

Commissioner Tighe moved that the following Resolution be adopted:

BEFORE THE BOARD OF COUNTY COMMISSIONERS

OF THE COUNTY OF JEFFERSON

STATE OF COLORADO

RESOLUTION NO. CC17-127

RE: Board of County Commissioners - Memorandum of Understanding -
Xcel Energy Partners for Implementation Phase of the Energy Action
Plan

Resolved that the Board of County Commissioners hereby approves the Xcel Energy Partners Memorandum of Understanding for the Implementation Phase of the Energy Action Plan and authorizes the Chairman of the Board to execute the MOU.

Commissioner Szabo seconded the adoption of the foregoing Resolution.
The roll having been called, the vote was as follows:

Commissioner Casey Tighe	Aye
Commissioner Donald Rosier	Nay
Commissioner Libby Szabo, Chairman	Aye

The Resolution was adopted by majority vote of the Board of County Commissioners of the County of Jefferson, State of Colorado.

Dated: April 18, 2017

MEMORANDUM

TO: Honorable Chairman and Members of the Board of County Commissioners
FROM: Katherine McIntire, Acting County Manager
RE: Xcel Energy Partners in Energy Memorandum of Understanding
DATE: April 18, 2017

Staff Recommendation:

That the Board of County Commissioners approve the Xcel Energy Partners Memorandum of Understanding for the Implementation Phase of the Energy Action Plan and authorize the Chairman of the Board to execute the MOU.

Resolution No.

CC 17 - 127

Background:

Jefferson County and its Sustainability Commission have been working with Xcel Energy to develop an Energy Action Plan (EAP) to benefit County residents and businesses. The EAP focuses on Jefferson County facilities and the commercial and residential sectors in unincorporated Jefferson County. For the commercial sector, the EAP will support implementation of Commercial Property Assessed Clean Energy Plan (C-PACE) financing and a Business Lighting Efficiency Campaign to help businesses pay less on their electricity bills. The EAP will support residences with a "Zero Energy Ready" Home Outreach Campaign and a voluntary neighborhood energy challenge. The EAP will also support the promotion of Jefferson County as a leader in responsible stewardship of taxpayer dollars and the environment through energy efficiency. The EAP does not establish energy goals; it is a public/private partnership focusing on voluntary programs that provide opportunities to reduce energy costs and increase access to renewable energy.

The EAP is an exhibit to the proposed Memorandum of Understanding (MOU) between Xcel Energy and Jefferson County. For the 18-month term of the MOU, Xcel Energy commits to provide a total of 372 hours of staff and consultant support and over \$10,000 for materials and funding for County staff time to implement the EAP. If the parties determine that additional staff and consultant time is needed, Xcel agrees to consider authorizing additional support.

By its terms the MOU is a voluntary agreement between the parties and the EAP is not adopted by Jefferson County as formally-approved goals or policies. It does not guide land use, regulatory, or other County decision-making processes. Participation by businesses and residents in the EAP is voluntary and implementation of the EAP will be coordinated with other County energy and conservation programs and activities.

BCC Briefing Presented: January 24, 2017 and March 7, 2017

Prepared by: Steve Snyder and Deborah Churchill

Distribution:





Original returned to: Diane Keathley, Clerk to Board

Copies to: Deborah Churchill and Steve Snyder

BCC HEARING ROUTING FORM (non-purchasing items)

Contacts: Originating Division and Contact: Mark Danner Phone: 303.271.5008
 County Attorney Contact: Steve Snyder Phone: 303.271.8926

Xcel Energy Partners in Energy Memorandum of Understanding Phase 2: Implementation

ROUTING					
O R D E R	Division	Authorized Signatures Name/Initials	Date Rec'd	Date Fw'd	Comments
()	Originator				
()	Division Director	M. Danner 	4/12/17	4/12/17	
(1)	Department Director	K. Newman 	4/12/17		
(2)	County Attorney	S. Snyder 	4/12	4/12	
()	Elected Official				
(3)	BCC Agenda Coordinator	J. Fredricksen 			

09/02/2009

**Xcel Energy Partners in Energy
Memorandum of Understanding
Phase 2: Implementation**

THIS MEMORANDUM OF UNDERSTANDING ("MOU"), dated this 19th day of April, 2017, is made and entered into by and between the **COUNTY OF JEFFERSON, STATE OF COLORADO, a body politic and corporate** ("Jefferson County") and **PUBLIC SERVICE COMPANY OF COLORADO d/b/a XCEL ENERGY** ("Xcel Energy").

RECITALS

- A. Through Xcel Energy's Partners in Energy offering and with the support of Jefferson County's Sustainability Commission, the Jefferson County Energy Action Plan ("Energy Action Plan"), attached as **Exhibit A** and incorporated by reference, has been developed.
- B. The Energy Action Plan sets out voluntary opportunities to reduce energy use and increase access to renewable energy to support healthy, thriving and resilient communities in primarily the unincorporated areas of Jefferson County.
- C. The intent of this MOU is to outline how Jefferson County and Xcel Energy will continue to work together to support the implementation of the Energy Action Plan for Jefferson County facilities and the residential and commercial sectors in unincorporated Jefferson County.

NOW, THEREFORE, in consideration of the mutual promises and conditions contained herein, it is agreed as follows:

- 1. **MOU Term.** The term of this MOU begins on the date of its full execution by the parties and expires on September 30, 2018. Either party may terminate this MOU upon 30 days' written notice to the other party. Upon termination both parties shall be relieved of all obligations and commitments set forth in this MOU.
- 2. **Voluntary Agreement.** This MOU is a voluntary agreement and not intended to be legally binding on either party or on any other person or organization. The Energy Action Plan opportunities are voluntary and are not mandates or regulatory in any manner. The Energy Action Plan is not adopted by Jefferson County as formally-approved goals or policies and the Plan shall not guide land use, regulatory, or other Jefferson County decision-making processes.
- 3. **Coordination with Jefferson County Programs and Activities.** All Energy Action Plan efforts undertaken by Jefferson County and Xcel Energy shall be in coordination with

other Jefferson County energy and conservation-related efforts and shall be consistent with Jefferson County programs and Policies.

4. Xcel Energy will support Jefferson County's Energy Action Plan efforts, in the following ways:

- **Commercial Sector:**

- Provide support for launching Commercial Property Assessed Clean Energy (C-PACE) financing to the businesses operating within Jefferson County.
 - Assist in the delivery of three educational workshops targeted at Jefferson County businesses and the trade involved providing and installing equipment associated with energy-efficiency and renewables. We will support in the development of content for the workshop, assist in the coordination logistics, develop advertising collateral and fund up to \$100 in printing and distribution cost for each workshop and provide up to \$400 per workshop for food and beverages.
 - Develop case studies for three projects that successfully save customers money on their energy bill through equipment installed that is financed through C-PACE.
- Provide support to conduct a Business Lighting Efficiency Campaign to help businesses pay less on their electricity bills.
 - Draft outreach materials and coordinate delivery of the marketing campaign to reach target business areas. Provide up to \$500 in print and advertising support.
 - Coordinate the work of Xcel Energy Small Business Lighting implementation team to leverage C-PACE where appropriate.
 - Develop educational and outreach materials to assist large businesses in identifying opportunities to save energy and dollars by converting their lighting to more energy efficient technologies.
 - Include case study development and a lighting fact sheet for additional information and tools.
 - Support the development of materials to educate contractors about the opportunity to leverage rebate programs to sell lighting equipment.
- Support funded by Xcel Energy for this focus area is not to exceed 160 hours. These hours will include those provided through our Partners in Energy team from the Brendle Group and does not include support provided by Xcel Energy internal staff. If the parties determine 160 hours of Brendle Group support will be insufficient to complete this focus area, Xcel agrees to consider authorizing sufficient additional support from Brendle Group to complete this focus area.

- **Residential Sector:**

- Support the delivery of a “Zero Energy Ready” Home Outreach Campaign.
 - Lead the development of outreach materials and marketing collateral to promote Xcel Energy Home Energy Squad and Home Energy Audit offering. Coordinate campaign delivery with Xcel Energy program staff.
 - Identify cost-effective and innovative opportunities for residential outreach and education on home energy savings.
 - Provide \$600 dollars in print and advertising support.
- Provide support for a voluntary neighborhood energy challenge.
 - Assist in design and delivery of an energy challenge to further promote home energy savings and leverage group participation to drive additional energy saving.
 - Provide neighborhood challenge tracking. Public disclosure of energy challenge data shall only occur in aggregate; data from individual homes shall not be disclosed to the public.
 - Provide \$500 for printing and advertising of recruitment and energy challenge materials or outreach event support.
 - Provide \$700 for neighborhood energy challenge prize support. The actual prize being funded needs to be approved by Xcel Energy.
- Support funded by Xcel Energy for this focus area is not to exceed 140 hours. These hours will include those provided through our Partners in Energy team from the Brendle Group and does not include support provided by Xcel Energy internal staff. If the parties determine 140 hours of Brendle Group support will be insufficient to complete this focus area, Xcel agrees to consider authorizing sufficient additional support from Brendle Group to complete this focus area.

- **County Facilities:**

- Assist in the promotion of Jefferson County as a leader in responsible stewardship of taxpayer dollars and the environment through energy-efficiency.
 - Support the development of outreach materials and a messaging strategy for employees of Jefferson County.
 - Develop materials and support to drive occupant engagement and behavior change activities that result in lower energy consumption.
 - Coordinate with County staff and McKinstry on the promotion of existing energy improvement projects and the energy use intensity (EUI) baselines.
 - Support the development and delivery of employee surveys to establish a baseline of knowledge and awareness.
 - Support ongoing tracking of Energy Use Intensity (EUI) by facility for County buildings as appropriate.
 - Provide \$400 to support an employee outreach event.

- Support funded by Xcel Energy for this focus area is not to exceed 72 hours. These hours will include those provided through our Partners in Energy team from the Brendle Group and does not include support provided by Xcel Energy internal staff. If the parties determine 72 hours of Brendle Group support will be insufficient to complete this focus area, Xcel agrees to consider authorizing sufficient additional support from Brendle Group to complete this focus area.
- **Additional support:**
 - Xcel Energy will provide up to \$7,500 in co-funding to support Jefferson County contracting or employing an incremental personnel resource to assist in the delivery of the Energy Action Plan.
 - Work performed by this resource must be incremental to any work currently underway in Jefferson County.
 - Jefferson County will be responsible for the hiring and work direction for this resource. Xcel Energy does not assume any liabilities associated with services provided or work performed by this resource.
 - Work supported by this role will facilitate implementation of the Energy Action Plan should not incorporate installations services already offered under the Xcel Energy portfolio of programs such as Small Business Lighting or Commercial Refrigeration.
 - Quarterly tracking and reporting on Xcel Energy program participation by the businesses and residents in Jefferson County. Reporting will include participant counts and energy reduction.
 - Continued support for the strategy teams. This will include facilitation of team calls as appropriate, task tracking and reporting, and coordination with Xcel Energy program staff.
 - Support funded by Xcel Energy for this work is not to exceed 60 hours. These hours will include those provided through our Partners in Energy team from the Brendle Group and does not include support provided by Xcel Energy internal staff. If the parties determine 60 hours of Brendle Group support will be insufficient to complete this focus area, Xcel agrees to consider authorizing sufficient additional support from Brendle Group to complete this focus area.

5. Jefferson County's and its Sustainability Commission's participation in the Energy Action Plan are described as follows:

- **Commercial Sector:**
 - Outreach and delivery of C-PACE financing.
 - Identify the target audiences for C-PACE workshops and coordinate with Xcel Energy and C-PACE to perform outreach to these groups and invite them to County sponsored workshops.
 - Provide a venue for the three workshops C-PACE educational workshops.

- Develop content for the workshops that addresses the County's role in the support and delivery of C-PACE.
 - Supporting the education and application for businesses interested in applying to C-PACE.
 - Reporting on participation levels and results to educate and inspire other businesses.
 - Work to complete four C-PACE financing projects of energy-efficient equipment or renewable technologies in unincorporated Jefferson County.
- Support delivery of a Commercial Lighting Outreach Campaign to businesses in unincorporated Jefferson County.
 - Assist in identifying target businesses and contact lists.
 - Support outreach and share campaign information through County communication channels.
 - Goals will include:
 - Contact 200 small businesses and engage 40 in Xcel Energy's Small Business direct install lighting, with 15 of those participating businesses installing additional lighting equipment.
 - Contact 300 large businesses and engage 90 in installing energy efficient lighting equipment.
- **Residential Sector:**
 - Assist in the development of a Zero Energy Ready Home campaign.
 - Provide input into the development of materials to be developed and distributed jointly with Xcel Energy and Jefferson County.
 - Support residential outreach activities to support promotion of Xcel Energy Home Energy Squad and Home Energy Audits.
 - Goals will include:
 - Outreach to 3,000 households with 300 participating in Xcel Energy's Home Energy Squad program or receiving a rebate for a Home Energy Audit.
 - Increasing conservation program participation in the following Xcel Energy programs by 50%: Single Family Weatherization, Evaporative Cooling, Air Conditioning, Insulation and Air Sealing, Refrigeration Recycling and Residential Heating.
- **County Facilities:** Educate Jefferson County staff on recent energy-efficiency improvements and assist in implementation of best practices for energy management.
 - Assist in the development and delivery of employee materials and outreach to educate staff on the details and benefits of recent

upgrades. Educational support may include delivery of employee workshops.

- Administer a staff survey to establish baseline business practices and identify best opportunities for improving energy efficiency practices.
 - Continue EUI tracking of building performance.
- Providing Xcel Energy an opportunity to review marketing materials to assure accuracy when they incorporate the Xcel Energy and Partners in Energy logos or reference Xcel Energy or any of its products or services.
 - Sharing the collateral, energy action plan document, supporting work documents, and implementation results from Jefferson County with the public. The experience, successes, and lessons learned from this community will inform others looking at similar or expanded initiatives.
6. **Notices.** All communications pertaining to this MOU shall be directed to Mark Danner, Director of Facilities Management on behalf of Jefferson County and Tami Gunderzik on behalf of Xcel Energy. The contact information for each person is:

XCEL ENERGY:

Tami Gunderzik
Sr. Product Manager
414 Nicollet Mall, 401-6
Minneapolis, MN 55401
Phone: 612-330-6686
Email Address: tami.gunderzik@xcelenergy.com

JEFFERSON COUNTY:

Mark Danner
Jefferson County Director of Facilities Management
100 Jefferson County Parkway
Golden, CO 80419
Phone: 303-271-5000
Email Address: mdanner@jeffco.us

7. **No Employment Relationship.** By entering into and performing under this MOU neither party is acting as an agent, servant or employee of the other.
8. **Colorado Governmental Immunity Act.** By entering into this MOU Jefferson County is not waiving or limiting any rights or protections from liability provided by the Colorado Governmental Immunity Act, Section 24-10-101, *et seq.*, other statutes, constitutional provisions, or common law.
9. **Non-Appropriation.** This MOU shall not be interpreted to impose a multi-year obligation on Jefferson County. Financial commitments of Jefferson County under this MOU payable after the current fiscal year are contingent upon funds for this MOU being

appropriated, budgeted and otherwise made available by Jefferson County. If funds for this MOU are not budgeted and appropriated in any year subsequent to the fiscal year of execution of this MOU, Jefferson County may immediately terminate this MOU by giving Xcel Energy notice of such non-appropriation.

10. **Third-Party Beneficiaries.** Nothing contained in this MOU shall give or allow any claim or right of action by any third party. The parties intend that any third party shall be deemed an incidental beneficiary only.

11. **Officials Not to Benefit.** No elected or employed member of either party shall be paid or receive, directly or indirectly, any share or part of this MOU or any benefit that may arise therefrom.

12. **Execution by Counterparts; Electronic Signatures.** This MOU may be executed in two counterparts, each of which shall be deemed an original and shall constitute one and the same instrument. The parties approve the use of electronic signatures for execution of this MOU. Only the following two forms of electronic signatures shall be permitted to bind the parties: (1) Electronic or facsimile delivery of a fully executed copy of a signature page; or (2) The image of the signature of an authorized signer inserted onto PDF format documents. All use of electronic signatures shall be governed by the Uniform Electronic Transactions Act, C.R.S. §24-71.3-101 through §24-71.3-121.

COUNTY OF JEFFERSON, STATE OF
COLORADO:

By: Libby Szabo, Chairman
Board of County Commissioners

Date: 4-19-2017

XCEL ENERGY:

[Signature]

Date: 3/28/2017

APPROVED AS TO FORM:

[Signature]

Steven L. Snyder
Assistant County Attorney



An Energy Action Plan for **Jefferson County, Colorado**

March 30, 2017

EXHIBIT A

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Acknowledgments

Thanks to the following organizations and individuals for participating in developing this Energy Action Plan.

Community's Energy Action Planning Team

The planning team was formed from a varied group of Jefferson County representatives, County and municipal staff, and other partner organizations committed to working on energy efficiency in the community.

Jefferson County Sustainability Commission

Rachel Emmer (chair), Evergreen's Alliance for Sustainability
 Erich Harris, Evergreen's Alliance for Sustainability
 Jenny Heeter, National Renewable Energy Laboratory
 Colleen Jorgensen, Red Rocks Community College (retired)
 Frank Rukavina, National Renewable Energy Laboratory

Business and Organizational Representatives

Ginny Ades, Evergreen's Alliance for Sustainability, Xcel Energy Residential Auditor
 Mark Bana, Red Rocks Community College
 Ed Hegwood, Rocky Mountain Education Center, Red Rocks Community College
 Patti Mason, United States Green Building Council
 Peggy Morgan, Red Rocks Community College
 Don Saal, United States Green Building Council
 Alison Schwabe, McKinstry
 Steve McCannon, Regional Air Quality Council

City and Other Governmental Representatives

Jessica Prosser, City of Arvada
 Michael Turner, Colorado Energy Office
 Jonathan Wachtel, City of Lakewood
 Theresa Worsham, City of Golden

Jefferson County Representatives

Deborah Churchill, Jefferson County Board of County Commissioners
 Hal Corin, Jefferson County Public Schools
 Mark Danner, Jefferson County Facilities
 Casey Tighe, Jefferson County Board of County Commissioners
 John Wolforth, Jefferson County Planning and Zoning

Xcel Energy Representatives

Preston Gibson, Area Service Representative
 Tami Gunderzik, Partners in Energy Program Manager
 Conor Merrigan, Partners in Energy Facilitator
 Shelby Sommer, Partners in Energy Facilitator

JEFFERSON COUNTY ENERGY ACTION PLAN

Executive Summary

Jefferson County desires to support healthy, thriving, and resilient residential and commercial sectors in the County by providing opportunities to reduce energy use and increase access to renewable energy. These voluntary initiatives will promote economic development in the County through energy efficient projects, strengthen communities through neighborhood coordination and involvement, and offer educational opportunities for residents to learn how to save money on their utility bills. The initiatives will focus on unincorporated Jefferson County; any efforts within cities or towns will be coordinated with our local government partners.

Implementation of the Energy Action Plan will also assist with and enhance Jefferson County's continuing energy and resource conservation efforts involving County facilities.

To support achievement of its goals, Jefferson County will focus on these priority strategies:

Commercial PACE Financing

Building owners will be encouraged to voluntarily take advantage of Commercial Property Assessed Clean Energy (C-PACE) financing and see energy savings.

Business Lighting Retrofits

Both small and large commercial businesses in Jefferson County will be encouraged and assisted to participate in voluntary lighting retrofit projects.

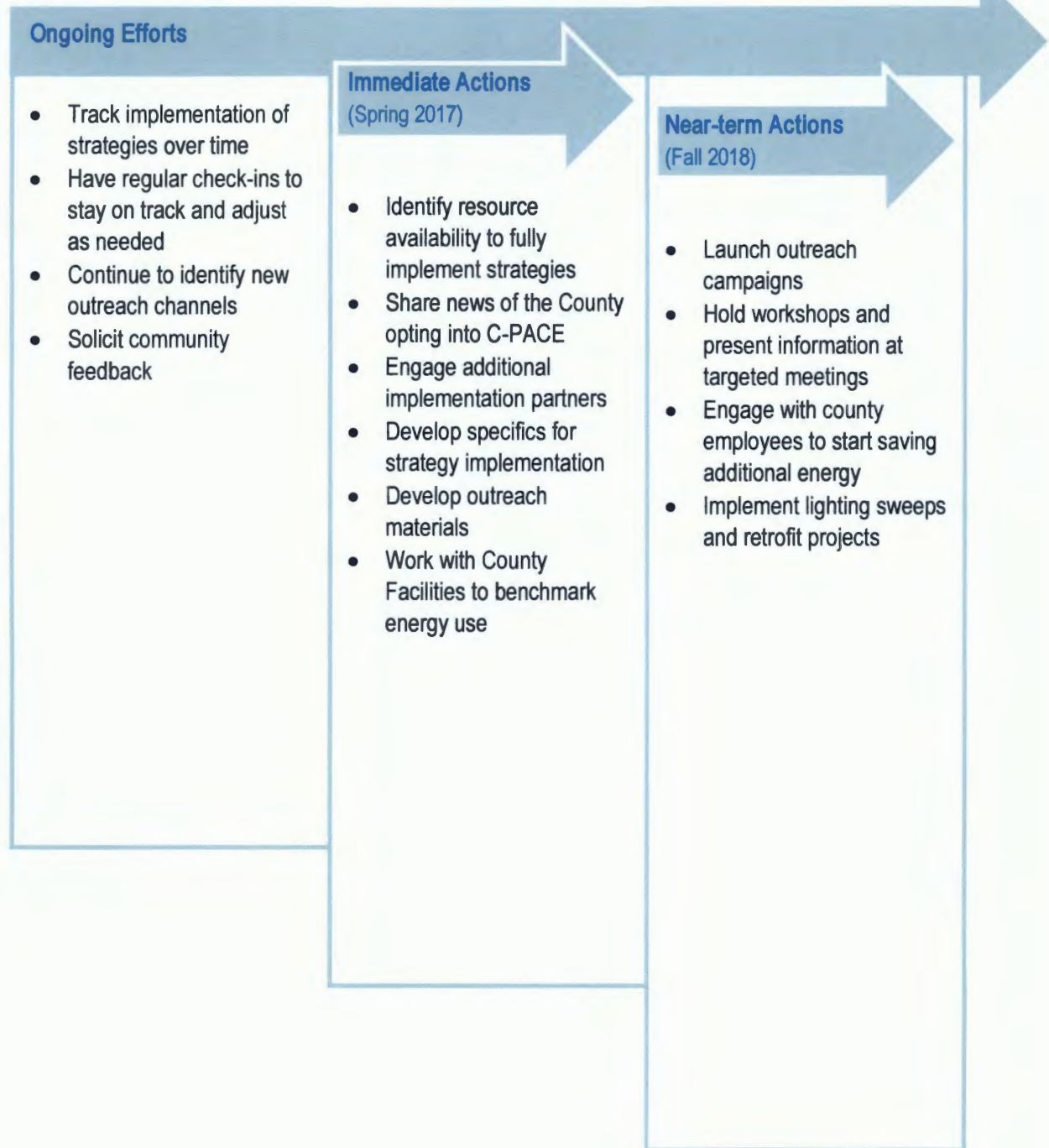
Zero Energy Ready Homes

Jefferson County residents will be provided with information about their utilities and ideas and encouragement to make their homes energy high performers.

Leadership by Example

Jefferson County will strive to build on their recent energy retrofits to increase energy savings and highlight best practices.

Playbook for Achieving Our Goals



Introduction

Jefferson County includes 12 municipalities, many with their own energy and sustainability programs. This Energy Action Plan is intended to supplement and be informed by those programs, and focuses the scope of its analysis to the unincorporated areas of Jefferson County. The all-volunteer Jefferson County Sustainability Commission has acted as the convening body for the plan development and will likewise remain active in the implementation efforts. Several of the largest municipalities, namely Golden, Arvada, and Lakewood, have all participated in the planning process and brought their collective experience to bear along with a willingness to share in the implementation efforts. Representatives from local institutions contributing included Jeffco Public Schools, Red Rocks Community College, and the National Renewable Energy Lab. Because some of the topics were of statewide interest and have the potential to tap into statewide programs, the Colorado Energy Office as well as the Regional Air Quality Council were also represented. Finally, Jefferson County elected officials and staff participated as their time allowed, with attendees from the County Commissioners, a staff liaison, Facilities, and Planning and Zoning. This group was facilitated by the Xcel Energy team and came together in order to develop and implement a plan to address energy use in unincorporated Jefferson County.

The roughly six-month planning period will be followed by an eighteen-month supported implementation period as the community transitions to putting the identified strategies in motion. Some of the implementation strategies started in tandem with plan completion, while others will require additional development in order to successfully launch and have the desired impact. Each strategy has been developed and vetted by a sub-team of the energy action planning team, and the strategies that have been selected reflect the best input of the entire team. The analytical support to help quantify impact and allow for calibration of the strategies has been provided via the custom COMPASS tool using Jefferson County Xcel Energy customer data. The COMPASS tool allows the community to both look backwards at the historical data for the County as well as to project forward the impacts of various strategies. While not all strategies are quantified, those that can be provide a sense of the final impact the actions initiated during the planning process can make.

Xcel Energy Partners in Energy

Xcel Energy is the main electric and gas utility serving Jefferson County, though there are numerous other utility providers in the County. In the summer of 2014, Xcel Energy launched Partners in Energy to support communities, such as Jefferson County, in developing and implementing energy action plans. The content of this plan is derived from a series of four planning workshops held in the community. The process is supported with information around energy use and past program participation from Xcel Energy, facilitation services, and development of this Energy Action Plan.

Partners in Energy has worked with Jefferson County to coordinate support for implementing the plan and has developed a Memorandum of Understanding that outlines specific support Xcel Energy will provide to help Jefferson County deploy its strategies and achieve its goals.



Figure 1: Partners in Energy Process for Success



Figure 2: Resources from Xcel Energy for Implementation

Jefferson County Background

Jefferson County, Colorado is the “Gateway to the Rocky Mountains”. The county was established in 1861 after the gold rush of the late 1850s when it was one of the original 17 counties established by the Territory of Colorado. It was primarily an agricultural and mining area for many years after being established. Today, it is a thriving suburban, business, industrial, and recreational community.

Geography, Population, and Demographics

The county is located west and southwest of Denver, nestled into an area where the Great Plains meet the Rocky Mountains. Its 773 square miles feature rolling grasslands, natural foothills, and rugged mountains. Most of the population lives in the 12 incorporated suburban communities that are primarily located on the eastern side of the county bordering Denver (see Figure 3). However, there are about a dozen smaller unincorporated communities scattered throughout the rest of the county.

The county's population is approximately 540,000 people, with about 190,000 of those people living in unincorporated areas. Population growth has been faster in unincorporated areas, with a 4.7% increase in population between 2010 and 2012. The county as a whole experienced 2.5% growth during the same timeframe. The population of the entire county is expected to increase 12.5% by 2040, to about 630,000 people.

The current median age in the county is 41, with about 13% over the age of 65 and 21% under 18 years of age. However, by 2040, over 25% of the county's population is expected to be over 65 years old. Jefferson County is predominantly Caucasian (80%), while about 14% of the county's population is of Hispanic origin. In unincorporated areas, about 89% of the population is Caucasian and 6% is of Hispanic origin.

Housing

There are approximately 230,000 housing units in Jefferson County, more than 95% of which are occupied. In unincorporated areas, there are approximately 78,000 housing units. Like the population itself, housing units in the county are aging. Only 25% of all housing units have been built after 1990, and 64% have three bedrooms or more. This combination of older, larger homes presents tremendous opportunities for energy efficiency improvements and savings. Low vacancy rates, estimated at about 3% in 2014, imply that the housing inventory is tight. This provides further evidence that energy efficiency updates for the older housing single-family stock could be well supported.

Large multi-family apartments (20 or more units) comprise 10% of the county's housing stock. However, over 50% of renter households spend 30% or more of their monthly income on housing and utility costs. Energy efficiency improvements in these apartment areas could likely support revitalization and reinvestment efforts, as well as provide savings for cost-burdened residents.

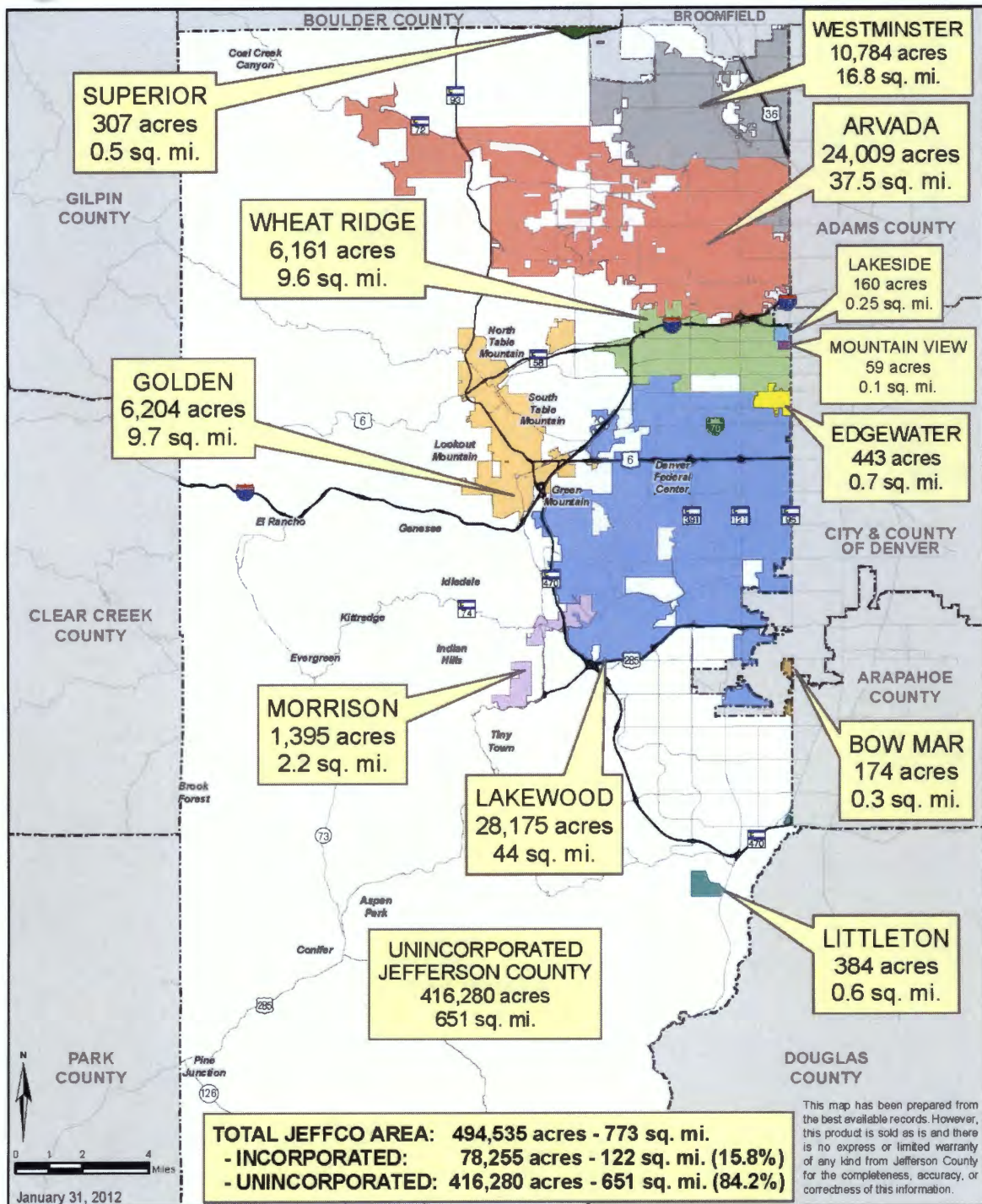


Figure 3: Jefferson County Cities and Unincorporated Areas

Businesses and Economy

Jefferson County businesses employ about 223,000 workers. Unemployment in 2014 was estimated at 4.9% and the median household income is about \$70,000. Major industries include healthcare, clean energy technology, information technology, aerospace, and banking.

Jefferson County's Comprehensive Plan identifies numerous priorities to grow the economy and support businesses in the community including the following:

- Allow for research and development of new technologies
- Recruit and support industries that create primary jobs
- Promote technology transfer opportunities
- Support and encourage partnerships between businesses and educational institutions
- Incentives to attract new and retain existing businesses

Many of these priorities also relate to energy action planning in Jefferson County in that reducing utility costs through energy efficiency strategies can help existing and new businesses thrive. Furthermore, strategies focused on renewable technologies, financing mechanisms, and collaboration with educational institutions will help Jefferson County businesses create primary jobs, test and invest in new technologies, and forge new partnerships across the community.

Commitment to Sustainability

Jefferson County recognizes the importance of sustainability in the present and looking toward the future. In 2014, the Sustainability Commission was founded by the Board of County Commissioners, with the purpose to create an open collection of sustainability best practices and promote sustainability opportunities available to residents and businesses in Jefferson County. The commission is comprised of nine members, serving two-year terms in a voluntary, advisory role. Members represent a cross-section of business, research, and educational communities. Commission members are Partners in Energy collaborators with a confirmed commitment and priority towards the development and implementation of this Energy Action Plan. Participating in Partners in Energy supports their goal to work on programs and initiatives throughout the year to promote sustainability efforts in the County.

Jefferson County's Comprehensive Master Plan, updated in late 2012, applies to unincorporated areas where the County has land use authority. As an advisory document, it guides land use decisions made by the Jefferson County Planning Commission and Board of County Commissioners. It is used in conjunction with community plans and special plans. The Comprehensive Master Plan defines the primary vision for land use in Jefferson as the following:

A balance of residential, Commercial, Community, Recreational, Agricultural and Open Land uses, which protects and maintains the quality of the mountain and plains environment, provides economic vitality for current and future generations, respects private property rights, and maintains Jefferson County as a place of choice to live, work, and recreate.

This primary vision is supported by a series of supporting vision statements that pertain to other aspects of life in Jefferson County. These supporting visions that are most directly related to energy are included below.

- A collection of healthy, energy-efficient communities with a range of housing types for all income levels that address the needs of those who work and live here and provide opportunities for those with special needs.
- A County that fosters sustainable economic development by accommodating a balance of land uses that create Primary Jobs, maintain and enhance the County's fiscal viability, economic diversity, and social and natural environment while enhancing the economic vitality of the County.
- A County that ensures adequate and reliable services, facilities and utilities, for the health, safety, and welfare of its residents.
- A County that encourages innovation and leadership in technological solutions and business enterprises to distinguish the County as a quality, forward-thinking business environment.
- A County that is a leader in the development of renewable and alternative energy, that leverages the renewable innovation resources that reside in the County and welcomes public/private partnerships to foster innovation to promote reliable energy supplies and all forms of energy sources.

The Comprehensive Master Plan also includes a section focused on sustainability, namely the ideals that shape the goals and policies of the plan: economic vitality, environmental stewardship, and social concerns. In addition to establishing the vision and policies in the Comprehensive Master Plan, Jefferson County has implemented numerous energy efficiency and sustainability practices in County facilities and across the community, as documented in the "Where Are We Now?" section of this plan.

Furthermore, many of the municipalities and organizations within Jefferson County are recognized leaders in their sustainability and energy efforts, including but not limited the cities of Lakewood, Arvada, and Golden, Red Rocks Community College, Jeffco Public Schools, and the National Renewable Energy Laboratory. Their participation in developing the Energy Action Plan has been invaluable in developing a plan that reflects the local assets, opportunities, and experiences of the Jefferson County region. A summary of existing practices and efforts is also included in the "Where Are We Now?" section of this plan.

The Case for a Community Energy Action Plan

As a community embracing the challenge of thriving in a resource-constrained world, Jefferson County recognizes that a community Energy Action Plan can complement existing efforts to enhance energy savings and increase awareness of the benefits of making responsible energy decisions. While many of the county's municipalities already offer energy-focused programs and opportunities to residents and businesses, the unincorporated areas of the County do not have access to similar offerings, nor do they receive the same level of communications from municipal outreach efforts, resulting in lower participation rates in unincorporated areas. Therefore, this plan will help fill some of these gaps for unincorporated Jefferson County, as well as complement other community and countywide planning efforts. Furthermore, this Energy Action Plan will help provide focus for the Jefferson County Sustainability Commission in coming years, as one of its keystone initiatives that will support residents, businesses, and other organizations in reducing their energy impacts, conserving resources, and connecting with opportunities for rebates and savings.

Where Are We Now?

Baseline Energy Analysis

An early step in the Partners in Energy planning process is to review the current energy use, in this instance for the portion of the entire county served by Xcel Energy, plus a more detailed review of the unincorporated areas that represent the focus of this plan. Electricity and natural gas data supplied by Xcel Energy show that **Jefferson County as a whole** has more than 250,000 residential, commercial, and industrial accounts that consumed approximately 4 billion kWh of electricity and 270 million therms of natural gas in 2014. In the **unincorporated areas**, there are approximately 65,400 residential accounts and 5,600 commercial and industrial accounts that consumed 1.2 billion kWh of electricity (30% of overall county electricity consumed) and 140 million therms of natural gas (52% of overall county natural gas consumed) in 2014 (Figure 4). It should be noted that these accounts represent only Xcel Energy customers and there are an unknown number of customers for other electricity and natural gas providers in unincorporated Jefferson County.

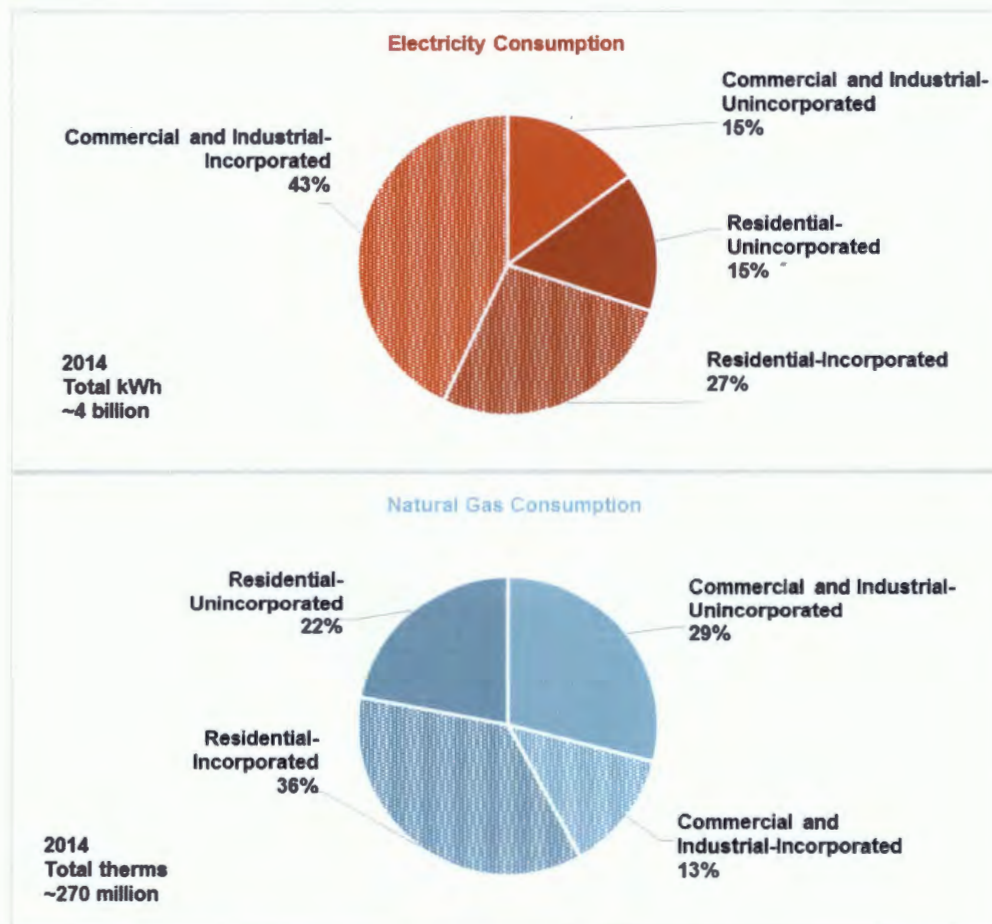


Figure 4: Jefferson County - Electricity (top) and Natural Gas (bottom) Consumption in 2014¹

¹ Due to rounding numbers may not match unincorporated energy consumption charts exactly.

In the unincorporated areas of the county, residential accounts and businesses each consumed 50% of total electricity (Figure 5). However, businesses consumed 56% of natural gas.

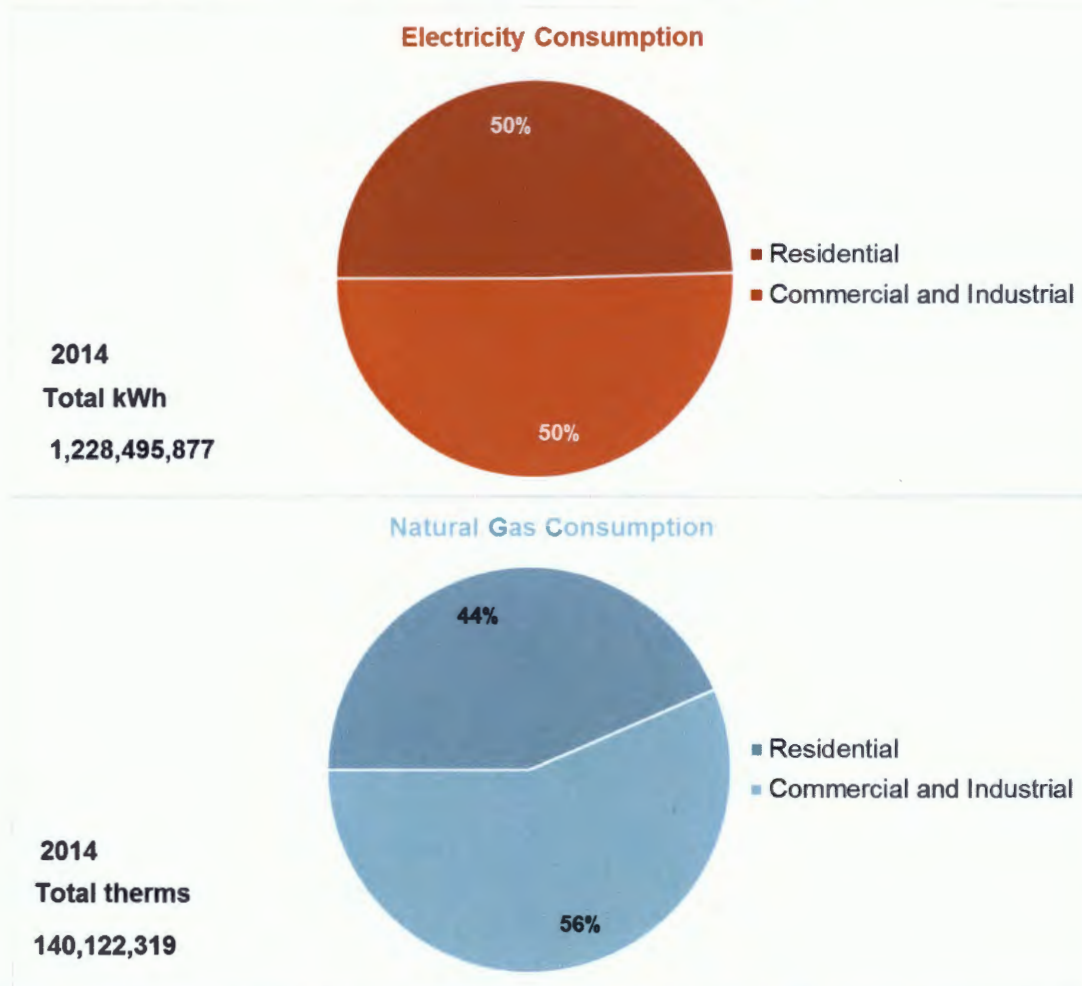


Figure 5: Unincorporated Areas in Jefferson County - Electricity (top) and Natural Gas (bottom) Consumption in 2014.

In terms of average annual participation in Xcel Energy's Demand Side Management (DSM) programs, there have been more than 3,500 participants in residential programs, and more than 370 participants in commercial programs for the past three years (2012, 2013, and 2014).

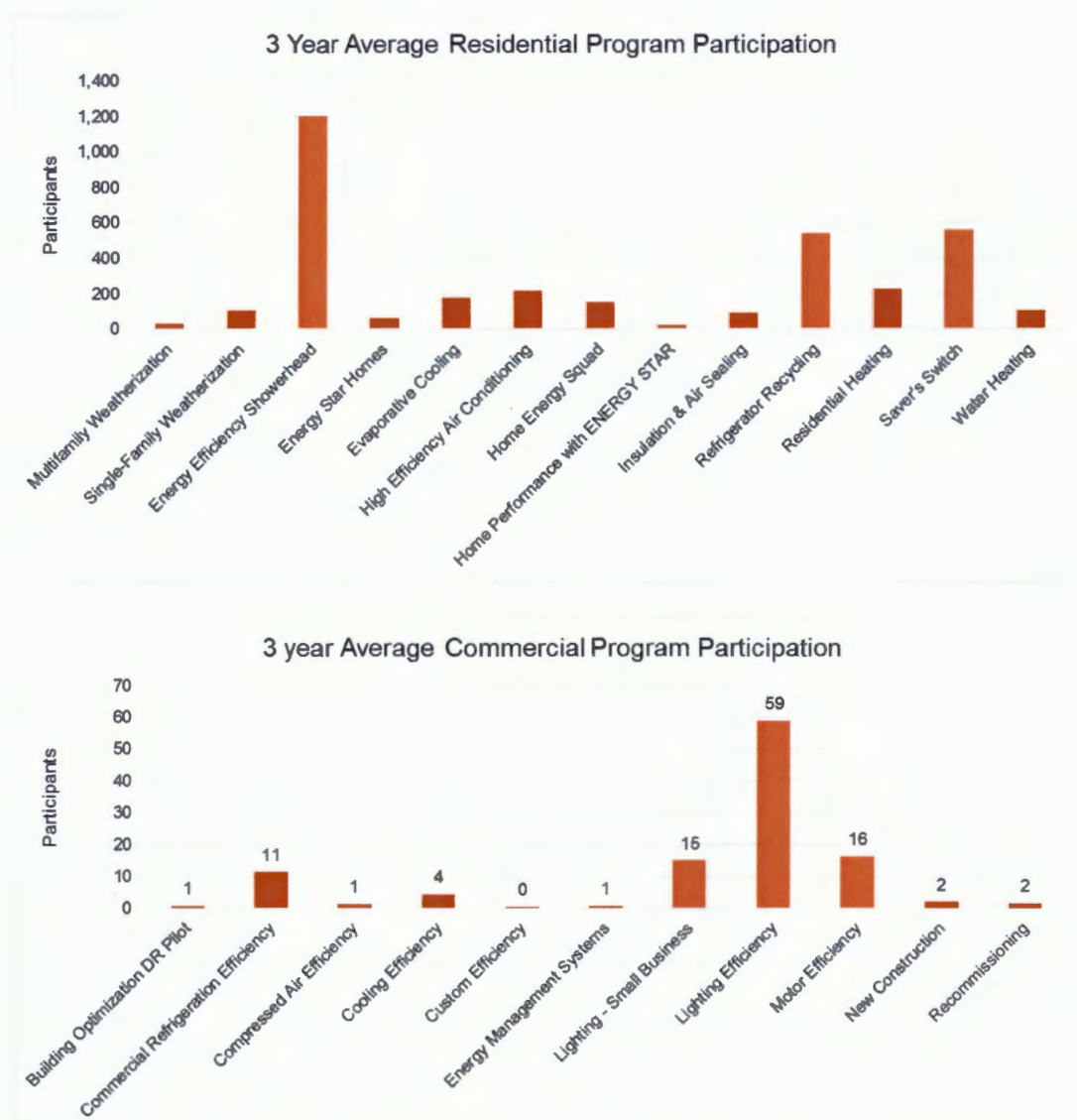


Figure 6: Average Annual Demand Side Management Program Participation in Unincorporated Jefferson County – Residential (top) and Commercial (bottom) for 2012 to 2014

Existing Energy Practices

It will be essential to coordinate the Energy Action Plan with efforts Jefferson County and its communities are already leading. Jefferson County established the Sustainability Commission to coordinate efforts of its communities and provide an informational clearinghouse to help continue the sustainability efforts and best practices in each of its communities. Jefferson County aims to coordinate the existing energy and sustainability activities across the County enabling communities to personalize their goals and approach for the greatest success in their community. A breadth of various efforts have been spearheaded by each community with a common commitment to improve energy efficiency, reduce consumption, and diversify their energy portfolio across residential, commercial, and municipal/ institutional customers.

Specific initiatives and activities across Jefferson County (listed below) are foundational to the success of the actions outlined in this plan.

Table 1: Existing Energy and Sustainability Initiatives

Jefferson County Energy and Sustainability Initiatives

Jefferson County

- Participating in Xcel Energy Partners in Energy to enhance and coordinate existing activities across the County
- Adopted the Energy Resource Conservation policy to guide cost-efficient and sustainable energy resource usage and to model good citizenship, accountability, and service
- Ongoing construction of energy efficiency and facility improvement measures at various County facilities including but not limited to performance contracts, interior lighting upgrades with occupancy sensors, exterior lighting upgrades, digital building controls, equipment schedule optimization, heating, ventilation and air conditioning upgrades, and computer power management

Evergreen

- Evergreen's Alliance for Sustainability (501(c3)) features monthly speakers, films and other community formats to educate and discuss a spectrum of sustainability issues. Energy and especially renewable energy is often a meeting and outreach topic. They were the recipient of a Governor's Energy Office grant to implement a 'Biggest Loser' Energy Efficiency Challenge in the mountain community.

Arvada

- Certified Solar Friendly Community
- The Arvada Sustainability Advisory Committee provides strategic guidance for the implementation of Sustain Arvada
- Adopted the Sustain Arvada Community Plan in 2012 and the Sustain Arvada Municipal Action Plan in 2010

Golden

- Certified Solar Friendly Community
- Updated Sustainability Strategic Plan in 2015, including city requirements for reducing energy consumption by 20% and producing 50% of total energy consumption by renewable by 2017 along with GHG reductions
- Hired a full-time Sustainability Manager
- Founded the Community Sustainability Advisory Board in 2008

Jefferson County Energy and Sustainability Initiatives

Lakewood

- Certified Solar Friendly Community
- Signed on to the Compact of Mayors global coalition committed to reducing GHG emissions and increasing climate change resiliency.
- Established the Employee's Committee for a Sustainability Lakewood in 2007 to lead sustainability efforts across all City departments.
- Formed a sustainability division in the Planning Department in 2012 with two staff members in 2016
- Adopted first community-wide sustainability plan in 2015 that includes annual reporting
- Recognizes businesses, nonprofits, community organizations, individuals and schools each year with sustainability awards
- Offers a Sustainable Neighborhoods Certification Program to enhance livability and ecological footprint of neighborhoods
- Purchased 274 kilowatts of solar energy from a community solar garden for City operations.
- 2025 energy reduction goals include generating 45% of municipal, residential and commercial energy from renewables and reducing citywide building energy use intensity by 20%

Westminster

- Certified Solar Friendly Community
- Signed the U.S. Mayors Climate Protection Agreement
- Established a Green Team which leads and oversees sustainability-related efforts in the community and provides recommendations to City Council
- Appointed a citizen Environmental Advisory Board (EAB) to educate the community on environmental matters

Jeffco Public Schools

- 5.5% of district power is from renewable sources.
- Hosting an energy saving competition Fall 2016 where schools compete to save energy and to learn more about energy usage at school and at home. In the 2015 competition, twelve schools saved 40,000 kWh during the twenty day competition.
- Hired a Resource Conservation Advocate to run behavioral based energy saving competitions and to work directly with environmental clubs and green teams.
- Installed 23 irrigation management systems at sites with the highest water usage since 2012. These systems, and other measures, have contributed to a reduction of over 35% in district wide water consumption since 2012.
- 24 of our schools are equipped with real-time electrical monitoring devices that provide web-based visibility and a learning platform for students. These devices provide an inside look at our electrical usage which helps in diagnosing operational issues. The remainder of Jeffco sites will be equipped before 2020.
- Three schools have been fully converted to LED lighting with more on the way.

Local Outreach and Communication Channels

Below are some of the ways that Jefferson County's residents and businesses currently receive information. These communication channels will be helpful during implementation efforts and will be further explored, identified, and utilized for each strategy during the plan implementation period.

Table 2: Outreach Channels

<i>Jefferson County</i>	
Organizations	<ul style="list-style-type: none"> • <i>Chambers of Commerce – Evergreen, West Chamber (JeffCo) and Conifer</i> • <i>Evergreen's Alliance for Sustainability</i> • <i>Mountain Resource Center</i> • <i>Evergreen Christian Outreach</i> • <i>Evergreen Audubon</i> • <i>Mountain Metro Association of Realtors</i> • <i>Homeowner Associations (various)</i>
Publications	<ul style="list-style-type: none"> • <i>Panorama Newsletter</i> • <i>Mountain Connection Magazine</i> • <i>Serenity Magazine</i> • <i>Evergreen Newspapers; Canyon Courier, High Timber Times</i> • <i>YourHub (Denver Post neighborhood supplement)</i>
Media	<ul style="list-style-type: none"> • <i>Jefferson County website</i> • <i>@JeffcoColorado Twitter feed</i> • <i>Jefferson County Facebook Page</i> • <i>Jefferson County Instagram</i> • <i>Nextdoor.com</i> • <i>Jefferson County Open Space Bulletin Boards</i> • <i>Drive by signs on highways and local roads</i> • <i>Targeted marketing through email subscription list</i> • <i>JustAroundHere.com</i> • <i>PineCam</i> • <i>Evergreen Friends and Neighborhood Facebook Page</i> • <i>Mtn. Area Events Facebook Page</i>
Events	<ul style="list-style-type: none"> • <i>Jefferson County Fair and Festival</i> • <i>Mountain Area Earth Day Fair (Evergreen)</i>

Where Do We Want to Go?

Our Energy Vision

Jefferson County's energy vision focuses on collaboration and coordination with all community members, including municipal partners and organizations. It blends a pragmatic focus on near-term action to reduce energy use and save residents and businesses money, with long-term aspirations of a cleaner energy supply and thriving economy.

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.

Energy Goals

The goals of the Energy Action Plan are to provide the residential and commercial sectors primarily in the unincorporated areas of Jefferson County with opportunities to increase energy conservation and reduce energy costs and to support the County's efforts to conserve energy at its facilities. These goals will serve as overarching guidance and context for the various focus areas and strategies and associated targets detailed in this Plan, which will be monitored more closely during the implementation period and in coming years.

How Are We Going to Get There?

Three major focus areas were identified in order to organize the strategies of this Energy Action Plan: the commercial sector, residential sector, and institutional sector. Planning workshop discussions for each focus area included exploration of potential financing mechanisms, policy and regulatory approaches (e.g., codes and standards), and renewable energy options. The rationale for and basic profile of each focus area is outlined on the following pages.

Strategies are specific actions that Jefferson County and its partners plan to take to achieve the goals stated in this plan. Jefferson County's Energy Action Planning team developed energy strategies by examining energy data, brainstorming and prioritizing possible actions, considering existing programs and opportunities, and assessing the potential impacts compared to the identified goals.

Each strategy identified has its own action plan that identifies a responsible leader and team members, outlines implementation steps and a timeline, identifies partners and resources, and assigns metrics for tracking progress. **While Xcel Energy is committed to providing resources to support 18 months of implementation, the full implementation of many of the strategies is dependent upon the level of resources and commitments made by Jefferson County and its implementation partners.** By providing staffing support and/or additional incentives to encourage participation, whether in the form of additional rebates or process efficiencies, many of the strategies could have amplified impacts if they are supported both by Xcel Energy and Jefferson County.

Note that within the "Implementation Options" section of each strategy, several optional pathways for implementation are proposed. They include elements of the strategy that are "Ready to Implement" (through volunteer contributions and Xcel Energy support), as well as elements that "Need Additional Resources to Implement" (such as staffing and/or program funding from Jefferson County or other partners in order to fully implement). The Jefferson County Board of County Commissioners will be responsible for decision-making related to plan implementation, including execution of a Memorandum of Understanding with Xcel Energy.

Commercial Sector

A focus on the commercial sector will help businesses improve efficiency, and access new financial tools and rebate opportunities, which may in turn help them reduce costs and increase profitability. As illustrated in Figure 5, the commercial sector (commercial and industrial accounts) comprised 56% of unincorporated Jefferson County's natural gas consumption and 50% of electricity consumption in 2014. There are approximately 5,500 commercial premises in unincorporated Jefferson County, and the average energy cost per premise (electricity and natural gas) is \$17,254 annually or \$1,438 per month.

The planning team identified two strategies for the commercial sector:

- Expanding financing options for energy efficiency improvements
- Conducting lighting retrofit campaigns

Commercial PACE Financing

Description

In order to make cost effective, Commercial Property Assessed Clean Energy (C-PACE) financing available for property owners to invest in new energy efficient properties and upgrades in Jefferson County, the Jefferson County Sustainability Commission led an effort to provide evidence of support to the Board of County Commissioners with hope of the County opting in to the New Energy Improvement District (NEID) established by State legislation. Now that C-PACE has been adopted, the Sustainability Commission and partners will promote the program in order to drive increased adoption.

Targets

- Within 18 months of adoption, reach 1,400 (approximately one quarter of all commercial and industrial premises) and engage 4 businesses within unincorporated Jefferson County to take advantage of C-PACE financing
- Host at least 3 workshops and/or targeted presentations on the topic by June 2017

Scope

- Develop informational resources to distribute to businesses in unincorporated Jefferson County and for municipalities to share with businesses in their jurisdictions.
- Identify list of targeted businesses, stakeholders and/or locations for outreach efforts.
- Distribute informational materials through a variety of formats (direct mail, email, business groups, etc.).
- Create, market, and deliver C-PACE content at a series of workshops and/or pre-existing meetings of relevant groups intended to educate the market on C-PACE utilization.
- Track Jefferson County projects utilizing C-PACE financing and update annually, including anticipated energy savings and other quantifiable data where available.
- Develop case study(ies) of successful projects for reference and distribution.

Responsible Parties and Roles

- Jefferson County Sustainability Commission: assign a strategy leader and/or intern, help identify potential stakeholders, help develop and participate in workshops, share annual results

Commercial PACE Financing

- C-PACE Strategy Leader: coordinate the development and delivery of workshop content, lead business outreach efforts, track Jefferson County participating projects and quantifiable metrics
- Colorado Energy Office C-PACE Program Administrator: support delivery of content at Workshops and meetings, review outreach materials
- Evergreen's Alliance for Sustainability and You (EAS+Y): share C-PACE opportunity with Evergreen and Confer Chamber of Commerce Members
- Municipal representatives (Arvada, Golden, Lakewood): promote C-PACE in respective jurisdictions, provide support for workshop
- Partners in Energy: coordinate Xcel Energy support and rebate information for workshop and outreach efforts

Timeline

-
- Summer 2017: Develop outreach materials and preliminary workshop schedule
- Fall 2017 to Summer 2018: Conduct C-PACE outreach workshops/presentations (including a workshop in EAS+Y calendar of events)
- December 2017: First progress report on C-PACE activity in Jefferson County
- June 2018: Develop case-study
- **October 2018: Second progress report on C-PACE activity in Jefferson County**

Implementation Options

Ready to Implement

Under existing conditions, this strategy will rely more heavily on private sector companies and municipalities to provide outreach support, venues, and distribution channels. Outreach will be coordinated with the C-PACE administrator for the state and include each municipality and the County. Implementation will focus on sharing information about the program, exploring opportunities to combine C-PACE financing with Xcel Energy rebate programs, and leveraging existing contacts and communications channels to host workshops.

Needs Additional Resources to Implement

With additional resources, this strategy could be coordinated and targeted more effectively to reach specific stakeholders and large economic development partners. As a new program, additional support would also hasten the adoption with ongoing education of County staff in order to have higher comfort levels in providing accurate information to the public.

As a whole, the success of this strategy is less resource dependent due to the existing momentum and private sector appetite to develop projects in Jefferson County, but would be enhanced and accelerated with additional support.

Commercial PACE Financing

Funding

- Xcel Energy: Outreach and event support
- Colorado Energy Office- (Potential) Event support
- C-PACE Project Developers: Workshop sponsorship and recruitment, case study support

Involved Parties

- Jenny Heeter, Jefferson County Sustainability Commission
- Theresa Worsham, City of Golden
- Jonathan Wachtel, City of Lakewood
- Jessica Prosser, City of Arvada
- Conor Merrigan, Partners in Energy
- Tracy Phillips, C-PACE Director
- Jefferson County Economic Development Corporation
- Chamber of Commerce representatives

Outreach Channels

- Informational workshops/targeted presentations (at least 3)
- Press releases and case studies
- Listing on appropriate statewide (and national) websites and collateral as having opted-in
- Direct e-mails from Xcel Energy
- Promotion using County and municipal websites and communication departments
- Informational materials (e.g., flyers) combining C-PACE, Xcel Energy Rebates, and any other applicable energy and water saving programs
- Evergreen's Alliance for Sustainability (and You)
- Chambers of Commerce
- Jefferson County Economic Development Corporation

Measurement

- **Number of workshops; number of participants**
- Number of outreach recipients
- Number of projects in Jefferson County (categorized by unincorporated and incorporated)
- Total anticipated energy savings from projects in Jefferson County ((categorized by unincorporated and incorporated)

Lighting Retrofits

Description

This strategy is focused on a campaign to encourage commercial businesses and institutions (non-profits, churches, and public buildings) in unincorporated Jefferson County to convert to more energy efficient lighting (e.g., LED lamps). The focus of the messaging will be educating customers on the benefits of LEDs including energy savings, energy cost savings, longer lamp life, less degradation of light quality, and maintenance cost savings. Tools will be provided to assist customers during the initial consideration of a lighting retrofit, through a lighting audit, and ultimately to help guide project implementation. Where practical, a dedicated lighting sweep including direct installs will be initiated.

Targets

- Within 18 months of launch, reach 200 and engage 40 (roughly three times historical three-year average annual participation in Small Business Lighting Program) of the eligible **small businesses** in a free lighting audit and related direct install measures and convert 15 (37%) to broader energy efficiency projects such as lighting retrofits, or other equipment rebates.
- Within 18 months of launch reach 300 and engage 90 (roughly 33% more than the three-year annual average) of the **large business customers** in significant lighting projects.

Scope

Preparation

- Incorporate tools targeted at small businesses and financing available for both the small businesses and larger businesses. Focus on the ability to save money and help the bottom line by saving on energy and maintenance costs through lighting retrofits.
- Research and develop a list of target businesses for both small and large business outreach. Potential facilities to target include:
 - Retail spaces such as grocery stores, shopping malls, and big box stores
 - Commercial real estate property management companies and/or owners with multiple properties in unincorporated Jefferson County
 - Office parks in unincorporated Jefferson County
 - Non-profit and faith-based organizations
- Develop a timeline for outreach and identify Jefferson County site visit dates for audits and direct installs so that scheduling is more streamlined.
- Explore development of a "lighting calculator" spreadsheet and/or "quick facts" checklist or informational resource to help illustrate costs, rebates, and savings (energy, cost, and maintenance) from a potential project.
- Connect potential businesses directly to an Xcel Energy lighting specialist to assist with estimating savings potential.

Outreach

- Communicate directly to businesses and leverage local business associations to educate on the benefits and "how to's" of changing out lighting.

Lighting Retrofits

- Reach out to trades/contractors in Jefferson County to make them aware of the opportunity to provide implementation support once businesses have received an audit.
- Identify success stories from local businesses that have changed out their lights and saved.
- Provide direct support to businesses in estimating cost/savings and completing their applications.
- Measure participation and conversion.

Responsible Parties and Roles

Preparation

- Jefferson County Sustainability Commission: assign a strategy leader and/or intern, lead identification of potential businesses and/or facilities, support development of communications materials
- Business Lighting Strategy Leader: coordinate the development of communications materials, lead business outreach efforts
- Partners in Energy: coordinate Xcel Energy support and materials development
- Xcel Energy Small Business Lighting Program: support business identification and development of outreach materials
- Municipal Representatives, Jeffco Public Schools, Red Rocks Community College, NREL, Jefferson County Economic Development Coordination: support development of communications materials and contact areas/lists

Outreach

- Xcel Energy Small Business Lighting Program: implement lighting sweep
- Partners in Energy: coordinate Xcel Energy support and support outreach efforts
- Jefferson County Sustainability Commission: support outreach efforts, identify and develop success stories, share annual results
- Business Lighting Strategy Leader: lead large business outreach efforts, support small business outreach, help track Jefferson County outreach efforts
- Municipal Representatives, Jeffco Public Schools, Red Rocks Community College, NREL, Jefferson County Economic Development Coordination: share communications materials with networks

Timeline

- Spring 2017: Develop any additional outreach marketing pieces needed for small/large business outreach (including adding Green Business benefits, call script, etc.)
- Spring 2017: Coordinate outreach with Xcel Energy Small Business Lighting Program
- Fall -Winter 2017: Conduct small business outreach and direct installs
- Spring 2018: Coordinate large business outreach with Xcel Energy/Jefferson County Economic Development Corporation/other partners
- Spring 2018: Notify contractor networks of upcoming effort and need for support
- Fall-Winter 2018: Conduct large business lighting assessments and provide access to implementation resources
- Winter 2018: Encourage project implementation through direct follow up with audit customers
- Ongoing: Track participation and outcomes

Lighting Retrofits

Implementation Options

Ready to Implement

Under existing conditions, this strategy will rely heavily on existing contractor relationships, Xcel Energy contractors, and key Account Managers. Due to the time and contacts required to reach and engage larger businesses, it will focus on more of the small business lighting efforts which may result in lower savings.

Needs Additional Resources to Implement

Additional resources would allow for targeted identification and recruitment of larger businesses as well as the potential to engage more broadly across the County, potentially to incentive participation above Xcel rebate levels (similar to what has worked well in Golden), and to coordinate with other strategies more effectively.

As a whole the success of this strategy is less resource dependent due to the resources available through Xcel Energy, but it would be supplemented and more effective with additional County support.

Funding

- Xcel Energy and CLEAResult program: support and funding for direct installation
- Partners in Energy: outreach content development and outreach support
- **Commercial PACE financing (if approved and as applicable)**

Outreach Channels

- West Chamber of Commerce (Jefferson County) newsletters/meetings/social media
- County business licensing and/or property record mailing lists
- Xcel Energy/CLEAResult outreach channels (customer lists, CLEAResult call center, direct contact)
- Jefferson County Economic Development Corporation contacts
- Chamber of Commerce websites, newsletters, Twitter, Facebook and LinkedIn pages
- Xcel Energy and trade ally lists
- Sustainability group contacts

Measurement

- Number of businesses contacted
- Number of initial program participants
- Number of follow-up programs participants
- Energy savings from project conversion

Residential Sector

Focusing on the residential sector will provide opportunities for Jefferson County households to reinvest in their properties, reduce their energy impacts, and access more rebate and savings opportunities. As illustrated in Figure 5, the residential sector comprised 44% of unincorporated Jefferson County's natural

gas consumption and 50% of electricity consumption in 2014. There are approximately 65,000 residential premises in Jefferson County, and the average energy cost per premise (electricity and natural gas) is \$1,637 annually or approximately \$136 per month.

One overarching strategy was identified for the residential sector, as detailed below.

Zero Energy Ready Home Strategy

Description

This strategy aims to increase energy fluency and awareness of Jefferson County residents through a multi-pronged outreach campaign that (1) assists residents in understanding the concept of zero energy readiness and their own energy usage and personal impacts, (2) provides residents support in reducing their energy usage, increasing energy efficiency, and reducing their utility costs to move towards zero energy readiness, and (3) engages residents in a neighborhood challenge to boost participation in targeted Xcel Energy programs to increase zero energy readiness.

Zero Energy Ready Home is a program of the US Department of Energy (DOE). A Zero Energy Ready Home is one that is so efficient that a renewable energy system can offset all or most of its annual energy consumption by encouraging: adaptation to energy efficient practices in homes; home improvements which yield better energy efficiency (e.g. insulation); subscription to community renewable energy sources (wind or solar farms); and installation of individual renewable energy systems.

Targets

- Within 6 months of launch, recruit at least three residential neighborhoods to participate in a neighborhood Zero Energy Ready Home challenge.
- Within 18 months of launch, reach 3,000 and engage 300 (roughly two times historical three-year average annual participation) in a [Home Energy Squad](#) visit or [Home Energy Audit](#).
- Within 18 months of launch, engage more than 2,000 participants in programs to increase home efficiency and performance (as a result of Home Energy Squad/Audit and residential outreach efforts). To achieve this, it is estimated that participation rates in targeted Xcel Energy programs could increase by 50% over three-year averages rates, as follows:
 - [Insulation and Air Sealing](#) – 139 participants in 2017
 - [Evaporative Cooling](#) – 264 participants in 2017
 - [High Efficiency Cooling](#) – 331 participants in 2017
 - [Refrigerator Recycling](#) – 812 participants in 2017
 - [High Efficiency Heating](#) – 344 participants in 2017
 - [Low Income Weatherization](#) – 162 participants in 2017

Scope

Zero Energy Ready Home Strategy

Startup

- Identify target residential customers (e.g., how many unincorporated households are in need of upgrades based on age of structure and previous participation rates)
- Design campaigns to encourage active use of MyEnergy portal for customers not participating in the Residential Energy Feedback program.
- Develop informational materials based on best practices to provide information on key billing statement features for paper bills and information on signing up for the MyEnergy portal.
- Develop parameters for neighborhood challenges including a zero energy readiness checklist to guide households in implementation activities.
- Identify target neighborhoods to participate in neighborhood challenge and recruit via direct outreach and social media.
- Develop materials to share information about use of MyEnergy portal, neighborhood challenge participation, targeted programs, and savings opportunities.
- Develop Jefferson County social media strategy for distributing information and neighborhood challenge coordination (e.g., Facebook or NextDoor).

Challenge and Outreach

- Implement direct outreach and social media campaigns.
- Launch neighborhood challenges.
- Provide ongoing feedback and encouragement for participants.
- Regularly track challenge progress and share results.

Responsible Parties and Roles

Preparation

- Jefferson County Sustainability Commission: assign a strategy leader and/or intern, support development of neighborhood challenge parameters and Zero Energy Ready checklist, support development of communications materials and social media campaign, lead neighborhood recruitment
- Zero Energy Ready Home Strategy Leader: lead challenge parameter development, support the development of communications materials and checklist
- Partners in Energy: support development of neighborhood challenge parameters and checklist, coordinate Xcel Energy support and materials development
- Jefferson County, Jeffco Public Schools, Red Rocks Community College, NREL, Jefferson County Economic Development Coordination: support development of communications materials and contact areas/lists

Challenge and Outreach

- Zero Energy Ready Home Strategy Leader: lead social media campaign and reporting efforts, serve as point person for challenge questions
- Partners in Energy: coordinate Xcel Energy support, support outreach efforts; lead tracking efforts
- Jefferson County Sustainability Commission: support challenge and direct outreach efforts
- Xcel Energy Home Energy Squad: implement squad visits; potential outreach
- Xcel Energy Registered Contractors: implement home energy audit visits

Zero Energy Ready Home Strategy

- Municipal Representatives, Jeffco Public Schools, Red Rocks Community College, NREL, Jefferson County Economic Development Coordination: share communications materials with networks

Timeline

- Spring 2017: Develop Zero Energy Ready checklist, neighborhood challenge parameters, social media strategy, and other outreach materials
- Spring 2017 – Winter 2017: Provide outreach on zero energy readiness and reading energy bills
- Winter 2017: Launch social media campaign and recruit participants for neighborhood challenge
- Spring- Fall 2017: Launch and administer neighborhood challenge and implement social media campaign
- Winter 2018: Share challenge results
- Ongoing: track participation and outcomes

Implementation Options

Ready to Implement

Under existing conditions, implementation of this strategy will include the development of communications materials and basic outreach to residential households through existing communications channels.

Needs Additional Resources to Implement

Additional resources are necessary to develop and administer neighborhood challenges, and to provide enhanced outreach through social media and new communications channels.

As a whole, the success of this strategy is highly resource dependent due to the time intensiveness of managing neighborhood challenges, deployment of a social media campaign, and the need for representation of the County.

Funding

- Residential Households: Home Energy Squad and/or Home Energy Audit costs
- Xcel Energy: direct installs and rebates for residential customers
- Partners in Energy: outreach content support and outreach materials
- Jefferson County Sustainability Commission: outreach content support; any subsidies for challenge elements

Zero Energy Ready Home Strategy

Involved Parties

- Xcel Home Energy Squad Implementer
- Xcel Energy registered contractors for home energy audits
- Xcel Energy Advisors (CLEAResult)
- Jefferson County Sustainability Commission
- HOAs/other neighborhood associations
- Jefferson County municipalities including Lakewood, Golden, and Arvada
- Residential contractors and trade groups
- Renewable energy providers

Outreach Channels

- County homeowner associations and/or property record mailing lists
- Xcel Energy Home Energy Squad outreach channels
- Registered contractors
- Energy Advisor Service (CLEAResult)
- Sustainability group websites, newsletters, Twitter, Facebook and LinkedIn pages
- Xcel Energy and trade ally lists

Measurement

- Number of households contacted
- Number of neighborhoods participating in challenge
- Number of households participating in programs
- Energy savings from program participation

Institutional Sector

The institutional sector includes governmental facilities, schools, colleges, places of worship, and not-for-profit organizations. Together, major institutions such as Jefferson County facilities, Red Rocks Community College, Jeffco Public Schools, and the National Renewable Energy Lab include many of the largest facilities in the community, as well as a significant share of its employment opportunities. While detailed analysis of the energy use of institutional facilities within Jefferson County was not completed during this planning process, these facilities and organizations remain a primary area of focus to showcase leadership by example through energy efficiency and renewable energy efforts. The focus on the institutional sector will also help reinforce the commercial and residential sector strategies due to unique outreach channels associated with large institutions.

Jefferson County Facilities staff has tracked the energy use and bills of 14 of the County's major facilities for the past several years. The five-year average total energy use for these facilities (2010 to 2015) was 15 million kWh, and 451,000 therms (electricity and natural gas). The five-year average cost of energy for these facilities is \$1,763,000 annually or about \$147,000 per month.

The strategy to enhance energy efficiency of the institutional sector overlaps somewhat with the commercial strategies – especially the lighting retrofit strategy where efforts to engage businesses in lighting retrofit programs will include outreach to large business and institutional facilities and highlight best practices. The Zero Energy Home strategy also links to the institutional sector in that institutional facilities and organizations will be an avenue to connect with households to increase residential interest and participation.

The following institutional sector strategy focused on Jefferson County facilities, but can be mirrored and replicated by other interested institutions and organizations.

County Facilities Leadership by Example Strategy

Description

We love the saying "What gets measured gets managed," and know that the energy performance of any building is directly tied to the users (both occupants and operators) of that building. In order to maximize County building performance and increase energy awareness among employees, Jefferson County will implement an energy awareness and engagement campaign that highlights progress to date, demonstrates how to get involved in reducing energy use, and establishes and improves benchmarks (i.e., energy use intensity) in facilities to maintain the momentum of the County's Energy Savings Performance Contracting program.

Targets

- Strive towards a 5% decrease in energy use intensity in Jefferson County facilities by 2025 due to a combination of occupant engagement and operational efficiencies.
- 75% of Jefferson County employees are aware of energy use and features of their building and county facilities by 2020.

Potential Outcomes

Potential outcomes will include a more educated and aware Jefferson County employee base concerning existing and future energy saving measures. With the new energized focus on energy conservation, recycling, waste diversion and overall resource conservation, additional energy use and savings may come to light throughout County Facilities.

Scope

This multi-pronged approach consists of activities aimed at:

- Conducting outreach to employees and the public to increase awareness of the energy-related accomplishments Jefferson County has achieved in the last 5-7 years.
- Engaging employees and taking specific actions to reduce energy use.
- Establishing benchmarks such as energy use intensity of buildings greater than 5,000 square feet.
- Driving additional facility energy savings and reduce energy use intensity since baseline year through ongoing occupant engagement and operations staff engagement, and exploration of additional energy management tools and technology.

County Facilities Leadership by Example Strategy

Outreach and Engagement

- Brief before/during/after surveys (using Survey Monkey and informational interviews) for employees on facility energy use to provide data for effort.
- Develop a communications strategy that includes:
 - Channel assessment (how to best get the word out)
 - Summary of recent and current County efforts and achievements (e.g., energy efficiency, performance contracting, renewable energy sourcing, innovative technologies, etc.)
 - Case studies of Jefferson County success stories for internal and external distribution (e.g., how tax dollars are being leveraged for cost avoidance)
 - Identification of current facility performance and energy use intensity baselines
 - Call to action for employees to get involved
- Host informational tours (with handouts) and/or workshops in County facilities for employees and potentially the public.
- Develop a periodic (e.g., quarterly or annual) Facilities Energy Report to share with internal and external audiences.
- Explore development of an energy dashboard to be part of Jefferson County intranet and streamed to kiosk displays and workstations and/or the installation of additional informational kiosks in other Jefferson County facilities.

Benchmarking

- Determine historic energy use intensity for County facilities.
- Share and compare McKinstry and Utility Manager GHG information.
- Enroll facilities in [Xcel Energy's Energy Benchmarking program](#).
- Establish energy use and energy use intensity targets based on recent performance and forecasts.
- Determine performance metrics to be emphasized in outreach/and reporting activities.

Maintain the Momentum

- Conduct an annual County facility building energy Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis to help identify and prioritize opportunities by facility (building off opportunities identified in McKinstry Technical Energy Audit (TEA) and Measurement and Verification (M&V) reports and identifying opportunities for GHG emissions reductions, operations staff and occupant impacts, and emerging technologies and solutions such as biomass, recycling waste heat, continuous commissioning piloting, renewable energy sourcing).
- Develop and conduct ongoing evaluation/awareness surveys to be administered annually at a minimum.

County Facilities Leadership by Example Strategy

Responsible Parties and Roles

- Jefferson County Facilities Staff: lead benchmarking and reporting efforts, lead SWOT analysis, support tour/workshop development
- Jefferson County Sustainability Commission: assign a strategy leader and/or intern, support development of case studies and outreach materials, support or lead tours/workshops
- Leadership by Example Strategy Leader: lead communications strategy development, lead outreach and survey efforts, develop facility energy report template, lead tour/workshop efforts, support the facility EUI baseline and tracking efforts
- McKinstry: provide data and benchmarking support and program advice
- Partners in Energy: support development of communications strategy and outreach materials, coordinate Xcel Energy support and materials development

Timeline

- Spring 2017: Develop communications strategy and materials; administer baseline employee survey(s); gather data and establish energy use intensity baseline; add portfolio to Xcel Energy's Energy Benchmarking program
- Summer- Fall 2017: Conduct outreach and engagement activities
- Spring 2018: Conduct facility SWOT analysis; prepare and distribute first annual report; establish targets and performance measures
- Ongoing (annually): Track performance measures and distribute report; complete SWOT analysis
- Fall 2018: Develop and administer employee follow-up survey (continue annually as appropriate)

Implementation Options

Ready to Implement

Under existing conditions, this strategy will rely on existing County and volunteer resources to share and communicate best practices, energy savings potential, and provide workshops. It is unlikely that the full savings estimated from robust occupant engagement will occur without additional resources.

Needs Additional Resources to Implement

Additional resources could be utilized in several ways. First, the County could elect to utilize their existing contractor to implement the program, supported by Xcel Energy's implementation assistance. Alternately, or in tandem, the County could provide dedicated staff support to manage the effort internally Xcel Energy implementation support.

As a whole the success of this strategy is highly dependent on the availability of additional resources to support it due to the comprehensive nature of a successful occupant engagement program.

Funding

- Jefferson County Facilities: staff time, facility improvements and software
- Xcel Energy: rebates
- Partners in Energy: outreach content support and outreach materials

County Facilities Leadership by Example Strategy

- Jefferson County Sustainability Commission: outreach time and support

Involved Parties

- Jefferson County Facilities
- Jefferson County Human Resources
- Jefferson County Public Engagement Office
- Jefferson County Sustainability Commission
- McKinstry
- Jefferson County staff

Outreach Channels

- Jefferson County internal newsletters/website/email and department meetings
- Survey Monkey
- Jefferson County website and social media
- Informational posters and signage
- Facility kiosks

Measurement

- Employee survey participation and before/after knowledge base
- Participation levels in tours/workshops
- Energy use and energy use intensity of County facilities

How Are We Going to Stay On Course?

Operational Actions and Tracking

The planning team will continue to meet every 6 months through the end of the program to note progress, address challenges, and offer support and solutions. In addition, strategy teams have been formed and leaders will be confirmed by the Jefferson County Sustainability Commission.

These teams will meet regularly in-person or via conference call to further plan and implement the strategies. A representative from each of the strategy teams will be represented at the 6-month planning team meetings to share progress, successes, and challenges. In between meetings, the planning team will stay up to date on implementation efforts using a shared site for resources, messaging, polling, and a group calendar.



Figure 7: Implementation Process

Xcel Energy will provide a tracking mechanism into which each strategy team can record progress on a regular (quarterly or similar) basis. This tracking will also include Xcel Energy results related to DSM program participation and energy usage which will be provided at each six-month planning team meeting.

Communication and Reporting

To maintain enthusiasm and momentum for achieving the goals set out in this plan, residents, businesses, and community groups must be engaged in the process. Jefferson County (and its municipalities and other planning team representatives, to the extent applicable) will share progress updates via their websites, social media outlets, and periodic press releases.

Changing Course: Corrective Action

Even though this Energy Action Plan is designed for greatest impact over the next 18 months, the residual effect and momentum gained by reinforcing residential initiatives, developing collaborative networks, expanding business programs, and leveraging channels for information and resources will be cyclical and will have long-term positive implications. In addition, the nature of implementation requires staging, flexibility, and course adjustments when necessary to be successful and experience sustained progress.

To accommodate the fluid nature of action and implementation and learn from experience early in the process, the regularly scheduled strategy team meetings as well as the planning team meetings will be a forum for agreeing on course adjustments or new approaches necessary to hit plan targets.

Any adjustments will be documented and shared with the broader group as they occur.

Ongoing Planning Team Support

The continued support and insight of the planning team is crucial for this plan's success. Individual members will be involved in advising and supporting individual strategies as well as engaging those beyond the planning team to get strategies off the ground. Their level of effort will include six-month planning team

meetings and participation on strategy teams for which they have volunteered. If a planning team member is not able to commit to continued participation, he or she will appoint an alternate to fill the role.

Achievement Recognition

Each of the strategies outlined in this plan will have its own methods for recognizing participants and high performers; however, it will be important to let the community at-large know how things are progressing and also to recognize the collaborative efforts of those involved in hitting the plan targets. At critical milestones, Jefferson County and Xcel Energy will publish updates on progress, share successes, and congratulate participants and partners through the Jefferson County website.

Beyond the Plan Horizon

Jefferson County can be an example to other communities in Colorado that are hoping to engage their population, businesses, and institutions and reduce their energy consumption. To this end, Jefferson County intends to share its story, including successes and challenges, to inform best practices in energy planning in Colorado.

Appendix 1: Glossary of Terms

Demand Side Management (DSM): modification of consumer demand for energy through various methods, including education and financial incentives. DSM aims to encourage consumers to decrease energy consumption, especially during peak hours or to shift time of energy use to off-peak periods, such as nighttime and weekend.

Energy Action Plan: a written plan that includes an integrated approach to all aspects of energy management and efficiency. This includes both short- and long-term goals, strategies, and metrics to track performance.

Goals: the results toward which efforts and actions are directed. There can be a number of objectives and goals outlined in order to successfully implement a plan.

Greenhouse Gas (GHG): Atmospheric gases that absorb infrared radiation and contribute the greenhouse gas effect, including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (NO₂), and water vapor.

Home Energy Audit: This Xcel Energy program provides a comprehensive whole house inspection, with options for blower door and/or infrared services. Customers work with an Xcel Energy registered contractor of their choice and pay the auditing company the total audit cost up front, and then Xcel Energy provides a rebate valued at 60% of the audit price, up to \$200.

Home Energy Squad (HES): Home Energy Squad is a partnership between Xcel Energy and CLEAResult. The program helps residential customers reduce energy use in their homes by completing direct installs. The cost of a home Energy Squad Visit is \$75 and the value of the labor, materials, and services provided is more than \$200.

kWh (kilowatt-hour): a unit of electricity consumption

Premise: a unique identifier for the location of electricity or natural gas service. In most cases it is a facility location. There can be multiple premises per building, and multiple premises per individual debtor.

Recommissioning: An energy efficiency service focused on identifying ways that existing building systems can be tuned-up to run as efficiently as possible.

Small Business Lighting: Small Business Lighting is a partnership between Xcel Energy and CLEAResult. Qualifying business electric customers of Xcel Energy may schedule a free lighting assessment wherein a lighting advisor walks them through cost-saving lighting opportunities and provides a follow-up report of recommended lighting upgrades and rebates. Select businesses may also qualify for direct installation of LED lamps and aerators during the assessment.

Therm: a unit of natural gas consumption

Windsource®: A program from Xcel Energy that allows customers to purchase blocks of wind energy as their electricity source.