

# Focus on Energy Quadrennial Achievement Report



**focus on energy**<sup>SM</sup>

Partnering with Wisconsin utilities

# ABOUT THIS REPORT

Focus on Energy is Wisconsin utilities' statewide energy efficiency and renewable resource program, funded by the state's investor-owned energy utilities and participating municipal utilities and electric cooperatives. Focus on Energy works with all customers of participating utilities, including homeowners, renters, businesses, farms, and schools, to complete cost-effective energy efficiency and renewable energy projects that meet customers' range of energy needs.

The Focus on Energy 2015 - 2018 Achievement Report provides highlights of the program's outcomes over the past four years, across all programs and measure categories. It is intended to provide the reader with a snapshot of the progress Focus on Energy has made in helping Wisconsin utility customers save energy and money, and achieving benefits for Wisconsin's economy and environment. Additional information on program performance can be found in evaluation reports on the Focus on Energy website: <https://www.focusonenergy.com/evaluation-reports>

## PARTICIPATING UTILITIES

Adams-Columbia Electric Cooperative  
Algoma Utilities  
Alliant Energy  
Arcadia Electric Utility  
Argyle Electric & Water Utility  
Bangor Municipal Utility  
Barron Light & Water  
Belmont Municipal Light & Water  
Benton Electric & Water Utility  
Black Earth Electric Utility  
Black River Falls Municipal Utilities  
Bloomer Electric & Water Utility  
Boscobel Utilities  
Brodhead Water & Light  
Cadott Light & Water  
Cashton Light & Water  
Cedarburg Light & Water  
City Gas Company  
Clark Electric Cooperative  
Clintonville Utilities  
Columbus Water & Light  
Consolidated Water Power Company  
Cornell Municipal Light Department  
Cuba City Light & Water  
Cumberland Municipal Utility  
Dahlberg Light & Power Company  
Eagle River Light & Water Utility

Eau Claire Energy Cooperative  
Elkhorn Light & Water  
Elroy Electric & Water Utility  
Evansville Water & Light  
Fennimore Municipal Utility  
Florence Utilities - Electric Only  
Gresham Water & Electric  
Hartford Electric  
Hazel Green Light & Water Utility  
Hustisford Utilities  
Jefferson Utilities  
Juneau Utilities  
Kaukauna Utilities  
Kiel Utilities  
La Farge Municipal Utilities  
Lake Mills Light & Water  
Lodi Utilities  
Madison Gas & Electric (MGE)  
Manitowoc Public Utilities  
Marshfield Utilities  
Mazomanie Electric Utility  
Medford Electric Utility  
Menasha Utilities  
Merrillan Electric & Water Utility  
Midwest Natural Gas, Inc.  
Mount Horeb Utilities  
Muscodia Utilities

New Glarus Utilities  
New Holstein Utilities  
New Lisbon Municipal Light & Water  
New London Utilities  
New Richmond Utilities  
North Central Power Co., Inc.  
Northwestern Wisconsin Electric Company  
Oakdale Electric Cooperative  
Oconomowoc Utilities  
Oconto Electric Cooperative  
Oconto Falls Municipal Utilities  
Pardeeville Public Utilities  
Pierce Pepin Cooperative Services  
Pioneer Power & Light Co.  
Plymouth Utilities  
Prairie du Sac Utilities  
Price Electric Cooperative  
Princeton Light & Water Department  
Reedsburg Utility Commission  
Rice Lake Utilities  
Richland Center City Utilities  
Richland Electric Cooperative  
River Falls Municipal Utilities  
Rock Energy Cooperative  
Sauk City Utilities  
Scenic Rivers Energy Cooperative  
Shawano Municipal Utilities

Sheboygan Falls Utilities  
Shullsburg Electric Utility  
Slinger Utilities  
Spooner Municipal Electric Utility  
St. Croix Gas  
Stoughton Utilities  
Stratford Water & Electric Department  
Sturgeon Bay Utilities  
Sun Prairie Utilities  
Superior Water, Light & Power  
Taylor Electric Cooperative  
Trempealeau Municipal Utilities  
Two Rivers Water & Light  
Viola Municipal Electric Utility  
Waterloo Utilities  
Waunakee Utilities  
Waupun Utilities  
We Energies  
Westby Utilities  
Westfield Electric Company  
Whitehall Electric Utility  
Wisconsin Dells Water & Light Utility  
Wisconsin Public Service (WPS)  
Wisconsin Rapids Water Works & Lighting Commission  
Wonewoc Water & Light Department  
Xcel Energy

For more information about participating in a Focus on Energy Program, visit [www.focusonenergy.com](http://www.focusonenergy.com), or call 1.800.762.7077.

For more information about Focus on Energy achievements and policy, please contact the Wisconsin PSC at 608.266.5481



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**CADMUS**

# FOCUS ON ENERGY ECONOMIC AND ENVIRONMENTAL IMPACTS

Focus on Energy helps residents lower their cost of living and businesses improve their bottom lines by reducing energy waste. These efforts benefit the entire state by driving economic growth and reducing greenhouse gas emissions, and they do so very cost-effectively. A recent federal study of state energy efficiency programs found that Wisconsin ran **the most-cost-effective programs in the country**, achieving the highest rate of energy savings per dollar spent.\*



Wisconsin utilities import fuel and power from other states, so a significant share of Wisconsin ratepayer funds are spent outside of the state economy. By reducing energy use, Focus on Energy provides long-term savings that support increased in-state spending on other local goods and services.



When economic benefits are counted, cost-effectiveness findings calculated that Focus on Energy provided **\$5.16 in benefits for every \$1.00 invested** over the 2018 program year.



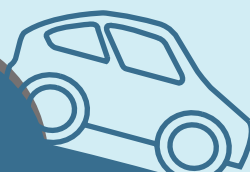
Focus on Energy's positive net employment impacts supported more than 1,000 full-time equivalent jobs per year over the Quadrennium.

\*Report available at: [www.swenergy.org/Data/Sites/1/media/lbnl-cse-report-june-2018.pdf](http://www.swenergy.org/Data/Sites/1/media/lbnl-cse-report-june-2018.pdf)

For the 2015-2018 Quadrennium, the Focus on Energy programs resulted in

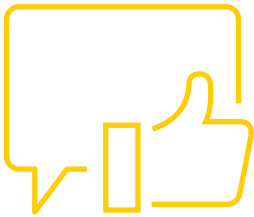
**28,531,208 tons of avoided CO<sub>2</sub>**

That's equivalent to taking over **six million cars** off the road for one year!

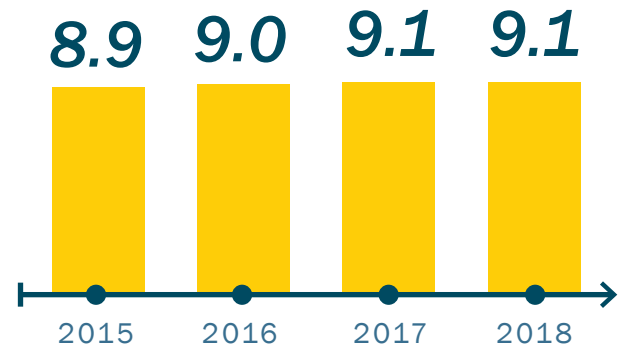


# PARTICIPANT EXPERIENCE: NONRESIDENTIAL CUSTOMERS

## PARTICIPANT SATISFACTION



Commercial participants' satisfaction with the programs was high across the Quadrennium, averaging 9.0 out of 10 across the four-year period.



The Program Administrator implemented several improvements to the commercial program application process to enhance customer experience, including the introduction of a standardized catalog.

Between 2015 and 2018, the nonresidential programs **saw a 15% increase** in participants who rated the application process as easy.

## RELATIONSHIP TO TRADE ALLIES\*

Installation contractors and other trade allies remained a highly effective partner in marketing the nonresidential programs throughout the Quadrennium. Nonresidential participants were most likely to hear about Focus on Energy programs from Trade Allies, and 65% of customers say they seek out Trade Allies as a trusted source of information.

**60% of Trade Allies** reported growth in their business since becoming involved with Focus on Energy.

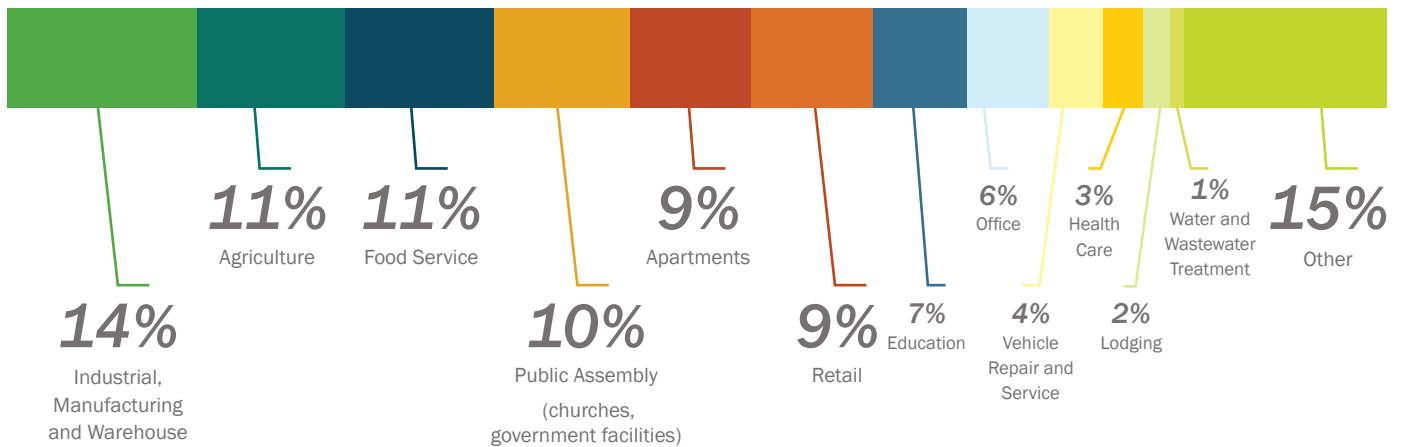


\*Trade Allies include contractors, vendors, and national rebate administrators

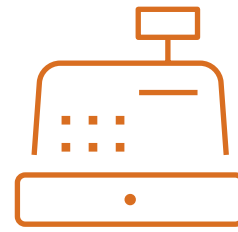
# NONRESIDENTIAL PARTICIPANT QUADRENNIUM SNAPSHOT

Nonresidential participants represented a wide variety of industries and business types over the Quadrennium.

## Percent of Commercial Participants by Segment, 2015-2018



Industrial, manufacturing, and warehouse facilities represented the largest share of nonresidential participants over the quadrennium, consistent with their large share of state energy use: in 2016, this sector represented nearly half of electric savings opportunities and over one quarter of natural gas savings opportunities.



Participation among retail and food service businesses experienced the **largest growth** among nonresidential segments from 2015 to 2018.

Throughout the four-year period, the Program Administrator updated its offerings and revised program designs to serve **hard-to-reach segments** such as small businesses and rural customers.

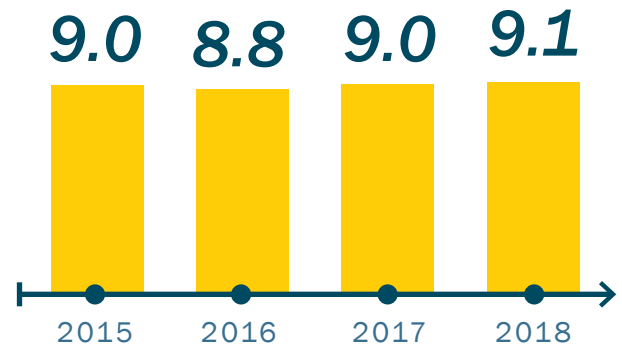


The number of small businesses participating in Focus on Energy grew by **46% from 2015 to 2018**. The share of rural participants taking advantage of the Focus on Energy offerings also increased significantly throughout the Quadrennium, due in part to the introduction of rural programs such as the Community Small Business Offering.

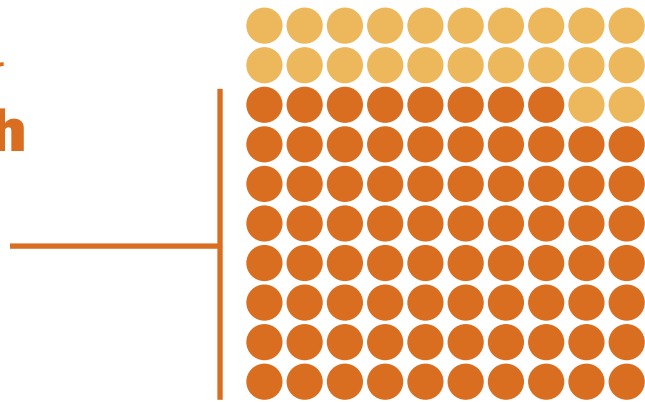
# PARTICIPANT EXPERIENCE: RESIDENTIAL CUSTOMERS

## PARTICIPANT SATISFACTION

Residential participants' satisfaction with the programs was high across the Quadrennium, averaging 9.0 out of 10 across the four-year period.



In 2018, **78%** of residential participants reported that their opinion of their utility is **much more** or **somewhat more favorable** since participating in a Focus on Energy program.



With the introduction of specialized program offerings for rural customers, the share of rural residents that the programs reached grew.

Overall, residents across the state are more aware of Focus on Energy than they were in 2015.

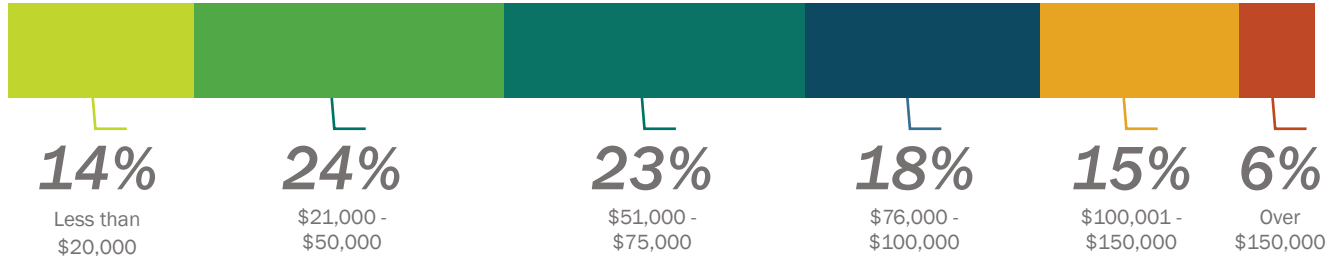
## NOTABLE CHANGES

- **29% growth** in percentage of rural Focus on Energy residential participants from 2015 to 2018
- **7% growth** in statewide awareness of Focus on Energy programs from 2015 to 2018

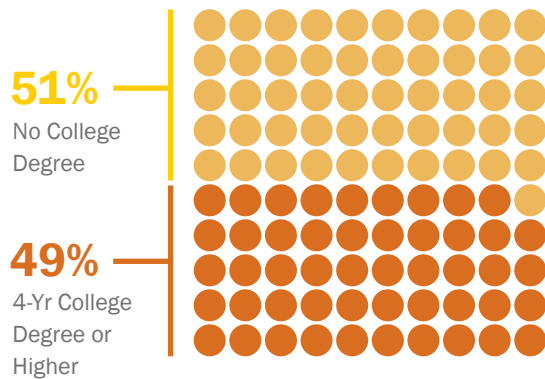
# RESIDENTIAL PARTICIPANT QUADRENNIUM SNAPSHOT

From 2015 to 2018, Wisconsin residents of all education levels, income levels, and ages took advantage of the Focus on Energy offerings.

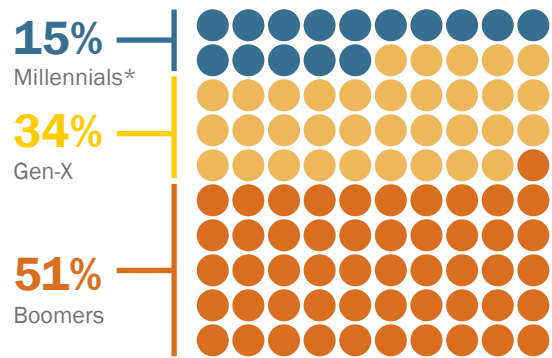
## Percent of Residential Participants by Income, 2015-2018



## Residential Participants by Education Level



## Residential Participants by Generation



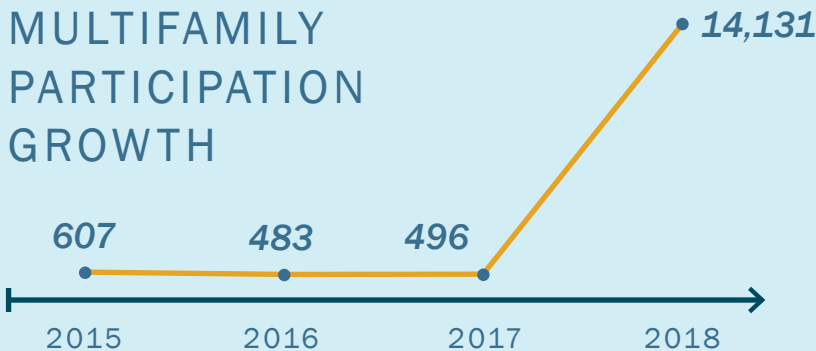
\*Millennials: Under 35, Gen-X : 35 - 54, Boomers: 55+

Based on data from a representative sample of Wisconsin residents, Focus on Energy participant demographics in the 2015-2018 Quadrennium were generally similar to those of the population. Participants reported slightly higher incomes than the general population, since higher-income residents are more likely to

be homeowners who can make decisions about home upgrades.

However, Focus did introduce several new initiatives to reach multifamily residents throughout the Quadrennium, and participation among this segment increased significantly.

## MULTIFAMILY PARTICIPATION GROWTH



In 2017, Focus on Energy introduced the Multifamily New Construction Program, and in 2018, began specifically offering free energy efficiency product kits to apartment dwellers through the Simple Energy Efficiency Program.

# RESIDENTIAL LIGHTING

Home lighting options evolved dramatically since 2015, and Focus on Energy has rapidly adjusted to ensure customers can obtain the most efficient and cost-effective options. In 2015, 90% of verified gross lighting savings came from CFL incentives. In 2017, the program entirely shifted to LEDs. Because of these changes, the lighting program maintained its prominence within the residential portfolio, representing 75% of gross residential savings in 2015 and 2016, and 71% in 2018.

## Percent of Households Purchasing Efficient Light Bulbs

There was a significant decline in the number of households purchasing CFLs over the three-year period, from 44% of households purchasing in 2015 to 12% purchasing in 2016 and 2017. Simultaneously, households purchasing LEDs have more than doubled, from 21% in 2015 to 29% in 2016 to 48% in 2017.



CFL

44%  
2015



12%  
2017



LED

21%  
2015



48%  
2017



The shift is significant - savings from LEDs incented in 2018 was enough to supply electricity to over **17,000 homes for one year.\***

Through its consistent, longstanding support of Wisconsin's lighting market, Focus on Energy has successfully helped the market transition to offering more efficient lighting technologies. Evaluation research has estimated that the cumulative impact of the past 14 years of program support, combined with the incented bulbs, increased the LEDs sold in Wisconsin by almost 4 million bulbs in 2017.

The lighting market is expected to continue transforming over the next four years due to national lighting standards and growing use of LEDs, and Focus on Energy is well positioned to monitor and adjust to the continuing market changes.

\*Source: U.S. Environmental Protection Agency. In 2018, the average home in the U.S. consumed 11,764 kWh of electricity. More information available at: [www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references#houseelec](http://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references#houseelec); see "Home electricity use."



# PORTFOLIO ENERGY IMPACTS

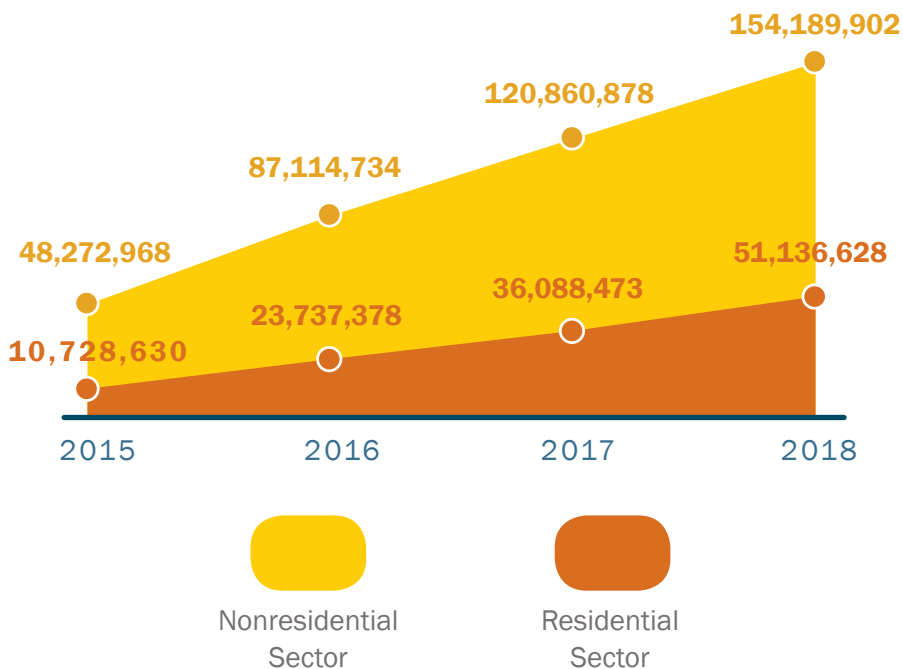
## BEST PRACTICES FOR DETERMINING SAVINGS

To support its determination of energy savings, Focus on Energy publishes a Technical Reference Manual (TRM) that documents and explains its methods for calculating savings achieved from installing efficiency measures. The TRM ensures that these savings estimates are accurate, transparent, and usable for program staff and for the public. The TRM also serves to unify savings assumptions across Focus on Energy programs and technologies and guide savings estimates for new measures. It contains over 235 workpapers that outline savings estimates for over 1,000 efficiency measures.

Each year, dozens of workpapers detailing savings methodologies for hundreds of measures are updated or created in a collaborative process involving a wide range of Focus on Energy staff, tapping experts across many technologies. Through the use of quarterly meetings, collaboration software, and streamlined workpaper development procedures, this process has become more efficient over the Quadrennium while the TRM remains best-in-class.\*

\*"TRM Power Rankings" poster presented by Quad ROI and E Source at the 2018 ACEEE Summer Study on Energy Efficiency in Buildings, in Pacific Grove, CA.

## CUMULATIVE ENERGY SAVINGS\*



### Notable Changes in Measure Mix



Nonresidential LED savings **more than doubled** from 2015 to 2018, resulting in an overall commercial lighting savings increase of 49% in that time.

Nonresidential savings were driven by a mix of heating and cooling, lighting, controls, and other measure types including many custom projects that address the unique needs of individual customers.



Residential savings were driven largely by efficient lighting; **savings from LEDs grew 9 times** from 2015 to 2018 as did savings from residential **renewable energy** measures.

Residential heating and cooling technology savings **nearly tripled** from 2015 to 2018.

\*Net Lifecycle MMBtu

# PILOTS

Program pilots played an important role in advancing Focus on Energy. Starting in 2015, the Program Administrator introduced a successful three-stage process for identifying and approving new program offerings. This process, as well as the process to develop rural programs, resulted in 12 launched pilots. While not all pilots ultimately proved successful enough to be integrated into the larger portfolio, several of them moved from pilot status to being offered as components under existing core programs and continued special offerings.

## Success Stories

The Low-E Storm Windows Pilot applied a familiar approach to a new market: offering upstream incentives to window manufacturers with the goal of increasing sales and installation of Low-E Storm Windows in the Milwaukee area. After seeing positive results in the two-month 2017 Pilot, the Program Administrator added the measure to the Retail Lighting and Appliance Program in 2018. For large commercial customers, the Program Administrator successfully ramped up a Strategic Energy Management Pilot, which was folded into the Large Energy Users Program as a permanent offering. The offering went on to receive the 2019 Innovation Award from the Midwest Energy Efficiency Alliance for its focus on customer engagement and continuous energy improvement.

## Disposition of Pilots

**MERGED WITH CORE PROGRAM**

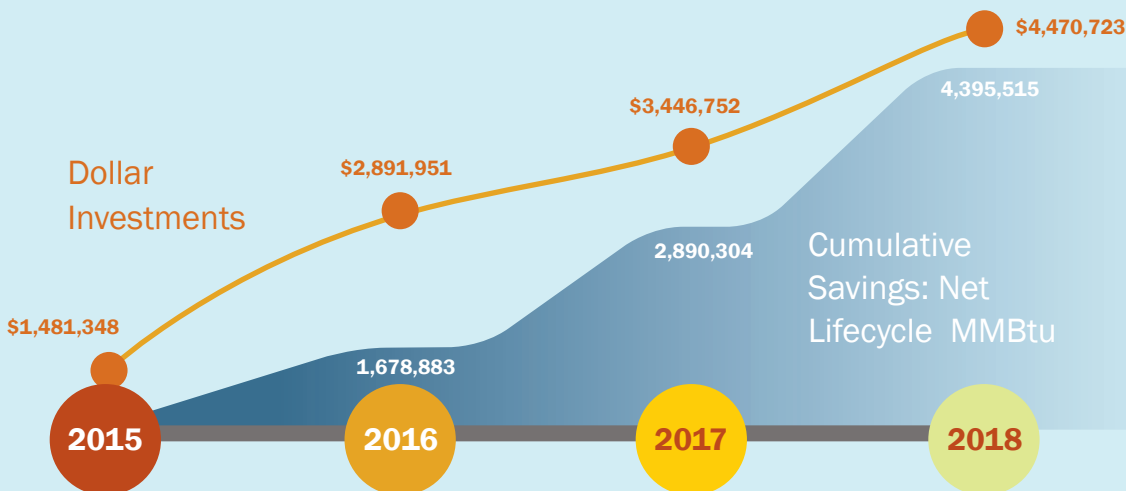
- Smart Thermostat**, 2015  
*Merged with Home Performance with Energy Star*
- Low-E Storm Window**, 2017  
*Merged with Residential Lighting and Appliance Program*
- Networked Lighting Controls**, 2017  
*Merged with Business Incentive Program*
- Strategic Energy Management (SEM)**, 2017  
*Merged with Large Energy Users Program*

**CONTINUED SPECIAL OFFERINGS**

- On Demand Savings**, 2015
- Midstream Commercial Kitchen Equipment**, 2017
- Midstream Commercial Lighting**, 2018

**ENDED AS PILOT**

- Manufactured Homes**, 2015
- Digital-Mail Home Energy Assessment Pilot**, 2017
- Nest Seasonal Savings**, 2016
- Digital Customer Engagement for Business**, 2017
- Retail Products Platform (RPP)**, 2017



The investment in pilots ramped up over the Quadrennium. Energy savings increased as programs matured.

Manufactured Homes  
On Demand Savings  
Smart Thermostat

Seasonal Savings

Networked Lighting Controls  
SEM  
RPP  
Midstream Kitchen  
Low-E Storm Windows