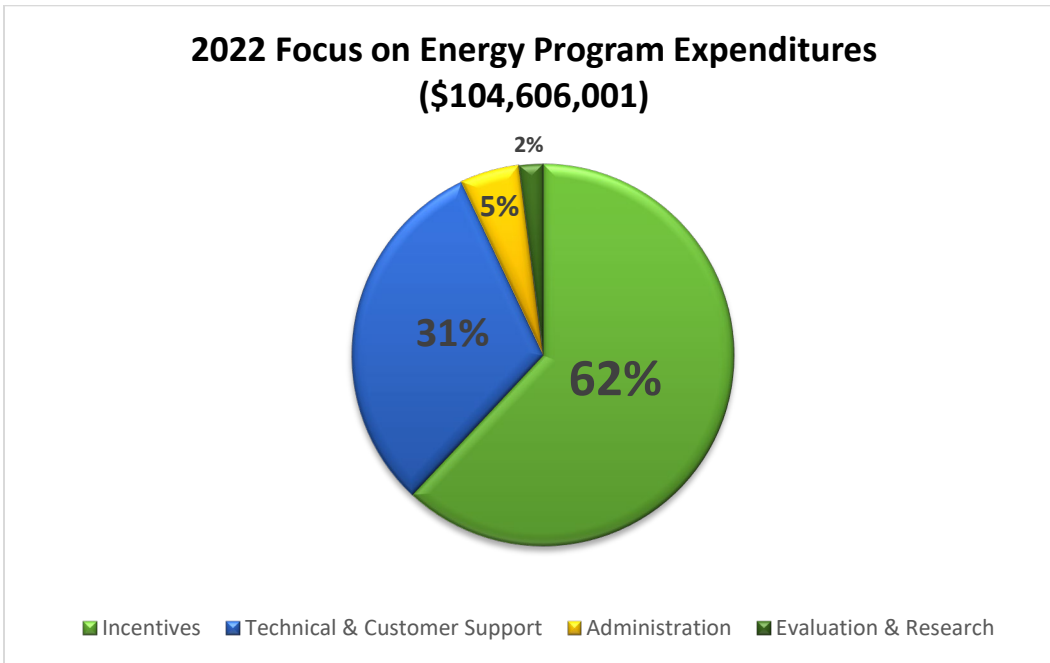
The four categories of Focus expenditures are defined as follows:

- **Administrative** costs are the costs not directly associated with a specific program activity but which are necessary to the development and administration of programs, including record keeping, payroll, accounting, auditing, billing, business management, budgeting and related activities, overhead allocation and other costs necessary to direct the organization of the program, but do not include program evaluation.
- **Technical & Customer Support** costs are those associated with project identification, engineering calculation & modeling, inspection of installed projects, trade ally contractor outreach, technical training, marketing and customer service.
- **Incentives** costs are cash incentives payable to Customers & Trade Allies and instant discounts received at point of purchase at participating retail locations.
- **Evaluation** costs are those associated with independently verifying program energy savings and supporting continuous program improvement through analysis of markets, technologies and program operations. **Research** costs are those associated with energy efficiency and renewables research and screening of new solutions through the Environmental & Economic Research & Development Program, Future Focus, and Pilot offerings.

Figure 2 below illustrates expenditures for the Focus program as a whole in 2022.¹

¹ The 2022 Incentives category includes a Commission-approved, \$12.0 million payment for the BCO biodigester project.

Figure 2: 2022 Focus on Energy Program Expenditures



Economic and Environmental Benefits from the Focus Program

Program cost-effectiveness remains high, even as Focus has ramped up higher-cost efforts to reach rural customers with new programs. The benefits from avoided energy costs and avoided emissions substantially exceeded the costs of program spending and participant project costs. The Focus program achieved \$2.36 in benefits for every \$1 in costs in 2022 from reduced energy costs and avoided emissions; when economic benefits are added, the ratio increases to \$4.55 to 1. Avoided emissions include:

- 6,241,182 tons of carbon dioxide;
- 3,003 tons of nitrogen oxide; and,
- 4,008 tons of sulfur dioxide.

Non-Residential (Business) Energy Efficiency Programs

All types of businesses, large and small, can benefit from the energy efficiency expertise provided by Focus staff. Focus works with eligible Wisconsin businesses to install cost-effective energy efficiency and renewable energy projects. Its efforts help businesses reduce energy waste, protect our environment, control the state's growing demand for electricity and natural gas, and promote in-state economic development. As mentioned above, Focus programs were reorganized in 2021 and Table 4 below shows the non-residential sector Solutions and Offerings for 2022:

Table 4: 2022 Focus Non-Residential Solutions and Offerings

Sector	Solution	Offering
Non-Residential	Business & Industry	*Agribusiness *Commercial and Industrial *Large Industrial
	Schools & Government	*Schools include K-12 Public & Private: Colleges & Universities Public & Private *Government includes Local, State, Federal and Tribes
	New Construction	*Design Assistance/Review *Prescriptive
	Trade Allies	*Renewable Energy, nonresidential Solar PV
	Midstream	*HVAC *Commercial Kitchen

These Focus programs help Wisconsin businesses by:

- Working with companies to identify and implement energy strategies;
- Providing businesses with financial incentives for implementing these strategies;
- Providing no-cost or low-cost energy tips;
- Offering training opportunities on energy efficiency; and
- Offering support for the preparation of applications for federal grants from the U.S. Department of Energy and ensuring that Focus incentives can be used as a funding match, if appropriate.

Table 5: 2022 Verified Gross Lifecycle Nonresidential Savings (with Renewables)

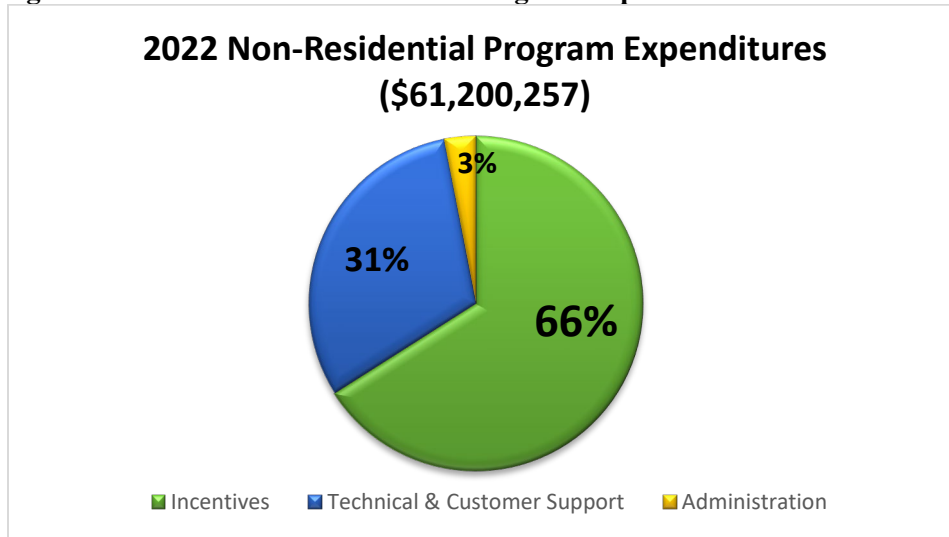
Portfolio	Participants	Verified Gross kWh	Verified Gross kW	Verified Gross Therms	MMBtus	B/C Ratio
Non-Residential	3,902	5,444,218,647	51,148	161,671,468	34,742,821	2.93

Expenditures

Figure 3 below illustrates expenditures for the 2022 Non-Residential programs².

² The Non-Residential 2022 Incentives category includes a Commission-approved, \$12.0 million payment for the BCO biodigester project.

Figure 3: 2022 Focus Non-Residential Program Expenditures



RESIDENTIAL ENERGY EFFICIENCY PROGRAMS

Focus offers a variety of Residential programs designed to help residents reduce energy waste and save money by providing information and incentives necessary to support smart energy choices. Wisconsin residents can participate directly by purchasing ENERGY STAR® qualified LED bulbs at retail stores, ordering a free energy-saving pack online, or purchasing energy-saving products at the Focus Online Marketplace. Some efficiency upgrades to existing homes – like a new furnace or air sealing and insulation - require professional assistance. Through the Trade Ally Solutions sector, Focus experts can offer insight, technical assistance, and financial incentives to get homeowners started. Table 6 below shows the 2022 Residential Solutions and Offerings.

Table 6: 2022 Focus Residential Solutions and Offerings

Sector	Solution	Offering
Residential	Direct to Customer	*Online Market Place *Packs *Retail/*Rural Retail
	Trade Ally Solutions	*Heating and Cooling (Tier I & Tier II) *Air Sealing & Insulation *Renewable Energy, Residential Solar PV
	Pilots	*Save to Give Trade Ally Solutions-Multifamily SEM
	New Construction	*Residential New Construction
	Midstream	*HVAC

Table 7: 2022 Verified Gross Lifecycle Residential Savings (with Renewables)

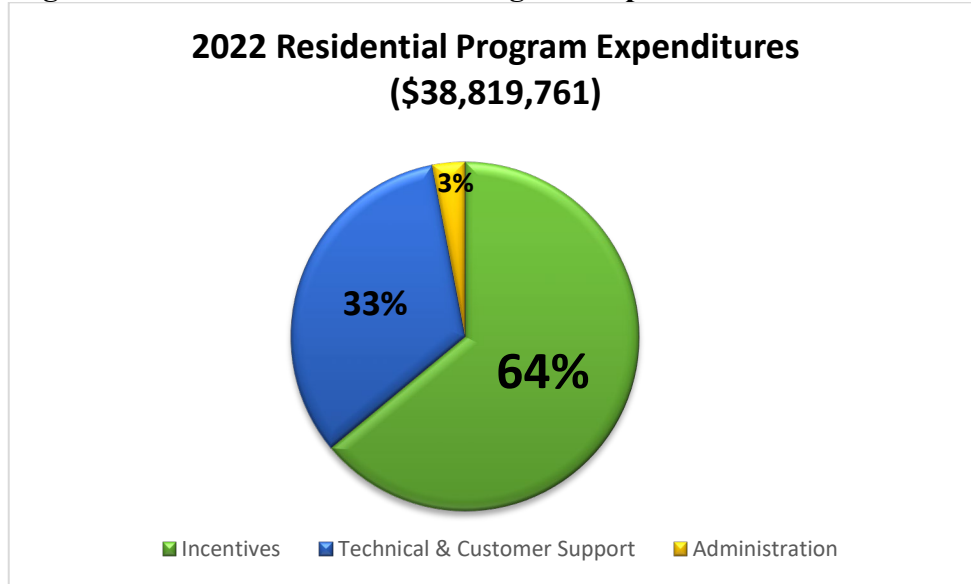
Portfolio	Participants+	Verified Gross kWh	Verified Gross kW*	Verified Gross Therms	MMBtu	Benefit/Cost Ratio
Residential Programs	961,836	2,483,080,424	31,133	87,905,255	17,262,796	1.55

+ This number includes the 745,035 Retail Lighting and Appliance participants.

Expenditures

Figure 4 below illustrates expenditures for the 2022 Focus Residential Program.

Figure 4: 2022 Focus Residential Program Expenditures



RENEWABLE PROGRAMS

Act 141 requires that the statewide program (Focus) includes renewable resource programs for Business and Residential end-use customers. For the Quadrennial III period, the Commission set the budget for renewables at \$5.5 million per year. For the Residential program in 2022, Focus offered financial rebates to offset solar installation costs for single family homes and multifamily buildings. The rebates included:

- Residential customers could receive up to \$500.
- Customers in specific rural ZIP Codes were eligible to receive up to a \$500 bonus in order to boost participation.
- Solar on multifamily buildings could receive up to \$50,000.

Focus offered solar PV rebates of up to \$50,000 for businesses and up to \$60,000 for agricultural producers. In addition, Focus offered rebates up to \$300,000 for renewable energy projects including: Biogas, Biomass, Solar Thermal, and Wind. Finally, Focus provided up to \$15,000 in financial rebates, not to exceed 50 percent of the cost of the study, for biogas and biomass feasibility studies. A feasibility study allows Wisconsin businesses, municipalities, farms, and other generators of waste or wastewater to assess the practicality of a proposed plan or project and make an informed decision on whether to proceed with implementation.

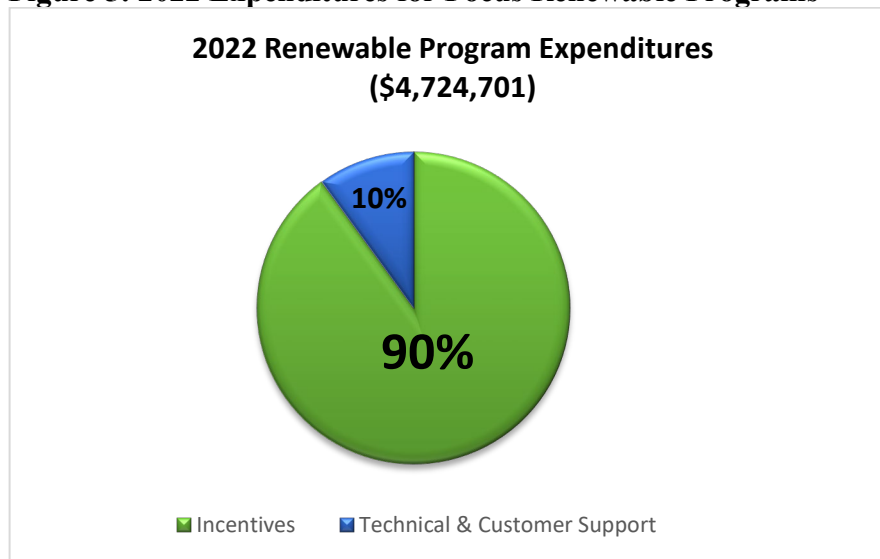
Table 8: 2022 Verified Gross Lifecycle Renewable Impacts

	Participants	Verified Gross kWh	Verified Gross kW	Verified Gross Therms	Benefit/Cost Ratio
Non-residential Renewables	156	457,675,208	6,124	0	1.36
Residential Renewables	2,300	627,662,303	8,493	0	
TOTAL	2,456	1,085,337,511	14,617	0	

Expenditures

Figure 5 below illustrates expenditures for the 2022 Focus Renewable Programs.

Figure 5: 2022 Expenditures for Focus Renewable Programs



RESEARCH PORTFOLIO

State statutes require that the statewide program include initiatives for research and development regarding the environmental and economic impacts of energy use in this state (196.374(2)(a)2.d.) Focus on Energy supports energy efficiency and renewable energy research through the Environmental & Economic Research and Development Program (EERD). EERD research projects allow Wisconsin to further its efforts towards reducing energy waste, costs, and environmental impacts. EERD projects are selected through a targeted competitive request for proposals (RFP) process. Focus on Energy also accepts research concepts or ideas on a rolling basis through the Future Focus process. In 2022, APTIM did not solicit ideas for new research topics for EERD in light of the ongoing Commission review of Focus policies through the third Quadrennial Planning Process. Solicitations will resume in future years, informed by Commission policies and priorities. Completed EERD and Future Focus projects can be found at [Future Focus Initiative](#) | [Focus on Energy](#).

FOCUS 2022 FINANCIAL SUMMARY

Administrative Costs

Table 9 below summarizes the administrative expenditures for the Focus program in 2022, which accounted for five percent of total spending.

Table 9: 2022 Focus Administrative Expenditures

2022 Administrative Costs	2022 Expenditures
Compliance Agent	\$304,324
SPECTRUM & General Software	\$1,013,327
Fiscal Agent (includes banking fees)	\$564,345
PSC Staff Oversight	\$408,434
APTIM Administrative Costs	\$1,890,052
Implementer Administrative Costs	\$864,810
TOTAL	\$5,045,292

Table 10 below, the Financial Sheet, summarizes revenue, expenditures and Focus obligations for 2022. Please note that the expenses for both the Residential and Business Programs include renewable resource program expenditures in addition to the energy efficiency program expenditures. In any given program year, not all dollars contributed are budgeted to programs in order to cover contractual obligations to be paid the following year.

2022 Focus Financial Sheet¹

Table 10: 2022 Focus Financial Sheet

REVENUE	
Investor-Owned Utilities	\$97,236,065
Municipal Electric Providers/Electric Cooperatives	\$3,413,403
TOTAL REVENUE	\$100,649,468
EXPENSES	
Residential Programs (without rural included)	\$36,686,350
Non-Residential Programs (without rural included)	\$55,559,220
Environmental and Economic Research and Development	-
Rural Programs	\$7,774,456
Evaluation	\$2,295,720
Other Program Support ²	\$2,290,255
TOTAL EXPENSES	\$104,606,001
Carry-Over Funds ³	\$9,913,986
Focus Contractual Obligations ⁴	\$18,389,615

¹ Taken from the SEERA *Expense Report, Expenses through December 31, 2022*.

² Includes Fiscal Agent; Compliance Agent; Commission; SEERA; consulting services; software; SPECTRUM development and maintenance; and bank fees.

³ Carry-Over funds remaining at the end of the contract period were obligated to core programs in the 2023 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 from one calendar year to the next. This amount is taken from SPECTRUM.

MUNICIPAL ELECTRIC AND RETAIL ELECTRIC COOPERATIVE REPORTING FOR COMMITMENT TO COMMUNITY PROGRAMS (CTC)

Act 141 requires municipal utilities and retail electric cooperatives to collect an annual average of \$8 per meter for energy efficiency programs. The monthly fee may not exceed 1.5 percent of the total of every other charge for which the customer or member is billed for that month or \$375 per month, whichever is less. Each municipal utility or retail electric cooperative can choose to send the dollars collected to the Focus fund or keep them and operate its own Commitment to Community (CTC) programs. Although Act 141 excludes load management from the definition of energy efficiency, it allows municipal utilities and retail electric cooperatives to include load management in their CTC program offerings.

Act 141 requires an electric cooperative or municipal utility operating its own CTC program to file a report that includes the following: 1) an accounting of fees charged to customers or members in the year, 2) expenditures on CTC programs, 3) a description of CTC programs established for the year, and 4) the effectiveness of the CTC programs in reducing demand for electricity by customers or members.

In 2022, 11 cooperatives, and all 81 municipal electric utilities sent their energy efficiency funds to Focus. CTC programs were operated by 13 retail electric cooperatives³. Reports for these cooperatives can be found on the PSC website <https://psc.wi.gov> and typing in docket number 5-GF-177 on the E-Services Portal. The energy savings estimates are calculated by the cooperatives and are not subject to the same evaluation procedures as the Focus savings are. As a result, Commission staff cannot verify these CTC energy savings claims and does not recommend adding these savings to Focus savings for the purposes of calculating statewide energy savings.

UTILITY VOLUNTARY PROGRAMS

Pursuant to Wis. Stat. § 196.374(2)(b)2., investor-owned utilities (IOUs) may, with Commission approval, fund and administer voluntary energy efficiency or renewable resource programs that are in addition to the statewide Focus programs. In 2022, four IOUs implemented voluntary programs: Northern States Power Company-Wisconsin (NSPW, also known as Xcel Energy), Wisconsin Electric Power Company (WEPCO, also known as We Energies), Wisconsin Public Service Corporation (WPSC), and Wisconsin Power and Light Company (WP&L, also known as Alliant Energy).

NORTHERN STATES POWER COMPANY-WISCONSIN (XCEL ENERGY)

Xcel offered four voluntary programs in 2022:

- **Residential Community Conservation Program.** This program was designed to provide additional incentives to Xcel's residential customers and to bring Focus programs

³ Barron Electric Cooperative, Bayfield Electric Cooperative, Central Wisconsin Electric Cooperative, Chippewa Valley Electric Cooperative, Dunn Electric Cooperative, East Central Energy Cooperative, Jackson Electric Cooperative, Jump River Electric Cooperative, Price Electric Cooperative, Polk Burnett Electric Cooperative, Riverland Electric Cooperative, St. Croix Electric Cooperative, and Washington Island Cooperative.

to smaller or rural areas of its service territory that otherwise may not have been reached. In 2022, Xcel paid a bonus incentive to customers who participated in Tier 1 and Tier 2 of the Home Performance with Energy Star program. The bonus incentive was equal to 75 percent of Focus on Energy's incentive to eligible residential customers and the combined total incentive (from Focus and Xcel could not exceed 90% of total project costs.

- **Commercial Community Conservation Program.** This program was complementary to the Focus Business and Industry program (B & I) and provided opportunities for business customers and non-managed industrial customers throughout its service territory, which included a bonus incentive equaling up to 50 percent of Focus on Energy's incentive, up to \$4,000, with total combined program rewards not to exceed \$4,000 per customer.
- **Mid-Market Program.** Xcel's Mid-Market Program (MMP) field representatives provided one-on-one outreach and support, including on-site assessments and reviews of rebate program offerings, designed to identify potential energy efficiency improvements for midmarket customers (small- and medium-sized commercial customers). Program staff worked in coordination with Focus on Energy, boosting Xcel's customers' participation in Focus' existing commercial programs.
- **Tribal Pilot Program.** In 2022 NSPW collaborated with Focus to offer a tribal pilot to the Red Cliff Band of Lake Superior Chippewa (Red Cliff). The pilot was designed to help the Red Cliff improve the energy efficiency of their homes and businesses. It was also intended to help them be sustainable in their efforts to improve their building stock going forward. Red Cliff, Focus and Xcel spent the first six months of 2022 planning and collaborating on program details. Due to the late start for program implementation in 2022, Xcel requested an extension of the program for 2023.

Table 11 below shows Xcel Voluntary Program Budgets and Expenditures from 2019 through 2022.

Table 11: Xcel Voluntary Program Budgets and Expenditures

Year	Residential CCP*	Commercial CCP+	TOTAL
2019 Budget	\$681,059	\$1,319,573	\$2,000,632
2019 Expenditures ¹	\$581,379	\$1,410,951	\$1,992,330
2020 Budget	\$721,180	\$1,606,992	\$2,328,172
2020 Expenditures ²	\$610,482	\$1,186,532	\$1,797,104
2021 Budget	\$721,180	\$1,606,992	\$2,328,172
2021 Expenditures ³	\$502,143	\$1,156,122	\$1,658,265
2022 Budget	\$765,467	\$1,607,416	\$2,372,883
2022 Expenditures ⁴	\$665,114	\$1,112,322	\$1,777,436

1. [PSC REF#: 386318](#)

2. [PSC REF#: 406689](#)

3. [PSC REF#: 431676](#)

4. [PSC REF#: 461506](#)

*Residential CCP Budget includes incentives for the Tribal Pilot

+Commercial CCP Budget includes labor for the Tribal Pilot and the Mid-Market budget and expenditures

2022 Program Results

Business customer participation has steadily declined over the past few years. There were 25 percent fewer Business and Industry program projects completed in 2022 compared to 2021. ([PSC REF#: 471137.](#)) In 2022, Xcel's Commercial CCP served 538 business customers resulting in annual program savings of 30,446,016 kWh of electricity and 685,620 therms of natural gas. MMP field representatives assisted business and industry customers in the completion of 117 projects in 2022. The MMP was particularly active in communities participating in Xcel's Partners in Energy (PiE) program. The 2022 PiE communities were Menomonie, Ashland, and La Crosse.

Participation and incentive expenditures in the Residential CCP have fluctuated in recent years as shown in Table 12 below. During the pandemic, the number of residential projects completed increased substantially. In 2022, the number of residential projects returned to pre-pandemic levels. While the number of projects completed in 2022 decreased, the average incentive per residential project completed increased due in large part to Focus increasing rebate amounts for air-source heat pumps (ASHPs) in 2022. In 2022, Xcel's Residential CCP served 2,242 residential customers resulting in annual program savings of 332,039 kWh of electricity and 290,984 therms of natural gas.

Table 12: Residential CCP Participation and Incentive Expenditures

Year	# Residential CCP Projects Completed	Residential CCP Incentive Expenditure
2018	2,136	\$589,148
2019	2,086	\$450,344
2020	3,260	\$518,640
2021	3,156	\$380,626
2022	2,242	\$534,729

WISCONSIN ELECTRIC POWER COMPANY (WE ENERGIES)

We Energies had two voluntary programs operating in 2022:

- Residential Assistance Program (RAP)** provided weatherization services for low-income customers in the We Energies service territory to address energy efficiency of the entire home and help reduce energy costs. RAP was available to natural gas customers who were homeowners and earned below 80 percent of the State Median Income (SMI). In addition, starting in 2022, We Energies collaborated with Focus and trade ally partners to develop program eligibility criteria for owner-occupied multifamily properties, non-owner-occupied housing units and non-profit customers. Eligible customers were identified through referrals from the utility’s Low Income Forgiveness Tool (LIFT) program and were also referred from the State’s Home Energy Plus Program (Low Income Energy Assistance Program and Weatherization Assistance Program).

Weatherization measures offered under RAP included those measures eligible for Focus’ enhanced incentives for income-qualified customers (also referred to as Tier 2 incentives) and included attic and wall insulation, air sealing, smart thermostats, and replacement of furnaces, boilers, and water heaters. Additional measures that can improve efficiency, comfort, and safety and were not offered by Focus were also eligible under RAP.

RAP funding covered all remaining costs after Focus incentives were applied. Trade allies performing the work submitted all required documentation to Focus for incentives and submitted project invoices to We Energies for the remainder of the balance. We Energies set an annual target to weatherize 150 homes. Prior to 2021, the program consistently exceeded its annual target of 150 homes. Challenges largely beyond the control of the program, including those associated with the impacts of the COVID-19 pandemic, have influenced performance in recent years. In 2021, staffing challenges, supply chain issues, and customer hesitation to allow contractors into their homes impacted RAP’s ability to meet its goal, resulting in the completion of 145 projects. In 2022, supply chain issues, rising prices for materials, and fewer referrals for urgent assistance during the heating season impacted program performance, resulting in the completion of 129 projects. Table 14 below shows RAP budget and spending for the last two years.

Table 14: RAP Budget and Spending, 2021-2022

Year	Budget Approved	RAP Expenditures	Units Complete	Average \$/Unit	Source
2021	\$925,000	\$873,271	145	\$6,023	PSC REF#: 434013
2022	\$925,000	\$873,382	129	\$6,786	PSC REF#: 463347

- Voluntary Design Assistance Program (VDAP)** supported business customers by performing customized whole-building analysis of energy saving options during the design phases for new construction and major renovations. We Energies’ voluntary program provided additional funding to help more of its customers participate in Focus on Energy’s Design Assistance Program (DAP) in the event Focus on Energy’s statewide program budget was fully expended. We Energies was first approved to operate its VDAP for the

2019-2020 program period and was approved by the Commission to operate through the 2026 program year. Table 15 below shows projects completed between 2020 and 2022.

Table 15: Voluntary Design Assistance Projects Completed, 2020-2022

Program Year	Projects Complete	Project Sectors	Combined Sq. Footage
2020	6	School, Hotel, Office Fire Station	~650,000 ft ²
2021	11	Retail, Office, Multifamily, Distillery	~574,000 ft ²
2022	14	Retail, Warehouse, Mixed Use, School Multifamily	~900,000 ft ²

Table 16 below shows approved budget and actual expenditures for program years 2019 through 2022.

Table 16: Voluntary Design Assistance Budget and Expenditures 2019-2022

Program Year	Approved Budget	Actual Expenditures
2019	\$480,000	\$75,000
2020	\$650,000	\$198,239
2021	\$650,000	\$272,635
2022	\$650,000	\$249,342

WISCONSIN PUBLIC SERVICE CORPORATION (WPSC)

In 2022, WPSC completed its third year of operating its voluntary program modeled after the We Energies Residential Assistance Program (RAP):

- Residential Assistance Program (RAP)** provided weatherization services for low-income customers in the WPSC service territory to address the energy efficiency of the entire home and help reduce energy costs. RAP was available to natural gas customers who were homeowners and earned below 80 percent of SMI. In addition, beginning in 2022, WPSC collaborated with Focus to develop program eligibility criteria for owner-occupied multifamily properties, non-owner occupied housing units, and non-profit customers. Eligible customers were primarily identified through referrals from the utility's Customer Assistance team and were commonly sourced from WPSC's Fresh Start program, the State's Home Energy Plus Program (Low Income Energy Assistance Program and Weatherization Assistance Program), community partners, and other emergency assistance programs.

Weatherization measures offered under RAP included those measures eligible for Focus Tier 2 incentives and included attic and wall insulation, air sealing, smart thermostats, and replacement of furnaces, boilers, and water heaters. Additional measures that could improve efficiency, comfort, and safety and were not offered by Focus were also eligible under RAP.

RAP funding covered all remaining costs after Focus incentives were applied. Trade allies performing the work submitted all required documentation to Focus for incentives and submitted project invoices to WPSC for the remainder of the balance.

WPSC set an annual goal to weatherize 45 homes. The program began operation in early 2020 and experienced challenges in meeting its annual unit goals. The COVID-19 pandemic significantly hindered program operations in 2020 and 2021. Program operations in 2022 saw modest improvements, however, WPSC’s annual Customer Service Conservation (CSC) Report indicated that supply chain disruptions, labor shortages, and product/equipment pricing challenges from the COVID-19 pandemic continued to present barriers to participation. ([PSC REF#: 463348](#)). Results from 2021 and 2022 are shown in Table 17 below.

Table 17: RAP Budget and Expenditures 2021-2022

Year	Budget Approved	RAP Expenditures	Units Complete	Average \$/Unit	Source
2021	\$300,000	\$62,170	10	\$6,217	PSC REF#: 434012
2022	\$300,000	\$111,874*	16	\$6,992	PSC REF#: 463348

*Administrative expenses to support the RAP pilot program in 2022 is not accounted for in the calculation of weatherization costs per unit. WPSC reports spending \$6,100 in administrative expenses for its pilot project in 2022. The total 2022 RAP expenditures including the pilot project was \$117,974

WISCONSIN POWER & LIGHT COMPANY (ALLIANT ENERGY)

In 2022, Alliant continued to operate two voluntary programs:

- Enhanced Low-Income Weatherization Program (ELIWP)** provided bonus incentives to low-income customers participating in Focus’ Home Performance with Energy Star Program, at the Tier 2 level, which served customers at or below 80% of SMI. The program provided weatherization services such as insulation and air sealing as well as supported installation of efficient heating and cooling devices such as furnaces. Modeled on We Energies’ voluntary Residential Assistance Program ([PSC REF#: 330677](#)), ELIWP provided 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 paid for the full costs of other efficiency and safety measures identified during inspection of participant homes, including leak repairs, carbon monoxide detectors, and LED light bulbs.

There were no formal savings goals, but the program targeted customers with especially high natural gas usage in order to prioritize customers who may have been able to achieve the largest energy savings benefits. The goal was to reduce gas usage by an average of 200 therms per year per household. The program was designed to serve 50 customers per year, which makes the annual savings goal about 10,000 therms annually. ELIWP first launched in early 2018. At the end of 2022, the ELIWP had completed projects for 172 customers since it began operation. After a low initial response rate during the first year of the program’s operation, Alliant was more successful in enrolling

program participants and completing projects. The program completed projects at 25 homes in 2019, 36 homes in 2020, 47 homes in 2021, and 64 homes in 2022.

The program's 2022 evaluation found that the primary barrier to participation was educational, noting that some customers required assistance to understand how programs worked and why they needed to provide financial or tax information to qualify. ([PSC REF#: 471592](#) at 7-8.) Alliant coordinated with Focus customer service representatives to equip staff with information to answer program questions and to increase trust in the program. Alliant also partners with Focus to enlist bilingual trade allies to help reach households it has not reached in the past due to language barriers. The ELIWP evaluation found high overall participant satisfaction (8.8 out of 10). A customer survey also found that participants were most likely to have learned about the program via word-of-mouth, which may suggest evidence that the program is building a positive reputation in the communities it serves.

- **Home Energy Monitoring Pilot.** The Home Energy Monitoring Pilot deployed energy monitors in customers' homes to measure energy usage multiple times per second, providing customers with real-time feedback on their energy usage so they can make behavioral changes to save energy. The monitors also disaggregated loads in order to provide customers with specific information on the usage level of each individual technology in their homes, which can help to identify inefficient technologies that could be targeted for replacement.

The Home Energy Monitoring Pilot has been implemented in multiple phases, with each phase having distinct objectives designed to gain an understanding of the potential for home energy monitoring devices across a range of residential customer segments. The objectives include: assessing the capabilities of alternative types of monitoring devices to accurately discern energy usage from individual technologies in the home; and to learn how customers respond to personalized messaging designed to encourage energy savings and participation in Focus on Energy program offerings. The pilot has primarily focused its efforts on deployment of Sense Home Energy Meters.

Phase One of the pilot operated in 2018 and deployed 100 home energy monitors in rural homes in the Alliant service territory to help assess rural-specific efficiency considerations. Phase Two launched in 2019 and added home energy monitors in an additional 100 homes in non-rural areas to allow for a more representative analysis of the effects of the home energy monitor technology across Alliant's service territory. Phase Three began in 2020 and expanded the objectives of the pilot program to include: adding additional customer participants to the program, evaluating the performance of an alternative home energy monitoring device for comparison to the Sense monitors, and exploring the savings impacts of enhanced personalized customer engagement services. Phase Four began operation in 2021 with the objective of further expanding the deployment of Sense monitors into residential homes of Alliant customers earning at or below 80 percent of SMI to better understand opportunities for energy savings in this customer segment.

In its order of October 14, 2021, the Commission approved Phase Five of the Home Energy Monitoring Pilot to operate in 2022 and 2023. ([PSC REF#: 423096.](#)) Phase Five provides support and analysis to participants in prior phases and expanded the deployment of Sense Meters to an additional 500 homes in the Alliant service territory. This phase will test new, targeted energy saving applications of the monitoring technology and develop quantitative information on the ability of the technology to shift energy demand off-peak. Phase Five intends to build off the findings from prior phases that included load disaggregation technology that has the potential to produce behavioral and device upgrade savings as well as identify end use loads that could be shifted off-peak. These customers could then participate in demand response initiatives and, for those customers on time-of-use rates, manage their energy bills. Phase Five will also identify customers with electric vehicles to better understand charging patterns and the potential demand, cost, and emissions savings when charging patterns are adjusted. Finally, Phase Five seeks to understand if remote energy monitoring can be used to identify high-use or faulty air conditioner equipment and encourage customers to replace these devices with high efficiency models.

Alliant's most recent evaluation report for the Home Energy Monitoring Pilot showed that customers participating in the first four phases of the pilot saved an average of 4.5 percent on their electric bills and that there was evidence of higher savings with increased customer messaging and engagement. ([PSC REF#: 471593.](#)) Customers receiving emails through the program enrolled in other energy efficiency programs at rates that were 51 percent higher than control group customers. Finally, Alliant conducted its first demand response events for pilot program customers in 2022. Initial analysis from these events shows measurable demand reductions that exceed the typical impacts of behavioral demand response programs and are comparable to those of smart thermostat demand response programs.

The Commission ordered an Evaluation Report for the Home Energy Monitoring Pilot as a condition of its approval of Phase Five. Alliant's Evaluation Plan indicates a Final Evaluation Report will be delivered to the Commission by July 1, 2024. ([PSC REF#: 426596.](#)) The evaluation will assess program staff and installer experiences with the pilot, gauge participant satisfaction, measure behavioral energy savings, calculate cost-effectiveness of the pilot, and examine the effectiveness of behavioral demand response events.

WISCONSIN HOME ENERGY ASSISTANCE PROGRAM (WHEAP) – WEATHERIZATION SERVICES

In order to present a more complete picture of energy efficiency and renewable activities in Wisconsin, this report also includes annual data on the Weatherization Assistance Program. The Division of Energy Housing and Community Resources (DEHCR), in the Department of Administration, contracts with various agencies throughout the state to provide weatherization services to eligible households. Households with incomes at or below 60% of the Wisconsin SMI are eligible for services. Agencies include community action agencies, housing authorities, local governments, and other non-profit organizations. The goal of the weatherization program

is to save energy by targeting households with an excessive energy burden and that are made up of customers who are elderly, handicapped, and/or children under 6 years of age.

If homeowners are eligible for weatherization services based on their WHEAP application, their application information will be referred to the local weatherization agency. Households selected for potential weatherization services will be contacted by the weatherization agency. The agency will then make arrangements to have an energy auditor look at their homes to see what can be done to make it more energy efficient. Weatherization services differ with each home depending on how it was built and its condition. Some common weatherization services include:

- Insulate attics, walls and floors;
- Insulate or replace water heater;
- Install energy efficient lighting;
- Reduce air leakage;
- Repair or replace furnace;
- Test and/or replace refrigerator;
- Perform a general health and safety inspection;
- Provide information about maintenance and energy conservation.

During the 2022 DOA contract period, the weatherization program provided services to 5,178 units and expenditures were \$57,858,027. In addition, DEHCR replaced 2,113 furnaces and repaired 2,457 for total expenditures of \$9,748,609.