



Public Service Commission Report to the Legislature
Energy Efficiency and Renewable Resource Program
Activities in Wisconsin

Calendar Year 2020

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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 retail 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.

Pursuant to 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 markets' ability 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.

2020 FOCUS ENERGY SAVINGS – OVERALL 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.

Focus programs were restructured beginning in 2020 in order to better serve customers and improve administrative efficiencies. The new structure has three sectors:

- Residential sector, servicing single-family and multifamily homes;
- Non-residential sector, servicing commercial, industrial, school, government, and agribusiness customers; and
- Midstream sector, servicing residential and non-residential customers via distributors.

These three sectors are further broken out into the Solutions and Offerings in Table 1 below.

Table 1: 2020 Focus on Energy Structure by Sector

Sector	Solution	Offering
Residential	Direct-to-Customer	*Appliance Recycling *Farmhouse Kits *Online Marketplace *Packs *Retail *Rural Retail Events
	Trade Ally Solutions	*Heating & Cooling *Air Sealing & Insulation *Renewable Energy, Residential
	New Construction	*Residential New Construction
Residential & Non-residential	Midstream	*Through Distributors
Non-residential/Business	Business & Industry	*Agribusiness *Commercial & Industrial *Large Industrial
	Schools & Government	*Schools *Government
	New Construction	*Design Assistance/Review *Prescriptive
	Trade Allies	*Renewable Energy
	Renewable Energy Competitive Incentive Program (RECIP)	*RECIP Bidding Process

Some of the highlights for 2020 include:

- For every dollar invested in energy efficiency, Focus provided \$2.43 in benefits; when economic benefits are added, the benefits increase to \$4.32.
- Customer satisfaction levels are high and continue to increase. Across all Focus programs, customer satisfaction was measured at 9.4 on a 10-point scale.
- The online marketplace recorded 32,594 new customers in 2020.

Table 2: Verified Gross Lifecycle Energy Savings: January 1-December 31, 2020

Portfolio	Participants	Verified Gross kWh*	Verified Gross kW*	Verified Gross Therms*	MMBtu	Benefit Cost Ratio
Non-residential	4,999	6,866,908,785	65,004	259,226,228	49,352,516	2.78
Residential	1,147,211 ⁺	4,456,602,415	35,738	57,948,924	21,000,820	1.70
Midstream**	740	8,351,599	211	4,608,448	489,340	1.45
FOCUS TOTAL	1,152,950	11,331,862,799	100,953	321,783,600	70,842,676	2.43

⁺ This number includes 968,201 participants in the Retail Lighting and Appliance program.

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

** Midstream results are incorporated into the Residential summary below.

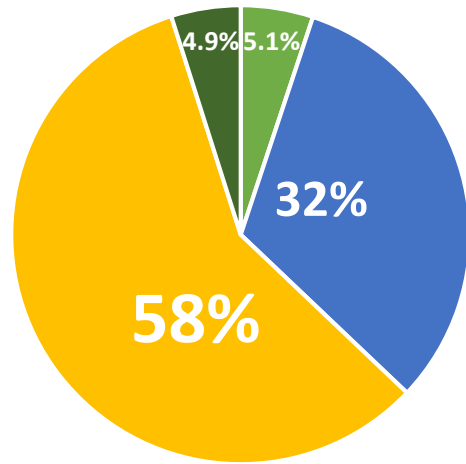
2020 FOCUS ON ENERGY PROGRAM EXPENDITURES

Expenditure categories were revised in 2016 to provide clarity and more accurately reflect program costs. The four categories include: Administrative; Technical & Customer Support; Incentives; and Evaluation. The definitions of each are as follows:

- **Incentives** costs are cash incentives payable to Customers & Trade Allies and instant discounts received at point of purchase at participating retail locations.
- **Technical & Customer Support** costs are those associated with project identification, engineering calculation and modeling, inspection of installed projects, trade ally contractor outreach, technical training, marketing, and customer service.
- **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.
- **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 renewable research and screening of new solutions through the Environmental & Economic Research & Development and Pilot offerings.

The chart below illustrates expenditures for the Focus program as a whole in 2020.

**2020 Focus on Energy Expenditures
(\$95,621,423)**



■ Administration ■ Technical & Customer Support ■ Incentives ■ Evaluation & Research

NON-RESIDENTIAL (BUSINESS) ENERGY EFFICIENCY AND RENEWABLE 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 2020 and Table 3 below shows the non-residential sector Solutions and Offerings:

Table 3: Non-residential (Business) Solutions and Offerings

Sector	Solution	Offering
Non-residential/Business	Business & Industry	*Agribusiness *Commercial & Industrial *Large Industrial
	Schools & Government	*Schools *Government
	New Construction	*Design Assistance/Review *Prescriptive
	Trade Allies	*Renewable Energy
	Renewable Energy Competitive Incentive Program (RECIP)	*RECIP Bidding Process

These Focus programs help Wisconsin businesses by:

- Working with companies to implement energy strategies;
- Rewarding businesses with financial incentives for these strategies;
- Providing no-cost or low-cost energy tips;

- Offering training opportunities on energy efficiency; and
- Applying for federal grants from the U.S. Department of Energy and in some cases using Focus incentives as a funding match.

Impacts of COVID--19 in 2020

In the 2020 evaluation report, the Evaluator Contractor (Cadmus) noted that non-residential programs were impacted by COVID-19 in a number of ways. In surveys, 64 percent of trade allies that work with business customers reported an observable decrease in customer interest and inquiries for their services in 2020. Eighty percent of trade allies surveyed who work primarily with businesses reported either having to stop much of their operations (21 percent) or delay some projects (59 percent) due to COVID-19. The Evaluator Contractor continues to perform primary research to understand the impacts of COVID-19 on particular business and residential segments served by Focus.

In its quarterly reports, the Program Administrator (APTIM) provided additional details regarding the impact of COVID-19 on program operations, supply chains, markets, and customers' decision-making in 2020. For example, after March 2020, the Large Industrial market saw far-reaching impacts across staffing and supply chains which made it difficult to complete projects. Three significant projects worth nearly four million MMBtu were delayed into 2021, specifically from complications due to COVID-19. Perhaps more significantly, three paper mills announced they were closing since COVID-19 began (Verso, Clearwater, and Neenah, Inc.), which is worth noting since pulp and paper typically makes up 60-70 percent of large industrial savings. Overall, Focus received 428 large industrial prescriptive applications in 2020, which is roughly a 25-percent decrease in applications compared to 2019.

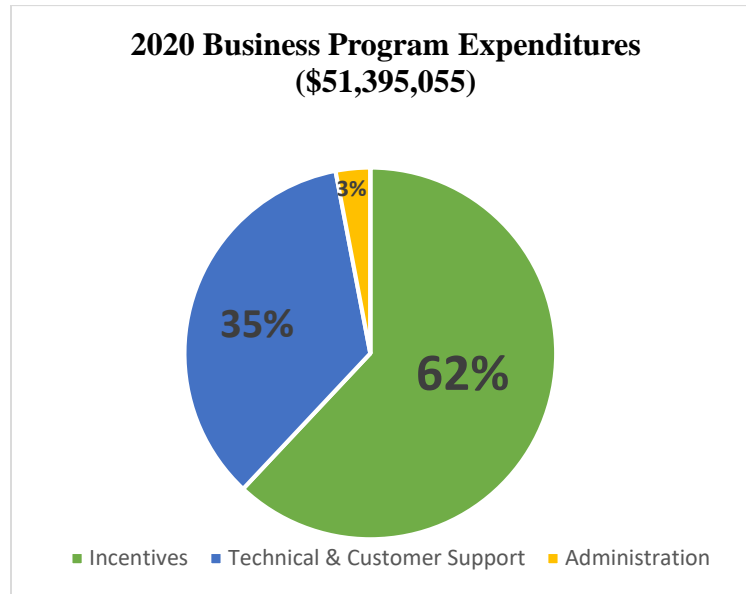
Other programs, like Agribusiness, saw 14 percent fewer prescriptive applications in 2020 compared to 2019. Much of this decline is attributed to halting in-field work, as remote engagement for customers and trade allies did not prove to be as successful as in-person outreach. Applications decreased significantly during the months when implementers were not in the field, but saw a spike as soon as in-person meetings were able to happen. Likewise, Schools and Government saw a 20-percent decrease in applications for 2020 compared to 2019, but did see a slight increase in savings. This is due to some larger projects being completed when timelines were moved up, which was made possible when schools closed. In fact, 60 percent of them savings for Schools and Government came from five projects.

Lastly, the Business New Construction program received about 100 fewer prescriptive applications compared to 2019, with five large whole building projects delayed into 2021 and one very large project being cancelled.

Table 4: 2020 Verified Gross Lifecycle Non-residential Savings (with Renewables)

Portfolio	Participants	Verified Gross kWh	Verified Gross kW	Verified Gross Therms	MMBtus	B/C Ratio
Non-residential	4,999	6,866,908,785	65,004	259,226,228	49,352,516	2.70

Expenditures



RESIDENTIAL ENERGY EFFICIENCY AND RENEWABLE 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 prompt smart energy choices. Wisconsin residents can participate directly by purchasing ENERGY STAR® qualified LED bulbs at retail stores, ordering a free energy-saving pack on line, 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 assistance. Through the Trade Ally Solutions sector, Focus experts can offer insight, technical assistance, and financial incentives to get homeowners started. Table 5 below shows the 2020 Residential Solutions and Offerings.

Table 5: 2020 Residential Solutions and Offerings

Sector	Solution	Offering
Residential	Direct-to-Customer	*Appliance Recycling *Farmhouse Kits *Online Market Place *Packs *Retail Lighting & Appliances *Rural Retail Events
	Trade Ally Solutions	*Heating & Cooling *Air Sealing & Insulation *Renewable Energy
	New Construction	*Residential New Construction

Impacts of COVID-19 in 2020

The pandemic presented numerous challenges to Focus Residential programs in 2020, but also some opportunities. Cadmus found that, in general, residential offerings did not experience a significant decrease in participation in 2020, noting that online orders for residential energy efficiency packs experienced a notable increase in participation of 70 percent. Customer surveys performed in the second half of 2020 indicated that residential customers participating in Focus offerings were primarily impacted by changes in appliance recycling pick-up protocols and shortages in labor and construction materials in the residential new construction sector.

While the packs/kit program had high participation with certain delivery methods (those ordered online), the program was still about 120,000 packs short of the 2020 target since approximately 25 percent of packs are usually delivered at in-person events which had to be cancelled.

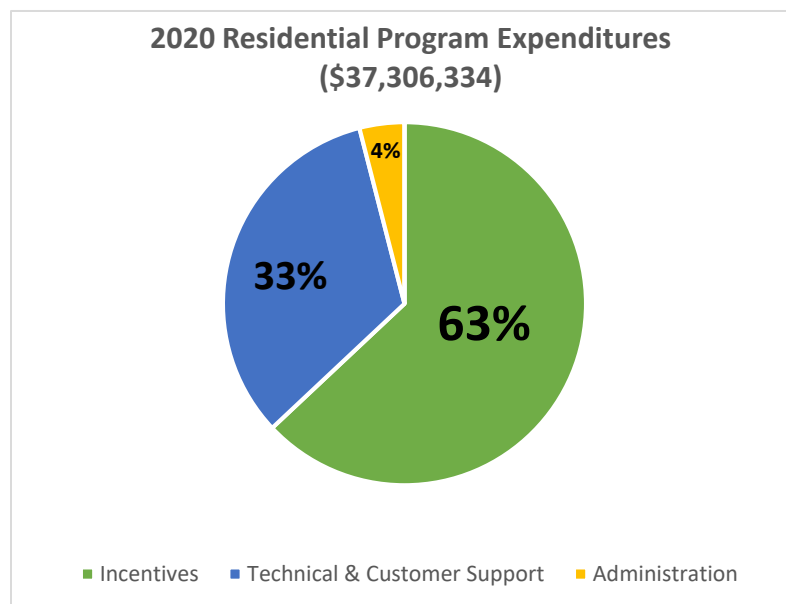
COVID-19 had a significant impact on the Residential New Construction program due to delays in new home starts. The largest contributor to delays was COVID-19's impact on the global supply chain for materials like roof trusses and appliances. In addition, labor shortages and increased lumber costs of about 146 percent significantly raised the cost of new homes. Overall, this resulted in a decrease in forecasted home completions of about 30 percent.

Table 6: 2020 Verified Gross Lifecycle Residential Savings (with Renewables)

	Participants	Verified Gross kWh	Verified Gross kW*	Verified Gross Therms	MMBtu	Benefit/Cost Ratio
Residential Programs	1,147,211+	4,456,602,415	35,738	57,948,924	21,000,820	1.70

+ This number includes 968,201 participants in the Retail Lighting and Appliance program.

Expenditures



RENEWABLE ENERGY PROGRAMS

Act 141 requires that the statewide program (Focus) include renewable resource programs for Business and Residential end-use customers. While the design and delivery of renewable incentive programs has varied over the years, in 2020 Focus offered two tracks for renewable customers as a result of Commission decisions at the end of 2019. ([PSC REF#: 380465.](#))

The first is the Solar Photovoltaic (PV) prescriptive track, where there is a set dollar amount per kW for residential and business customers. The second track is the Renewable Energy Competitive Incentive Program (RECIP), which provides incentives for cost-effective renewable energy systems installed at eligible Wisconsin businesses through a competitive request for proposals (RFP) process. RECIP offered three RFPs in 2020 in January, May, and September for biomass, biogas, solar thermal, and wind technologies.

APTIM reported that 2020 was a record year for residential solar PV participation. The Federal Investment Tax Credit (ITC), along with highly-motivated new solar installers in the state, contributed to the increase. COVID-19 did not slow residential solar PV demand but it appeared to have slowed installations on the business side to some extent.

In an effort to address the increased demand, APTIM reduced residential PV incentives per kW and the overall cap effective June 1, 2020. However, demand continued to increase throughout the summer and APTIM reduced the maximum incentive for Residential installations to \$500 beginning August 15 (as shown below), and to continue this amount into 2021 as well.

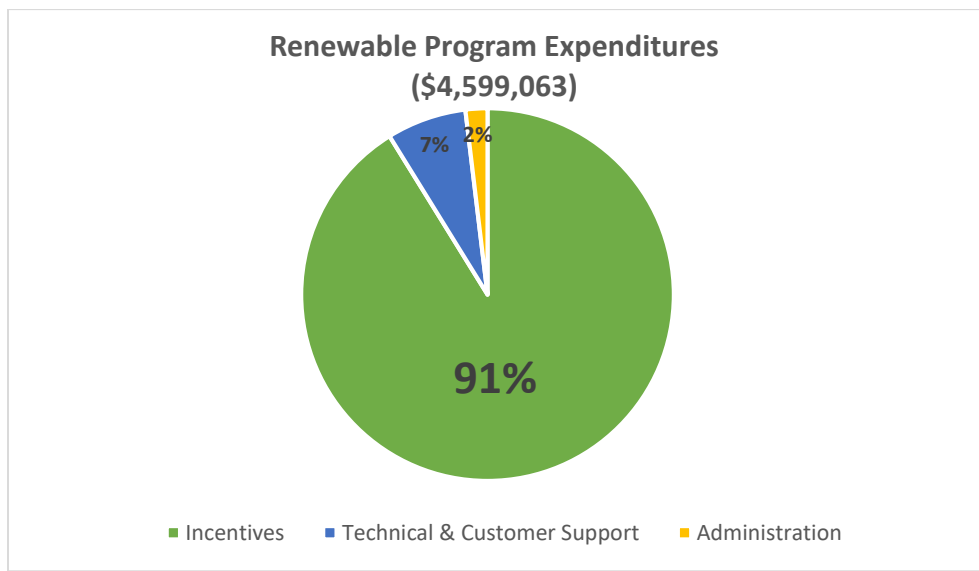
Table 7: Solar PV Incentives in 2020

Solar PV Incentives January 2020				Solar PV Incentives August 2020			
System Size (kW)		\$/kW (DC)	Max Incentive	System Size (kW)		\$/kW (DC)	Max Incentive
0	5	\$300	\$1,500	0	5	\$200	\$1,500
5	10	\$200	\$2,500	5	10	\$150	\$1,750
10	100	\$150	\$16,000	10	100	\$125	\$13,000
100	300	\$120	\$40,000	100	300	\$100	\$33,000
300	500	\$100	\$60,000	300	500	\$85	\$50,000
500+		\$0	\$60,000	500+		\$0	\$50,000
Residential Cap			\$1,500	Residential Cap			\$500

Table 8: 2020 Verified Gross Lifecycle Renewable Impacts

Sector	Participants	Verified Gross kWh	Verified Gross kW	Verified Gross Therms	Benefit/Cost Ratio
Non-residential Renewables	218	448,058,274	5,651	0	1.24
Residential Renewables	2,579	371,653,918	6,177	0	
TOTAL	2,797	819,712,192	11,828	0	

Expenditures



ECONOMIC AND ENVIRONMENTAL BENEFITS OF 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 \$2.43 in benefits for every \$1 in costs in 2020; when economic benefits are added, the ratio increases to \$4.32 for each \$1. Non-economic benefits include the prevention of the following emissions:

- 5,183 tons of sulfur dioxide (SO₂)
- 3,921 tons of Nitrogen Oxides (NO_x)
- 6,368,050 tons of carbon dioxide (CO₂)

RESEARCH PORTFOLIO

In January 2012, the Commission decided that the Environmental and Economic Research and Development Program (EERD) should focus research on the more immediate goal of Focus program design and delivery, rather than on the long-term goal of planning for the state's energy future. At the time of that decision, the Commission also reduced the annual EERD budget from \$1,900,000 to \$100,000 per year through 2014. A \$100,000 annual budget was then approved for the 2015-2018 program period during the second Quadrennial Planning Process. There was no change to the mechanism for soliciting new research projects; therefore, the EERD program continued to solicit new projects through a competitive procurement process. As of December 2020, the Focus EERD budget balance was \$505,942.

In 2020, APTIM conducted a bidding cycle for new research topics and selected five projects for total funding of \$400,988. Due to project timelines, four of the budgets noted below began in 2020 but will be completed in 2021. The five projects included:

- *Multifamily and Single Family Air Source Heat Pumps* (\$114,500 - ongoing)
- *Residential Dehumidification in Wisconsin* (\$69,088 - ongoing)
- *Behavioral and Technology Based Load Management Opportunity Case Studies* (\$65,000 – **completed in 2020**)
- *Cold Climate Variable Refrigerant Flow Systems* (\$85,000 - ongoing)
- *Next Generation C&I Programs: Energy Management Information Systems (EMIS)* (\$66,900 - ongoing)

FOCUS ON ENERGY 2020 FINANCIAL SUMMARY

During the 2020 contract period, the Focus program provided technical assistance; incentives; and energy efficiency and renewable energy information to over 1,152,950 business and residential customers in Wisconsin.¹ This resulted in verified gross lifecycle savings of 11,692,416,671 kWh of electricity and more than 390 million therms of natural gas. Annual kW savings were 100,481.

Administrative Costs

The chart below summarizes the administrative costs for the Focus program in 2020, which accounts for five percent of total spending.

Compliance Agent	\$247,334
SPECTRUM (Focus enterprise system)	\$1,181,887
Fiscal Agent (includes banking fees)	\$438,252
PSC Staff Oversight	\$279,172
SEERA Expenses	\$1,678
APTIM Administrative Costs	\$1,969,824
Implementer Administrative Costs	\$795,133
TOTAL	\$4,913,280

The Financial Sheet below summarizes revenue, expenditures and Focus obligations for the 2020 contract period. 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.

¹ This figure includes the estimated 968,201 households that participated in the Retail Lighting and Appliance program.

2020 Focus Financial Sheet¹

REVENUE	
Investor Owned Utilities	\$95,580,696
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 2020 contract period were obligated back into programs in the 2021 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.

MUNICIPAL ELECTRIC AND ELECTRIC COOPERATIVES 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 municipals and retail electric cooperatives to include load management in their CTC program offerings.

Act 141 requires that an electric cooperative or municipal utility operating its own CTC program 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 2020, 11 cooperatives, all 41 WPPI Energy (WPPI) municipal electric utilities, and all 41 non-WPPI municipal utilities sent their energy efficiency funds to Focus. CTC programs were operated by 13 retail electric cooperatives including: 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. CTC reports for these cooperatives can be found by visiting 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. As a result, Commission staff cannot verify these CTC energy savings claims and does not recommend adding these savings to the 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 in addition to the statewide Focus on Energy (Focus) programs. In 2020, four IOUs implemented voluntary programs: Northern States Power Company-Wisconsin (NSPW); We Energies; Wisconsin Public Service Corporation; and Wisconsin Power and Light Company (WP&L).

Northern States Power Company-Wisconsin

NSPW offered three voluntary programs in 2020:

- **Residential Community Conservation Program.** This program is designed to provide additional incentives to NSPW's residential customers and to bring Focus programs to smaller or rural areas of its service territory that otherwise may not have been reached. In 2020, NSPW paid a bonus incentive to customers who participated in Tier I and Tier 2 of the Home Performance with Energy Star program. The bonus incentive was equal to 60 percent 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 percent 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 (MMP, a pilot that launched in 2018).** NSPW's program 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 NSPW's customers' participation in existing measure-based commercial programs.

Overall, the 2020 Community Conservation programs saw an increase in participants and incentives paid in the residential program, but a decrease in both participants and incentives paid for the commercial programs. This was not a surprise given the COVID-19 pandemic and its impact on small business. For evaluation purposes, Cadmus uses the Utility Administrator Test (UAT) to calculate the cost-effectiveness of programs.

Table 9: 2020 NSPCW Budgets, Expenditures and UAT by Sector

	Approved Budget	Expenditures	UAT (NSPW costs only)
Residential	\$721,180	\$610,482	1.76
Non-residential	\$1,606,992	\$1,186,532	9.10
TOTAL	\$2,328,172	\$1,797,014	6.61

We Energies

We Energies had two voluntary programs operating in 2020 ([PSC REF#: 414713](#)):

- Residential Assistance Program (RAP)** provides bonus incentives to low-income customers participating in Focus' Home Performance with Energy Star Program, which provides weatherization services such as insulation and air sealing as well as supporting 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 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.

Table 10: We Energies 2020 RAP Results

Unit Goal	Units Completed	Savings Goal (therms)	Therm Savings Annual	Therm Savings Lifecycle	Approved Budget	Expenditures
150	162	60,000	37,184	743,662	\$925,261	\$855,035

While the program was able to meet its goals in 2020, the RAP program was impacted by COVID-19 and did not complete any projects between May and mid-July of 2020. The energy savings from the RAP program were credited to Focus, and We Energies did not estimate or claim savings for the non-Focus measures installed through RAP.

- Voluntary Design Assistance Program (VDAP)** provides 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 is fully expended. ([PSC REF#: 345333](#).) In 2020, We Energies requested an extension of the program through 2022 because of the long lead times for new construction projects. The Commission approved the request. In 2020, five customers were able to take advantage of the program for gross annual savings of 862,561 kWh and 10,888 therms. These customer projects included over 650,000 square feet of space in schools, offices, hotels, and a fire station. The VDAP budget for 2021 has 11 projects approved, as the Focus budget has been exhausted.

Table 11: VDAP 2020 Budget, Expenditures & Gross Annual Savings

Program	Savings Annual kWh	Savings Annual Therms	Approved Budget	Expenditures
Voluntary Design Assistance	862,561	10,888	\$650,000	\$198,239

Wisconsin Public Service Corporation (WPSC)

In 2020, WPSC began operating its voluntary program modeled after the We Energies Residential Assistance Program (RAP):

- Residential Assistance Program (RAP)** provides bonus incentives to low-income customers participating in Focus' Home Performance with Energy Star Program, which provides weatherization services such as insulation and air sealing as well as supporting 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 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.

Table 12: WPSC 2020 RAP Budget and Expenditures

Program	Approved Budget	Expenditures
Residential Assistance Program	\$300,000	\$722

The RAP team coordinated and conducted training to trade allies and was ready to proceed with this offering within the WPS service territory in the third quarter. Unfortunately, due to COVID-19, the kick-off of this program was delayed since it involves in-home assessments and installation of qualified weatherization measures within the home. As a result of the inability to launch in-field activity, there was minimal expense in 2020. Trade allies were equipped with light-bulb inventory and the printing of appropriate forms was completed so that the team would be ready to execute when appropriate in 2020. In the fourth quarter of 2020, letters were sent to eligible customers, but COVID-19 continued to cause customer engagement issues. Appointments were made at the end of 2020 and projects were completed in 2021.

Wisconsin Power & Light Company

In 2020, Wisconsin Power and Light Company (WP&L) continued to operate two voluntary programs:

- Enhanced Low-Income Weatherization Program (ELIWP)** provides bonus incentives to low-income customers participating in Focus' Home Performance with Energy Star

Program, at the Tier 2 level which serves customers at or below 80 percent of state median income 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. Modeled on We Energies' Residential Assistance Program, 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 efficiency 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.](#)) Customers are satisfied with the program and gave it a 9.5 rating out of 10.

- **Sense pilot.** ([PSC REF#: 415269.](#)) As initially proposed for 2018, the Sense pilot worked with Cadmus to install Sense Home Energy Meters in 100 residential homes. Sense meters measure energy usage at intervals of multiple times per second, providing customers with real-time feedback on their energy usage, which they can use to make behavioral changes to save energy. The meters also disaggregate loads in order to provide customers with specific information on the usage level of each individual technology in their homes, which can help identify inefficient technologies that could be targeted for replacement. To align with the Commission's emphasis on improving Focus' service to rural customers ([PSC REF#: 295732](#)), WP&L proposed to install all 100 meters in rural homes to help assess rural-specific energy efficiency considerations, including whether meters could help support "remote energy audits" that could identify leads for Focus projects without requiring more-costly direct home visits.

In its order of September 21, 2018, the Commission approved WP&L's proposal for 2019 to continue serving and evaluating the 100 customers initially recruited, and pursue an expanded "Phase Two" of the Sense pilot. ([PSC REF#: 350443.](#)) Under Phase Two, another 100 customers were added to the program with a budget of \$368,970, and recruited from non-rural areas to provide for more representative analysis of the Sense pilot's effects across WP&L's service territory. In addition, the 100 new meters would be installed with a new component that allows more immediate load disaggregation, to test the value of that component for customers. Order conditions required WP&L to submit a 2019 evaluation plan and documented Focus coordination procedures for the Sense pilot, which WP&L submitted on December 3, 2018. ([PSC REF#: 354391.](#))

On June 28, 2019, WP&L submitted a Sense pilot evaluation report analyzing outcomes from the Phase One participants served since 2018. ([PSC REF#: 371354.](#)) A customer survey found that participants were generally satisfied with the program, and that some participants affirmed that the Sense meter helped them identify efficiency opportunities. However, the evaluation also noted customer service challenges related to the difficulty of meter installation and maintenance for some customers. For example, 12 customers required follow-up electrician visits after installation to fix the meter's connection to the

electric panel, and a number of customers have been intermittently unable to collect meter data due to Wi-Fi connection issues.

Evaluators also identified preliminary indications that the program may have achieved energy savings associated with installation of the meter, but cautioned that conclusions could not be stated with statistical confidence until more data is collected from Phase Two participants. The review of energy savings also helped evaluators identify specific energy use patterns that could guide future program approaches for participants. For example, meter data indicated an unexpectedly large share of usage associated with “always on” loads from devices such as televisions that draw power even when not in operation, suggesting that programs could do more to target those savings opportunities. Data analysis also indicated that air conditioners, dryers, and always-on loads contributed the greatest load during peak periods, providing indications that those technologies may be the most beneficial to target in connection with future time-of-use or demand response initiatives.

In its order of November 1, 2019, the Commission approved WP&L’s proposal to operate the Sense pilot in 2020 by continuing to provide support and analysis of Phase One and Phase Two participants as well as initiating Phase Three of the pilot. ([PSC REF#: 378620.](#)) Phase Three includes three components: 1) installation of 100 Sense meters in homes of customers with average energy use levels to evaluate whether Phase One and Two findings are applicable to a broader range of customers; 2) recruit an additional 100 participants to install a new metering device with similar capability as Sense meters but with less cost to purchase and install; and 3) understand the savings impacts of enhanced personalized customer engagement services to a subset of customers compared to customers who did not receive additional engagement.

Implementation of Phase Three of the pilot was delayed due to technological compatibility issues encountered with the Copper monitors originally proposed for comparison with Sense meters as a lower cost alternative technology to explore. WP&L has since identified, and the Commission approved, installing alternative devices, Energy Cloud monitors, that, while more expensive than the monitors originally proposed, are still less expensive than Sense monitors and can be self-installed by the customer rather than requiring installation by an electrician, as is the case with Sense meters. Further delays of Phase Three installations were experienced in 2020 due to COVID-19 precautions. Field activities resumed in the third quarter of 2020, allowing the remaining Phase Three Sense meters to be installed. WP&L reports that some customers have experienced difficulties self-installing the alternative meters and Cadmus is working with the vendor to troubleshoot the issues.

WISCONSIN HOME ENERGY ASSISTANCE PROGRAM (WHEAP) – WEATHERIZATION SERVICES

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 income at or below 60 percent of the Wisconsin state median income (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 elderly, handicapped, and/or children under six years of age.

If a homeowner is 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 home 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:

- Insulating attics, walls and floors
- Insulating or replacing water heater
- Installing energy efficient lighting
- Reducing air leakage
- Repairing or replacing furnace
- Testing and/or replacing refrigerator
- Performing a general health and safety inspection
- Providing information about maintenance and energy conservation

In 2020, the weatherization program provided services to 4,950 units, and expenditures were \$45,348,134. DEHCR extended the contract performance period from July 1, 2020 to September 30, 2020, because the weatherization agencies faced challenges interacting with customers due to the COVID-19 pandemic.