Public Service Commission Report to the Legislature

Energy Efficiency and Renewable Resource Program Activities in Wisconsin

Calendar Year 2019
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2019 Report (January-December 2019)

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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 Focus Energy Savings – Portfolio 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.

Some of the highlights for 2019 include:

- For every dollar invested in energy efficiency, Focus provided $2.58 in benefits; when economic benefits are added, the ratio increases to $4.80 to $1.00;
- Customer satisfaction levels are high and continue to increase. Across all Focus programs, customer satisfaction was measured at 9.3 on a 10-point scale;
- Calculations found Focus on Energy generated $87,807,752 in health benefits for Wisconsin in 2019, accumulated by reduced emissions attributable to Focus on Energy activity.

**Verified Gross Lifecycle Energy Savings: January 1-December 31, 2019**

<table>
<thead>
<tr>
<th>Portfolio</th>
<th>Participants</th>
<th>Verified Gross kWh*</th>
<th>Verified Gross kW*</th>
<th>Verified Gross Therms*</th>
<th>MMBtu</th>
<th>Benefit Cost Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Residential</td>
<td>6,992</td>
<td>7,571,848,059</td>
<td>67,532</td>
<td>332,165,170</td>
<td>59,051,663</td>
<td>3.01</td>
</tr>
<tr>
<td>Residential</td>
<td>102,357+</td>
<td>4,120,568,612</td>
<td>32,950</td>
<td>58,072,316</td>
<td>19,866,612</td>
<td>1.70</td>
</tr>
<tr>
<td><strong>FOCUS TOTAL</strong></td>
<td><strong>109,349</strong></td>
<td><strong>11,692,416,671</strong></td>
<td><strong>100,481</strong></td>
<td><strong>390,237,486</strong></td>
<td><strong>78,918,274</strong></td>
<td><strong>2.58</strong></td>
</tr>
</tbody>
</table>

+ This number is for unique program participants. The Evaluation Team estimated that if participants in the Retail Lighting and Appliance program were included, this number would be 934,911.

* 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**

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 and the definitions 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 & modeling, on-site energy audits and assessments, inspection and 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.

The chart below illustrates expenditures for the Focus program as a whole in 2019.

![2019 Focus on Energy Expenditures](image)

**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 $2.58 in benefits for every $1 in costs in 2019; when economic benefits are added, the ratio increases to $4.80 to 1. Non-economic benefits include the prevention of the following emissions:

- 7,915,240 tons of carbon dioxide;
- 3,772 tons of nitrogen oxide; and,
- 5,336 tons of sulfur dioxide.
Nonresidential (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. Programs are organized by type of business delivery method which is more closely aligned with utility customer classes. This makes it easier to target customer classes using utility data. Programs in 2019 included:

- Large Energy Users;
- Business Incentive Program;
- Agriculture, Schools and Government;
- Small Business Program;
- Design Assistance Program (New Construction);
- Renewable Energy Competitive Incentive Program
- Renewable Rewards

These Focus programs help Wisconsin businesses by:

- Demonstrating practical ways 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.

2019 Verified Gross Lifecycle Nonresidential Savings (with Renewables)

<table>
<thead>
<tr>
<th>Portfolio</th>
<th>Participants</th>
<th>Verified Gross kWh</th>
<th>Verified Gross kW</th>
<th>Verified Gross Therms</th>
<th>MMBtus</th>
<th>B/C Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonresidential</td>
<td>6,992</td>
<td>7,571,848,059</td>
<td>67,532</td>
<td>332,165,170</td>
<td>59,051,663</td>
<td>3.01</td>
</tr>
</tbody>
</table>
Residential Energy Efficiency Programs

In 2019, demand for the broader portfolio of Residential programs continued to rise, helping residents reduce energy waste and save money by providing information and incentives necessary to prompt smart energy choices. Whether residents purchased ENERGY STAR® qualified LED bulbs, made efficiency upgrades to an existing home, requested a Simple Energy Efficiency kit, Focus experts offered the insight, technical assistance, and financial incentives to get them started. The following programs were offered in the Residential sector during 2018:

- Appliance Recycling
- Simple Energy Efficiency (Single Family and Renters)
- Home Performance with ENERGY STAR®;
- Retail Lighting and Appliances program;
- New Homes;
- Multifamily Energy Savings;
- Residential Renewables;
- Design Assistance Program (Multifamily)
- Online Marketplace
2019 Verified Gross Lifecycle Residential Savings (with Renewables)

<table>
<thead>
<tr>
<th></th>
<th>Participants+</th>
<th>Verified Gross kWh</th>
<th>Verified Gross kW*</th>
<th>Verified Gross Therms</th>
<th>MMBtu</th>
<th>Benefit/Cost Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Programs</td>
<td>102,357</td>
<td>4,120,568,612</td>
<td>32,950</td>
<td>58,072,316</td>
<td>19,866,612</td>
<td>1.70</td>
</tr>
</tbody>
</table>

+ This number represents unique participants and does not include the Retail Lighting and Appliance participants which if added in, would total 934,911.

Expenditures

Renewable Programs

Act 141 requires that the statewide program (Focus) includes renewable resource programs for Business and Residential end-use customers.

During the third Quadrennial Planning Process in 2018, the Commission made several decisions regarding the funding and structure of renewable programs beginning in 2019.

First, the Commission established funding for renewable programs during the third quadrennium (2019-2022) at $5.5 million per year, the same funding level established for 2018. The Commission also gave the Program Administrator the flexibility to adjust budgets between business and residential portfolios and RECIP and prescriptive programs as the market dictates (PSC REF#: 343909.) Second, the Commission made several decisions regarding the Renewable Energy Competitive Incentive Program (RECIP) including:
• Offering regularly scheduled RECIP funding rounds three times per year in January, May and September;

• Creating a dual-tiered approach to future rounds of RECIP, one for mid-sized projects under 100 kW in size and a second for projects larger than 100 kW; and

• Streamlining the RECIP application process by deleting the narrative requirements and increasing the emphasis on quantitative characteristics, including cost-effectiveness, capital budget available for the projects, and the percentage of project cost covered by the incentive. (PSC REF#: 349339)

2019 Verified Gross Lifecycle Renewable Impacts

<table>
<thead>
<tr>
<th>Sector</th>
<th>Participants</th>
<th>Verified Gross kWh</th>
<th>Verified Gross kW</th>
<th>Verified Gross Therms</th>
<th>Benefit/Cost Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-residential Renewables</td>
<td>135</td>
<td>13,665,620</td>
<td>4,467</td>
<td>0</td>
<td>1.51</td>
</tr>
<tr>
<td>Residential Renewables</td>
<td>1,021</td>
<td>7,926,997</td>
<td>2,781</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>1,156</td>
<td>21,592,617</td>
<td>7,248</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Expenditures

![2019 Renewable Program Expenditures](image)

Research Portfolio

Per a January 2012 Commission decision, the Environmental and Economic Research and Development Program (EERD) was directed to focus research on the more immediate goal of Focus program design and delivery rather than 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. The $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.

In 2019, APTIM did not solicit ideas for new research topics due to the restructuring of Focus programs and the subsequent rebidding process.

**Focus 2019 Financial Summary**

During the 2019 contract period, the Focus program provided technical assistance; incentives; and energy efficiency and renewable energy information to over 234,117 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 2019, which accounts for five percent of total spending.

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compliance Agent</td>
<td>$273,896</td>
</tr>
<tr>
<td>SPECTRUM (Focus enterprise system)</td>
<td>$656,048</td>
</tr>
<tr>
<td>Fiscal Agent (includes banking fees)</td>
<td>$463,905</td>
</tr>
<tr>
<td>PSC Staff Oversight</td>
<td>$385,825</td>
</tr>
<tr>
<td>SEERA Expenses</td>
<td>$7,718</td>
</tr>
<tr>
<td>APTIM Administrative Costs</td>
<td>$2,043,838</td>
</tr>
<tr>
<td>Implementer Administrative Costs</td>
<td>$1,233,388</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$5,064,618</strong></td>
</tr>
</tbody>
</table>

The Financial Sheet below summarizes revenue, expenditures and Focus obligations for the 2019 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.

\(^1\) Taken from the SEERA Expense Report, Expenses through December 31, 2019
## 2019 Focus Financial Sheet

<table>
<thead>
<tr>
<th><strong>Revenue</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Investor Owned Utilities</td>
<td>$98,269,619</td>
</tr>
<tr>
<td>Municipal Electric Providers/Electric Cooperatives</td>
<td>$3,497,717</td>
</tr>
<tr>
<td>Education and Training Revenue</td>
<td>$25,844</td>
</tr>
<tr>
<td><strong>Total Revenue</strong></td>
<td><strong>$101,793,180</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Expenses</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Programs</td>
<td>$36,704,651</td>
</tr>
<tr>
<td>Non-Residential Programs</td>
<td>$59,415,614</td>
</tr>
<tr>
<td>Environmental and Economic Research and Development</td>
<td>$0</td>
</tr>
<tr>
<td>Rural Programs (includes propane initiative)</td>
<td>$7,628,472</td>
</tr>
<tr>
<td>Evaluation</td>
<td>$2,132,135</td>
</tr>
<tr>
<td>Other Program Support</td>
<td>$1,787,392</td>
</tr>
<tr>
<td><strong>Total Expenses</strong></td>
<td><strong>$107,668,264</strong></td>
</tr>
</tbody>
</table>

| **Focus Contractual Obligations** | $15,235,728 |

1 Taken from the SEERA Expense Report, Expenses through December 31, 2019.
2 Includes Fiscal Agent; Compliance Agent; Commission; SEERA; consulting services; software; SPECTRUM development and maintenance; bank fees and depreciation.
3 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 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 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 2019, CTC programs were operated by 13 retail electric cooperatives. The other 11 cooperatives, all 41 WPPI Energy (WPPI) municipal electric utilities, and all 41 non-WPPI municipal utilities sent their energy efficiency funds to Focus. The table below summarizes energy savings and expenditures for all 13 CTC programs operated by cooperatives. It should be noted that 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.
2019 Retail Electric Cooperative CTC Summary

<table>
<thead>
<tr>
<th></th>
<th>kW (with Load Mgt.)</th>
<th>Annual kWh (with Load Mgt.)</th>
<th>Program Admin.</th>
<th>Program Delivery</th>
<th>Incentives</th>
<th>General marketing</th>
<th>Load Mgt. Costs</th>
<th>Wholesale Supplier Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coop CTC Totals</td>
<td>9,179</td>
<td>15,513,519</td>
<td>$38,357</td>
<td>$155,176</td>
<td>$812,357</td>
<td>$111,977</td>
<td>$443,299</td>
<td>$274,280</td>
</tr>
</tbody>
</table>

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 on Energy (Focus) programs. In 2019, three IOUs implemented voluntary programs: Northern States Power Company-Wisconsin (NSPW); We Energies; and Wisconsin Power and Light Company (WP&L).

Northern States Power Company-Wisconsin
NSPW offered four voluntary programs in 2019 (PSC REF#: 350098):

- **Home Performance with ENERGY STAR® (HPwES).** NSPW offered a bonus incentive equal to 60% of Focus on Energy’s incentive to eligible residential customers. This included the Whole Home Improvements Path and the Heating and Cooling Improvements Path. The combined total incentive (from Focus on Energy and NSPW) could not exceed 90% of total project costs.

- **Business Incentive program (BIP).** NSPW offered a bonus incentive for small- to-medium-sized commercial and industrial customers participating in the Focus on Energy BIP (including Agriculture, Schools, and Government). Eligible customers qualified for a bonus incentive equaling up to 50% of Focus on Energy’s incentive, up to $4,000, with total combined program rewards not to exceed $4,000 per customer.

- **Small Business program (SBP).** NSPW offered a bonus incentive to eligible small business customers participating in the Focus on Energy’s SBP. The bonus incentive equaled up to 50% of Focus on Energy’s incentives, up to a combined total of $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.
The residential programs targeted all Wisconsin residential NSPW customers, and the commercial programs targeted Wisconsin’s non-managed, small- to large-business and industrial customers. NSPW focused its annual goals on increasing participation within its service territory to ensure consistent or increasing participation in all CCP programs each year and on demonstrating program cost effectiveness as all energy savings are attributed to Focus on Energy. Both non-residential programs saw an increase in participation and the Mid-Market program which works with small and medium sized customers, had 433 participants, more than double its goal of 208. There was a slight decrease (2%) in the number of participants in the Home Performance with ENERGY STAR®. For evaluation purposes, Cadmus uses the Utility Administrator Test (UAT) to calculate the cost effectiveness of programs.

### 2019 NSPW Budgets, Expenditures and UAT By Sector

<table>
<thead>
<tr>
<th>Sector</th>
<th>Approved Budget</th>
<th>Expenditures</th>
<th>UAT (NSPW costs only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>$681,059</td>
<td>$581,379</td>
<td>2.47</td>
</tr>
<tr>
<td>Non-Residential</td>
<td>$1,319,573</td>
<td>$1,410,951</td>
<td>12.80</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$2,000,632</td>
<td>$1,992,330</td>
<td>9.79</td>
</tr>
</tbody>
</table>

We Energies

We Energies had two voluntary programs operating in 2019 ([PSC REF#: 331251](#)):

- **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 efficient and safety measures identified during inspection of participant homes, including leak repairs, carbon monoxide detectors, and LED light bulbs.

<table>
<thead>
<tr>
<th>Unit Goal</th>
<th>Units Completed</th>
<th>Savings Goal (therms)</th>
<th>Savings Achieved Annual</th>
<th>Savings Achieved Lifecycle</th>
<th>Approved Budget</th>
<th>Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>150</td>
<td>195</td>
<td>60,000</td>
<td>42,054</td>
<td>841,168</td>
<td>$925,261</td>
<td>$961,982*</td>
</tr>
</tbody>
</table>

*WE Energies submits two-year budgets so while they overspent in 2019, they underspent in 2018. Actual expenditures for 2018-2019 were $1,682,046 so were under the two year budget total of $1,850,000.

- **Voluntary Design Assistance Program (VDAP)** which 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](#)). 2019 was the first year of the program and participation was limited as WE Energies realized the lead time for these projects was longer than anticipated.
In 2019, Wisconsin Power and Light Company (WP&L) continued to operate two voluntary programs (PSC REF#: 350443):

- **Enhanced Low-Income Weatherization Program (ELIWP)** 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. Modeled on We Energies’ voluntary Residential Assistance Program (PSC REF#: 330677), 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.

  In its order of September 21, 2018, the Commission approved WP&L’s proposal to operate ELIWP in 2019, and serve an additional 50 customers with an additional budget of $410,000. (PSC REF#: 350443.) In 2019, ELIWP served 30 customers and was in contact with an additional 14 potential participants. Participation has been limited due to implementation delays and language barriers. WP&L has worked with Focus to start addressing those language barriers and made additional recruitment efforts, and participation has gradually increased. Recruitment has targeted customers with especially high natural gas usage, in order to prioritize customers who may be able to achieve the largest energy savings benefits.

- **Sense pilot.** As initially proposed for 2018, the Sense pilot worked with Cadmus, Focus’ independent evaluation contractor, to install Sense Home Energy Meters in 100 residential homes. (PSC REF#: 371373.) Sense meters measure energy usage at intervals of multiple times per second, providing customers with real-time feedback on their energy usage they can use to make behavioral changes to save energy. The meters also disaggregate loads in order to provide customers 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. 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 most beneficial to target in connection in future time-of-use or demand response initiatives.

Sense meters are intended to help customers identify and distinguish all sources of energy use in the home. By reviewing the data provided by the meter, customers can identify inefficient technologies and Focus offerings that could allow them to achieve savings. Receiving more information through the meters may also encourage participants to pursue behavioral savings by changing their energy use practices. Although more data is needed to draw more definitive conclusions, preliminary indications do suggest that participants may be achieving energy savings associated with installation of this meter.

Wisconsin Home Energy Plus – 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% 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 6 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:

- 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

In 2019, the weatherization program provided services to 4,953 units and expenditures were $38,659,888.