



2019 Year in Review

Acknowledgements

Deborah Churchill, *Chief of Staff*

Rachel Emmer

Sydney Hamilton

Erich Harris

Scott Hutchings

Jabez Meulemans, *Jefferson County Sustainability Coordinator*

Matt Mines

Alex Pray

Frank Rukavina

Kimberly Pardue Welch

Jeff Wong, *2019-2020 Committee Chair*

This document provides a brief overview of the work and achievements of the Jefferson County, Colorado, Board of County Commissioners' Sustainability Commission during the year of 2019.

ABOUT THE SUSTAINABILITY COMMISSION

The Jefferson County Sustainability Commission was founded in June 2014 in response to the growing interest in sustainability within the county community. The purpose of the Sustainability Commission is to create an informational clearinghouse and an open compendium of sustainability best practices. Duties include identifying and articulating sustainability goals, objectives and voluntary targets for county government and industrial, commercial, residential and recreational sectors county-wide. The commission provides expertise, resources and promotes awareness in the area of sustainability. The work shall be advisory. Any citizen or business participation in any commission program or initiatives is strictly voluntary. Additional information about the Sustainability Commission can be located here: <https://www.jeffco.us/3406/Sustainability-Commission>

Major highlights of the Sustainability Commission's work during 2019 include the extension of the Jefferson County Partnership in Energy (PIE) Memorandum of Understanding agreement with Xcel Energy. This work began in 2015 and culminated with the implementation of An Energy Action Plan for Jefferson County, Colorado, which was published March 30, 2017. In addition, sustainability commissioners conducted public outreach at numerous events, supported the advancement of renewable energy implementation by fostering the Colorado Commercial Property Assessed Clean Energy (C-PACE) program and supported the County's sustainability related education programs. The Commission also began a pilot program for virtual meetings, the first for any Jefferson County volunteer commission.

At the end of 2019, the Sustainability Commission took the initial step of developing the county's first resolution focused on climate change and a climate action plan when they presented a proposal at public workshop with the County Commissioners.

2019 SUSTAINABILITY COMMISSION ACHIEVEMENTS

TACKLING CLIMATE CHANGE

One of the primary goals of the Sustainability Commission is to provide an informational clearinghouse for best practices related to sustainability for both the Jefferson County community, and that cannot be accomplished without addressing climate change. The world's climate is changing at an increasing rate, posing risks to our environment, communities, and economy. Climate change presents new risks and growing challenges to human health and safety, infrastructure, and quality of life. Climate change is expected to cause growing losses to American infrastructure and impede the rate of economic growth. With respect to Jefferson County, annual average temperatures continue to trend warmer and climate models project that the fire season will be longer and the risk of wildfires will be higher. Annual snowpack is projected to decrease which has implications for available water in the county. Public health will continue to be adversely affected by hot temperatures, extreme weather events, and increased air pollution.

In December 2019, Sustainability Commission members attended a workshop with the Jefferson County Board of County Commissioners (BCC) to discuss and gain support for our climate change initiatives. Workshops are intended to provide an open format and exchange of ideas with the BCC in a less formal setting. In partnership with the Jefferson County Public Health department, the Sustainability Commission requested that the Jefferson County BCC:

1. Declare climate change a critical priority for Jefferson County through formal resolution, and
2. Approve the research, analysis, and development towards a Jefferson County Climate Action Plan.

The Climate Action Plan would include proposed goals, strategies, and programs to address both greenhouse gas (GHG) mitigation and climate adaptation. At the workshop, the Sustainability Commission presented data about climate change and its effects on both a global and local scale, a summary of what other local counties are doing to address climate change, a proposed initial planning process for developing a Climate Action Plan, and potential resources for technical support and financial assistance. The BCC was generally receptive to implementing the proposed measures, but asked the Sustainability Commission to provide a draft resolution specific to climate change and additional details about the effectiveness of Climate Action Plans in local communities, which the Sustainability Commission is working on in 2020.

As part of the climate change planning process, the Sustainability Commission partnered with the Jefferson County Public Health department to become an official ICLEI member. ICLEI (Local Governments for Sustainability) is an organization that provides technical consulting, training, community interaction, and other resources for local governments to implement sustainable development at the local level. One of the initial tasks for the Sustainability Commission during the research phase of climate action planning will be to build a general GHG emission database for the county, with assistance from ICLEI.



source: EPA



Jefferson County Employee Earth Day Fair

PARTNERS IN ENERGY

Xcel Energy has a program and team to support communities in achieving clean energy, economic development and energy conservation goals. The effort, known as Partners in Energy (PIE), supports communities in Colorado by helping them identify their future energy goals and develop strategic plans to drive activity. Xcel Energy provided a team from the Brendle Group to help Jefferson County facilitate the development of an Energy Action Plan using community-specific Xcel Energy data and tools designed specifically for PIE to forecast potential savings related to each strategy and set targets of participation or other measurable outcomes to determine progress over time.

The vision of the Jefferson County Energy Action Plan is to provide opportunities for the county to increase access to renewable energy to support a healthy, thriving, and resilient region. Jefferson County invites all community members to participate in its efforts to improve energy efficiency and develop renewable energy options.

Several strategies were adopted to support this vision. These strategies included launching Colorado Commercial Property Assessed Clean Energy (C-PACE) financing, conducting business lighting efficiency campaigns, performing neighborhood campaigns to promote residential energy efficiency, and activities to promote energy efficiency at County facilities.

In March 2019, a workshop was held to discuss the Energy Action Plan objectives, lessons learned, and future objectives (see the 2019 Year in Review for final data and statistics). Due to the success the program, the implementation phase of the Energy Action Plan was extended in 2019 (from August 2019 – August 2020) with a new Memorandum of Understanding between the county and Xcel Energy.

The plan extension will continue to focus on energy efficiency strategies for our three main sectors: the Residential Sector, Commercial Sector, and County Facilities. Below are highlights of accomplishments from each sector. Attachment A contains a detailed summary of energy data associated with the Partners in Energy campaign in 2019.

Residential Sector

The Sustainability Commission participated in the following 2019 events to educate county residents about energy and water efficiency and cost savings opportunities:

- Jefferson County Employee Earth Day Fair, April 2019
- 3-day Jefferson County Fair & Festival, August 2019

During these events, sustainability commission members distributed information about strategies that local residents could implement to conserve energy and water, as well as lower their utility bills, including participating in Xcel Energy's energy efficiency programs. The commission also distributed 400 free energy conservation kits that contained 9 LED bulbs and a solar phone charger. A new comprehensive list of where to recycle various household items throughout the county given to residents was also popular. The Residential Team also highlighted Xcel Energy's Home Energy Squad and Audit program, which allow residents to implement assisted energy savings strategies (such as LED light replacements and weather-stripping installation) at a subsidized rate.



participants in targeted Xcel Energy Efficiency residential programs (increase from 2018)



CO2 emissions reductions:
30,000+ tons of CO2 emissions avoided through Xcel's conservation programs

Commercial Sector

Colorado Commercial Property Assessed Clean Energy (C-PACE) Program enables owners of eligible commercial and industrial buildings to finance up to 100% of energy efficiency, renewable energy and water conservation eligible improvements. Financing is provided by private capital providers at competitive rates with repayment terms up to 25 years. Jefferson County entered into the DOE's C-PACE Working group which is a collection of cities, counties and other governmental agencies that receive information and training from DOE on how to advance C-PACE in their entities. JeffCo is specifically looking to:

- Promote C-PACE to small businesses,
- Assist the states C-PACE office with ideas and projects specific to JeffCo, and
- Promote C-PACE through contractor workshops to get them onboard with recruiting projects.

approximately

\$9.4
million

in financing for
JeffCo businesses

In 2019, the sustainability commission helped facilitate various workshops about C-PACE for JeffCo businesses. Since 2017, JeffCo has had 8 C-PACE projects completed, accounting for over \$9,400,000 in financing and resulting in an estimated 3.7 million kWh/year energy savings (copace.com/market-data).



Jefferson County Facilities

In 2019, the Jeffco Facilities branch of PiE focused on holding the first ever Earth Day Fair for engaging county employees and other occupants of county buildings on energy and sustainability topics. The event included ten booths featuring county divisions/departments and community organizations. Hundreds of staff attended the fair and enjoyed educational activities, informational materials, and networking, including LED lightbulb giveaways, public health impacts of climate change, electric bicycles, county facilities sustainability metrics, and more. Additionally, the internal Jeffco Sustainability Program released the second annual Sustainability Report (*Access the 2019 Sustainability Report here: <https://www.jeffco.us/DocumentCenter/View/20098/2019-Jefferson-County-Sustainability-Report>*)

COMMUNITY ENGAGEMENT & ACKNOWLEDGMENTS

In addition to the community events described in the Partners in Energy summary, the Sustainability Commission met with various organizations and members of the public at their monthly meetings including the following:

- Citizens' Climate Lobby
- Climate Reality Project
- Evergreen Alliance for Sustainability
- and various JeffCo residents

The Sustainability Commission also began distributing simple sustainability tips geared toward residents through Engage JeffCo, the county's monthly e-newsletter for citizen to stay update on county news and announcements. The complete list of tips can be found on our website.

The Sustainability Commissioners would like to thank the Jefferson County Commissioners for their leadership, governance and support of sustainability initiatives, as well as Jabez Meulemans, Jefferson County Sustainability Coordinator, for his dedication and commitment to the County.

SUSTAINABILITY COMMISSION MEMBER BIOGRAPHIES

Jeff Wong, *Commission Chair*

Jeff has served as a member of the Sustainability Commission since 2016 and was chair in 2019. He has an environmental engineering background and is currently a Sustainability Planner with the City of Lakewood. One of his favorite things about living in the county is the wide variety and easy access to open space for trail runs and hikes.

"I really enjoy implementing our residential energy and water efficiency strategies from the county's Energy Action Plan. By hosting workshops and attending local events, I get the opportunity to meet new neighbors and help them save money, energy, and water, in addition to educating the public about the great work that the Sustainability Commission is doing for the community.

I think interacting and listening with our county residents and business owners is important because the JeffCo's sustainability priorities start at the community level. I enjoy hearing personal stories to really understand what drives someone's passion for a sustainable place to live and thrive now and in the future. There are so many great things to love about living and working in JeffCo and I want to preserve them for all generations to enjoy."

Rachel Emmer

Rachel has been a member of the Sustainability Commission since it was formed in 2015. She considers the Sustainability Commission's program with Xcel Energy, Partners in Energy, to be one of our major accomplishments. This ongoing program provides outreach and information to Jeffco residents, primarily in unincorporated areas of the county, on Xcel Energy's money and energy savings programs.

"The world our children and grandchildren will come to know as decision-making adults will bear very little resemblance to what we enjoyed as youngsters. It is critically important that Jeffco takes a leadership roll in Colorado and along the Front Range to proactively plan a response for and address the issues associated with Climate Change to ensure Jeffco residents continue to regard our community as one where families thrive, opportunities abound and the environment is respected."

Sydney Hamilton

Sydney joined the Sustainability Commission in 2018. Her involvement has included attending multiple outreach events and assisting in publishing informational outreach. She is working to establish a program to provide funding for local sustainability-related projects. She holds a Master of Architecture from Georgia Tech and a Bachelor of Fine Arts from the University of Georgia, and now specializes in facilities planning at Stantec, where she recently celebrated her 13th work anniversary. In addition to serving on the JeffCo Sustainability Commission, she sits on the Board of Directors for the Levitt Pavilion Denver.

"I believe that outreach and education are vital to sustaining healthy communities."

Erich Harris

Erich has worked with the Sustainability Commission for over four years and has played a role in advancing the Colorado Property Assessed Clean Energy (C-PACE) legislation and projects in the County and assisting with the County achieving its SolSmart Gold Award. He is also currently a volunteer at the Alpine Rescue Team in Evergreen performing search and rescue for people recreating in the mountains of Colorado.

"I am working on a project called C-PACE which stands for Colorado Property Assessed Clean Energy. This project is part of our Partners in Energy Program and uses a unique financing mechanism to make renewable energy and cost saving efficiency upgrades in businesses possible by incorporating payments into their property tax. This can allow businesses to upgrade their buildings or other property and be cash positive from day one after completing the upgrades. This benefits the business community by saving them money in the near term and also into the future.

I was able to work with other Commission Members and employees at Jeffco to receive a Gold SolSmart Designation in 2017. Jeffco was awarded this achievement for its effort to support renewable energy for its citizens through areas like permitting and ease of installation in the county. Only 40 other communities throughout the nation received this award."

Scott Hutchings

Scott is Director of Government Affairs for Waste Management's Four Corners area (CO, UT, AZ, NM). He manages the legislative and political activities and represents the company on various Boards throughout the area, including the Arizona Chamber of Commerce, Colorado Motor Carriers, Denver Metro Chamber Leadership Foundation, Arizona Trucking Association, Colorado Counties Foundation and the Jefferson County Sustainability Commission. He is currently the chairman of the Rocky Mountain Chapter of the National Waste and Recycling Association. He works closely with state and local elected officials to solve problems around sustainability. Prior to Waste Management, Scott spent his career working in campaigns and political relations at all levels of government. He has worked with elected officials, non-profit organizations and business. He is an Eagle Scout and a lifetime member of the National Eagle Scout Association.

"I have been on the Commission since its inception and have seen the budget grow and add a Sustainability Director for the county with a good set of goals and objectives. It has been really fun to help grow the Commission and even receive awards from CDPHE and most importantly it has increased value to the county. I think Jeffco has an opportunity to be a leader in the Denver Metro area and we are continuing to move the County in the direction with partnerships and serving as a place to share best practices."

Matt Mines

Matt works for the Regional Air Quality Council to electrify our transportation system and reduce mobile source emissions in the region. He has been with the Sustainability Commission since the Fall of 2018. Matt has been supporting the Commission in developing a proposed climate action plan for the County.

"The Sustainability Commission has the exciting opportunity to help assist the County and residents in creating a more sustainable community for all of us. Considering the environment and the sustainability of our community can provide tremendous benefit to our residents. We have the opportunity to act now to reduce harmful emissions and protect our community so that our kids can continue to enjoy all that Colorado has to offer.

Sustainability is important for the County to pursue because it provides us the opportunity to develop a more efficient, resilient and healthier community for all. The multitude of benefits are far reaching beyond just reducing harmful emissions impacting the environment. Sustainability creates the opportunity for social, environmental and economic benefits and a view towards the future."

Kimberly Pardue Welch

Kimberly joined the Jefferson County Sustainability Commission in September 2018. I enjoy outreach and education activities and have supported the Commission by working with commission colleagues to develop a communication plan, submitted sustainability tips to Engage JeffCo and had the honor of speaking with the JeffCo community at the County Fair and during the 2019 Earth Day event at the Jefferson County Government Center.

"Volunteering with the Sustainability Commission is important because I want to serve my community by supporting efforts that protect our spectacular JeffCo Open Spaces, environment and ultimately public health."

Alex Pray

Alex has served on the Jefferson County Sustainability Commission since 2017. In that time, he has had the opportunity to directly interact with residents in the county at several neighborhood events as well as at the Jefferson County Fair and Festival. Alex has enjoyed seeing the direct impact the commission has on awareness of the need for sustainability and sustainable best practices within the county.

"A focus on sustainability within the community can improve the health and well-being of all residents and businesses, improve resiliency at the county level, and ensure that everything that makes Jefferson County great will remain for future generations to enjoy."

Frank Rukavina

Frank is President and Senior Advisor at Sustainable Innovations Operative LLC, an environmental consulting firm providing sustainable business solutions that create competitively distinguishing company legacies. Frank was formerly the Sustainability Director at the Department of Energy's (DOE) National Renewable Energy Laboratory (NREL) for 9 years. He led initiatives to drive NREL's net-zero energy and near-zero waste campus constructing six LEED platinum buildings and one LEED gold including the world's largest net-zero energy building. Frank increased on-site renewable electricity from 7% to 33% of campus demand. He collaborated on sustainability projects throughout federal, state and local government, universities and commercial industry and provided direct support to the DOE Headquarters' Sustainability Performance Office to advance sustainable operations of other DOE facilities. He previously served 4 years as NREL's Director of Environment, Health, Safety and Quality (ESH&Q). Prior to joining NREL Mr. Rukavina was the ESH&Q manager at the Rocky Flats Closure Site,

winner of the Project Management Institute's International Project of the Year award. Frank holds a Master of Science degree in Environmental Policy Management from the University of Denver. Frank also serves on the University of Colorado at Denver's Sustainability Advisory Council, the Rooney Road Household Hazardous Waste Recycling Center Foundation Board and has been on numerous Board of Directors for non-profit foundations.

As an inaugural member of the commission he has been part of the majority of the initiatives the Sustainability Commission has achieved. This includes the JeffCo Partners in Energy program with Xcel Energy and the resulting JeffCo Energy Action Plan which helps residents, businesses and the county facilities save money and reduce GHG emissions. Frank supported JeffCo facilities joining the Colorado Environmental Leadership program and is currently co-leader of the county's commitment to climate action planning. He is a member of the feasibility team assessing the development of a JeffCo Sustainability Foundation to provide funding opportunities for new initiatives.

"The sustainability commission is a means of providing decades of expertise in environmental sustainability, economic risk assessment and program management to benefit the residents of the county at no cost. The commission saves taxpayer money and provides recommendations to lower environmental risk and build community and infrastructure resilience."



Attachment A: Dashboard Data

Jefferson County Data Dashboard

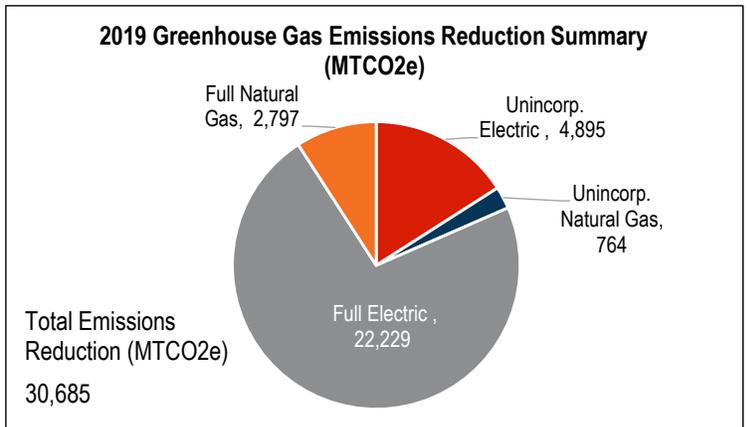
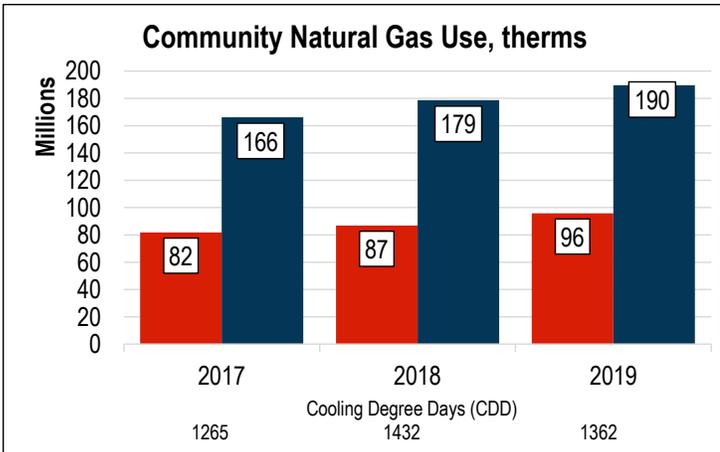
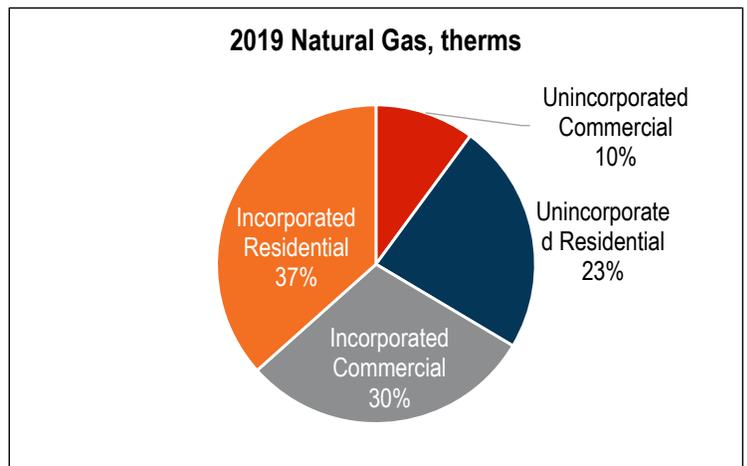
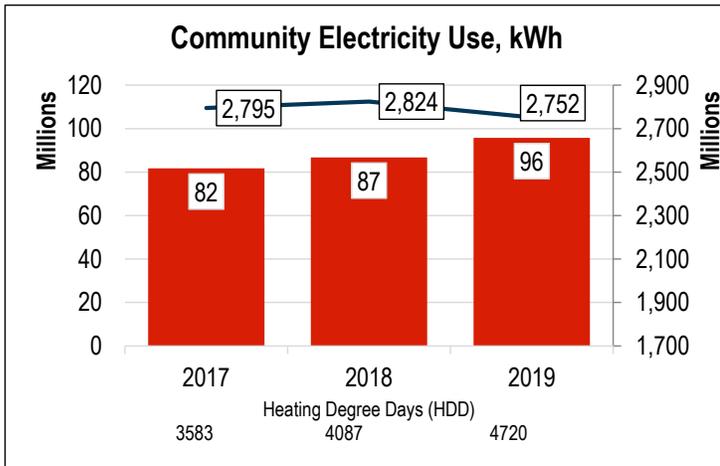
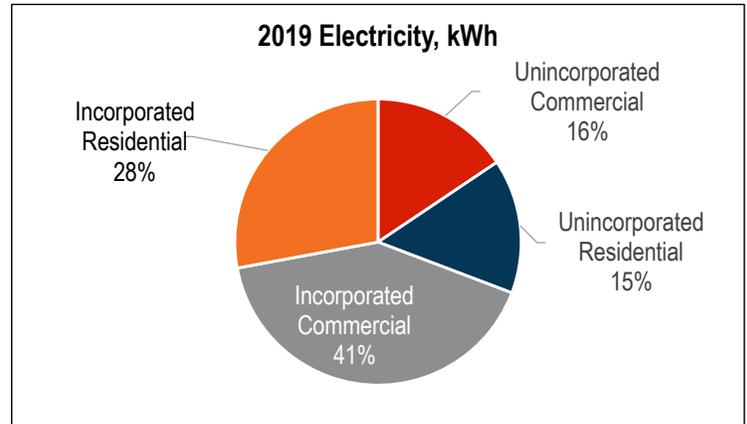
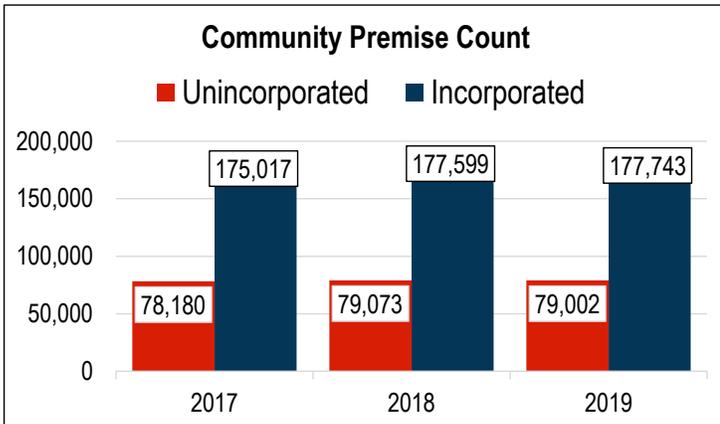
Xcel Energy 2019 Program Summary



Vision

"Jefferson County will provide opportunities to increase access to renewable energy to support a healthy, thriving, and resilient region. Jefferson County invites all community members to participate in its efforts to improve energy efficiency and develop renewable energy options."

Utility Consumption & Premise Trends



Xcel Energy provides Electricity & Natural Gas to the Community
 Participation counts for rebate programs reflect Xcel Energy offerings only
 Partners in Energy is a collaboration of the Community and Xcel Energy



PARTNERS IN ENERGY
 An Xcel Energy Community Collaboration

Jefferson County Data Dashboard

Xcel Energy 2019 Program Summary

Unincorporated Jefferson County

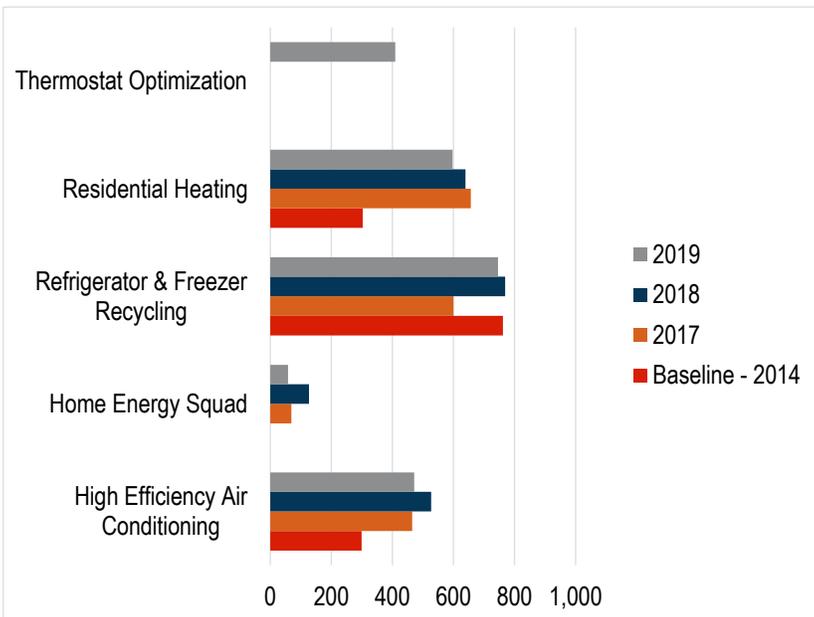


Residential Highlights & Activities

- Sustainability Commission members distributed energy efficiency information and conservation kits at the County fair in August.
- Jefferson County shared information about Home Energy Squad to County employees.
- Distributed 400 free conservation kits that contain 9 LED bulbs and a solar phone charger.

Top Programs - Residential Participation

2019 Total Premises Participation: **3,914**



Highlighted Xcel Energy Residential Programs

Key programs helping the Community meet its energy goals

Refrigerator and Freezer Recycling

This rebate program helps residential customers recycle their old, inefficient refrigerators and freezers by offering a \$50 rebate and free pick-up of the old equipment, resulting in energy savings for customers.

Residential Heating

This program offers rebates on new, efficient natural gas furnaces, resulting in both electricity and natural gas savings.

High Efficiency Air Conditioning and Evaporative Cooling

Rebates are available on both central air conditioning and evaporative coolers. Switching to newer, more efficient units leads to significant energy savings in the summer months.

Home Energy Squad®

With one visit to a residence, expert technicians can help residents affordably lower their energy bills by sealing up drafts, upgrading thermostats, and replacing inefficient lighting.

2019 Unincorporated Residential Metrics

Electricity DSM* Savings (kWh)

2,006,246

Natural Gas DSM Savings

142,302

Home Energy Squad & Home Energy Audit Participation

140

Solar Program Participants**

854

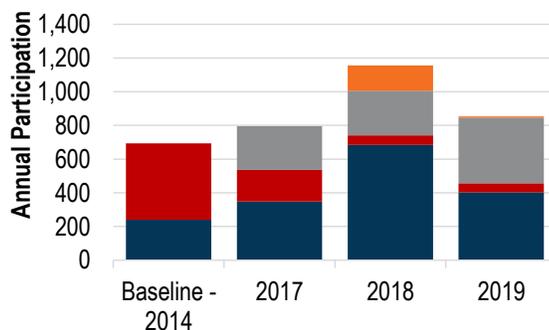
Windsource Participants

403

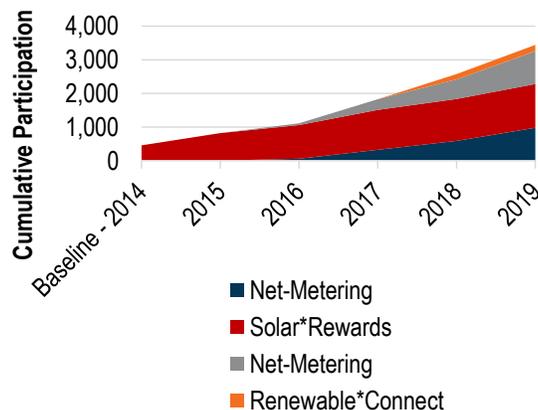
*DSM indicates Demand Side Management

**Solar Programs include Solar*Rewards, Net-Metering, Battery Pilot and Renewable*Connect

Annual Residential Renewables Participation Year-over-Year Participation



Cumulative Renewables Participation



Jefferson County Data Dashboard

Xcel Energy 2019 Program Summary

Unincorporated Jefferson County

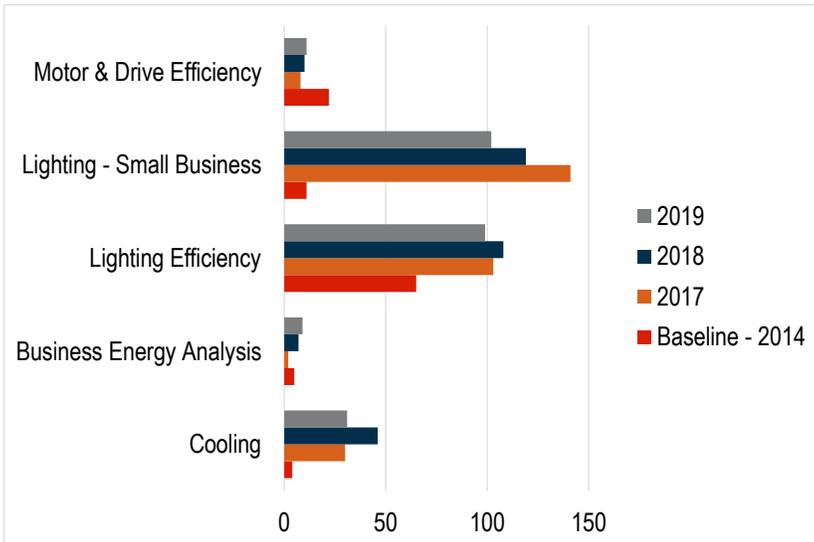


Commercial & County Facilities Highlights & Activities

- Shared information about C-PACE financing for businesses.
- Since 2017, Jefferson County has had 8 C-PACE projects completed, accounting for over \$9,400,000 in financing and resulting in an estimated 3.7 million kWh/year energy savings (source: copace.com/market-data)
- Distributed information about free onsite energy audits for businesses under 50,000 square feet.

Top Programs - Commercial Participation

2019 Total Premises Participation: **298**



Highlighted Xcel Energy Residential Programs

Key programs helping the Community meet its energy goals

Small Business Lighting and Lighting Efficiency

These programs help businesses upgrade their lighting to LED, install occupancy sensors, and more.

Cooling

Cooling rebates help lower the upfront cost of cooling systems and associated components, such as chillers, electronically commutated (EC) motors, and direct evaporative pre-coolers.

Business Energy Analysis

This study option provides free business energy audits for facilities less than 50,000 square feet and for customers with low demand (<100 kW), includes direct-installations of LED lamps, aerators, and pipe insulation.

2019 Unincorporated Commercial Metrics

Electricity DSM Savings (kWh)
7,398,882

Natural Gas DSM Savings
1,696

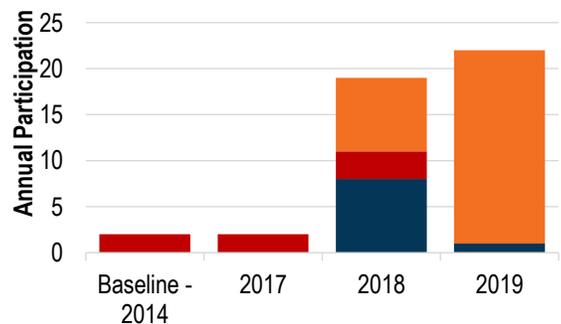
Small Business Lighting & Lighting Efficiency Participation
201

Solar Program Participants*
25

Windsorce Participants
1

*Solar Programs include Solar*Rewards, Net-Metering, Battery Pilot and Renewable*Connect

Annual Commercial Renewables Participation Year-over-Year Participation



Cumulative Renewables Participation

