



An Energy Action Plan for the Grand County Community

June 2024



PARTNERS IN ENERGY
An Xcel Energy Community Collaboration

ACKNOWLEDGEMENTS

Thank you to the following individuals who contributed many hours of service to developing this Energy Action Plan.

The content of this plan is derived from a series of planning workshops hosted by Xcel Energy's Partners in Energy. Xcel Energy is the main natural gas utility serving Grand County. Partners in Energy is a two-year collaboration to develop and implement a community's energy goals.

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Grand County Community Energy Action Plan

About This Plan

Located in the north-central Rocky Mountains, Grand County encompasses just under 2,000 square miles of meadows, mountains, and river valleys, including Colorado’s largest natural lake and the headwaters of the Colorado River. While each of the county’s six incorporated towns - Winter Park, Fraser, Granby, Grand Lake, Kremmling, and Hot Sulphur Springs - has a distinct character, they also share some common challenges and opportunities associated with their remote location, high-altitude environment, cold climate, and tourism-based economy.

This Energy Action Plan was developed through nine-months of countywide collaboration to identify a shared vision for Grand County’s energy future along with specific goals and strategies to move toward that vision.

Goals

There are significant opportunities to increase local energy savings by increasing participation in energy efficiency programs. This plan establishes a countywide goal to double annual participation in residential and business programs by 2026.

Residential Goal: 436 annual participants in Xcel Energy and Mountain Parks Electric residential programs by 2026.

Business Goal: 30 annual participants in Xcel Energy and Mountain Parks Electric business programs by 2026.

Grand County’s Community Energy Vision

The Grand County community envisions a future where all residents, businesses and visitors have access to energy that is affordable, dependable, and clean.

We value regional collaboration and will use our collective local influence to pursue forward-looking best practices that save energy, deliver financial savings, and enhance quality of life while maintaining our natural environment.

Strategies

Foundational Strategies

- » Strategy F-1: Establish a working group for countywide coordination on energy and sustainability issues.
- » Strategy F-2: Create a one-stop virtual shop for Grand County energy efficiency information.
- » Strategy F-3: Conduct outreach related to code requirements for new construction.

Residential Strategies

- » Strategy R-1: Educate Grand County residents about energy audit and efficiency opportunities.
- » Strategy R-2: Post energy efficiency audit, help residents make identified improvements.

Business Strategies

- » Strategy B-1: Reach out to businesses to promote energy audit and efficiency opportunities.
- » Strategy B-2: Post energy efficiency audit, help businesses make identified improvements.

Energy Baseline



Grand County is served by two energy utilities: **Xcel Energy for gas and Mountain Parks Electric for electricity.**



The county consumed **2,539,231 MMBtu** of energy from these two utilities in 2022.



The majority of energy consumed in the community can be attributed to **natural gas**, which **represents 63% of all energy use** in 2022.



Residential premises in the county **consumed more energy** (56%) in total than commercial and industrial premises (44%).

Annual Impact and Results of Plan Implementation



	Residential	Business
Baseline Participation	201	15
Baseline kWh Savings	69,066	73,083
Goal Participation	402	30
Goal kWh Savings	138,131	146,166



	Residential	Business
Baseline Participation	31	5
Baseline Thm Savings	4,273	21,952
Goal Participation	62	10
Goal Thm Savings	5,456	43,904



INTRODUCTION



Why We Want An Energy Action Plan for Grand County

Located in the north-central Rocky Mountains, Grand County encompasses just under 2,000 square miles of meadows, mountains, and river valleys, including Colorado's largest natural lake and the headwaters of the Colorado River. The county serves as the western gateway to Rocky Mountain National Park, which sees over three million visitors per year, and is home to the year-round resorts of Winter Park and Granby Ranch as well as 15,800 full-time residents (U.S. Census Bureau, 2023). While each of the county's six incorporated towns - Winter Park, Fraser, Granby, Grand Lake, Kremmling, and Hot Sulphur Springs - have a distinct character, they also share some common challenges and opportunities associated with their remote location, high-altitude environment, cold climate, and tourism-based economy.

The Grand County community came together in 2023 to collaboratively develop this countywide Energy Action Plan. While several of the towns in Grand County have established sustainability and energy goals, there have not been any coordinated county-level energy planning efforts to-date. Development of this Energy Action Plan presented an opportunity to build on previous efforts through countywide collaboration and to identify and implement shared energy goals and strategies.

The plan characterizes the community's energy use, establishes goals, and identifies strategies to help save energy, realize financial savings, and create benefits for local people throughout Grand County. It is designed to serve as an 18-month action plan outlining strategies and steps that Grand County municipalities, Xcel Energy, Mountain Parks Electric, and other partners can take to move toward an energy future that benefits all residents and visitors.

Our Engagement and Planning Process

The development of this Energy Action Plan was a nine-month process coordinated and led by a Project Management Team formed of representatives from Xcel Energy Partners in Energy, Sustainable Grand, and Mountain Parks Electric. The plan was shaped by input from key local

stakeholders and the broader Grand County community via a series of workshops, focus groups, and an online community survey. An Energy Action Team formed of Grand County municipalities, utilities, businesses, and community-based organizations helped to identify energy priorities and ensure that the goals and strategies identified were locally relevant and feasible. A full list of Project Management and Energy Action Team participants can be found in the **Acknowledgements**.

By the numbers, we engaged: 89 community survey respondents, and 15 key stakeholder participants in two workshops and four focus groups.

About Partners in Energy

Xcel Energy is an electric and natural gas utility providing energy to power millions of homes and businesses across eight Western and Midwestern states, including supplying natural gas to Grand County. Each community that Xcel Energy serves has its own unique energy priorities and vision. To continue to innovatively support its communities, Xcel Energy launched Partners in Energy in 2014 as a collaborative resource with tailored services to complement each community's vision. Over 40 Colorado communities have participated in Partners in Energy to-date, benefiting from support to develop an energy action plan, tools to help implement the plan, and resources designed to help each community stay informed and achieve their outlined goals.

About Sustainable Grand

Sustainable Grand is a community non-profit working in Grand County, CO since 2022 with a focus on:

- Making existing and new buildings in Grand County more energy efficient
- Transitioning the Grand County community to clean energy
- Increasing the use of electric vehicles and electric outdoor equipment
- Building community resilience to climate change
- Ensuring that Grand County receives a fair share of state and federal funding available to support sustainability efforts

Sustainable Grand applied to Partners in Energy in 2023 to launch collaborative energy action planning in Grand County.

About Mountain Parks Electric

Mountain Parks Electric is a cooperative electric utility providing electricity service to Grand County. The cooperative's mission is to, "Deliver safe, reliable, cost-effective, sustainable energy and services to better the lives of our members and communities." Its vision is, "To be the energy provider of choice and to support the communities we serve while realizing the full potential of the grid."

Mountain Parks Electric worked with Sustainable Grand and Xcel Energy to identify opportunities for partnership and ensure that the plan addresses both natural gas and electricity.

WHERE WE ARE NOW



To develop a vision and roadmap for Grand County’s energy future, it is necessary to first understand the community’s unique characteristics and existing energy landscape.

Key Community Characteristics

Key characteristics vary across Grand County’s communities

Grand County contains six incorporated towns, each of which has unique characteristics, as shown in **Table 1** and discussed in more detail in the sections below. **Figure 1** shows a map of Grand County, including the location of incorporated towns.

Table 1. Key characteristics of Grand County communities.

	Grand County	Granby	Kremmling	Fraser	Winter Park	Hot Sulphur Springs	Grand Lake
Population¹	15,724	2,074	1,779	1,220	762	906	281
Housing Units¹	16,731	1,803	695	1,183	2,757	332	876
Housing Vacancy Rate²	63%	47%	12%	61%	87%	14%	80%
Median Household Income³	\$79,367	\$77,679	\$64,141	\$75,893	\$80,000	\$83,125	\$72,917
Total Jobs³	4,972	668	203	608	2,080	84	182
Low Income Population⁴	23%	17%	41%	31%	28%	16%	9%
People of Color⁵	16%	11%	34%	22%	8%	18%	2%

¹ American Community Survey 5-Year Estimates 2022 Table DP05 (U.S. Census Bureau, 2022 a)

² American Community Survey 5-Year Estimates 2022 Table B25002 (U.S. Census Bureau, 2022 b)

³ American Community Survey 5-Year Estimates 2022 Table S1903 (U.S. Census Bureau, 2022 c)

⁴ Total Private Primary Jobs (U.S. Census Bureau, 2021)

⁵ EPA EJScreen (EPA, 2023)

However, population change is not uniform across the county and the rate of growth between 2010 and 2020 ranged from a 16.7% increase in Fraser to a 13.2% population decline in Grand Lake (Colorado State Demography Office, 2021). Growth in Fraser and Granby was likely driven by employment opportunities and development while population decline in Grand Lake is likely reflective of the direct and indirect impacts of the East Troublesome Fire. The East Troublesome fire of 2020 was the second largest in Colorado history, burning 193,812 acres and destroying 366 homes (Colorado Division of Fire Prevention & Control, 2023).

Grand County is becoming more racially and ethnically diverse

As the county becomes more racially and ethnically diverse, it will be important to consider equity in the development and implementation of energy action and outreach strategies.

16% of Grand County residents are people of color and 6.8% speak a language other than English at home, compared to 32% and 16.2% respectively statewide. The population of people who identify as two or more races and Hispanic/Latino is growing significantly faster than that in other groups, accounting for 33% and 48% of total population growth in Grand County between 2010 and 2020 respectively (Colorado State Demography Office, 2021). Younger age groups are also more diverse than older demographics. Specifically, 18.2% of Grand County residents in the 5 to 17 age group identify as Hispanic/Latino, compared to just 3.8% in the 65 to 85 age group (U.S. Census Bureau, 2020).

Income inequality places disproportionate burden on some residents

Lower income households face a higher housing and energy burden, defined as the percentage of income spent on housing and energy costs. These households may therefore be less able to make energy improvements without equitable access to energy audits and efficiency incentives. Lower income residents are also those who could benefit the most from home improvements and long-term energy bill savings.

The median household income in Grand County is \$79,367, lower than the state median income of \$87,598. There is significant variation in the income across the county and 7% of county residents are living in poverty (U.S. Census Bureau, 2023). While the average household in Grand County spends 2% of its income on energy, those with a household income below 80% of the area median face an energy burden of 4% to 14% of total income (U.S. Department of Energy, 2020).

Grand County has a very high number of second homeowners and short-term rental units

Tailored outreach and energy action strategies may be needed to reach second homeowners and short-term rental property owners or managers.

According to the 2020 census, 63% of housing units in Grand County are vacant, meaning they do not serve as primary residence (U.S. Census Bureau, 2022 b). This is compared to a statewide vacancy rate of just 9% and presents unique challenges when it comes to managing residential energy use. The vacancy rate also varies significantly across the county, ranging from 12% in Kremmling up to 87% in Winter Park.

Grand County has an older housing stock

Older homes tend to be less efficient, presenting opportunities for energy improvements with the potential for both comfort benefits and financial savings.

Much of Grand County’s housing stock is older, with 34% of housing units in the county built before 1980 (U.S. Census Bureau, 2021).

Grand County’s cold climate creates a high heating demand

Weather is a key driver of energy use. Cold temperatures are typically associated with high natural gas consumption for heating and hot temperatures are often linked to increased electricity use in warm climates where homes and businesses have air conditioning.

The average annual temperature in Fraser is 36°F. Some areas of the county are slightly less cold such as Kremmling, with an average annual temperature of 38.5°F. However, much of the county is located in USDA Plant Hardiness Zone 4a with an average annual extreme minimum winter temperature ranging from -30 to -25°F (USDA, 2023) and, compared to the Denver average annual temperature of 51.2°F, Grand County has a very cold climate (NOAA, 2023). Heating Degree Days are a measure of how cold the temperature is and can be used as an indicator of heating demand. In 2023, Granby saw 8,702 Heating Degree Days, compared to around 4,200 in the Denver area (Weather Data Depot, 2023).

Fuel source

The fuel source used by homes and businesses in Grand County will influence the programs and opportunities available to them and therefore the development and implementation of outreach and programs. Additionally, since propane is an expensive source of heating fuel, particularly in cold climates with high heating demands, communities without natural gas service may particularly benefit from heating efficiency and electrification measures.

Only 46% of homes in Grand County are heated with utility-provided natural gas, compared to 65% statewide. In Grand County 32% of homes are heated with electricity and 22% use another heating fuel compared to 26% using electricity and only 8% using another heating fuel source statewide (U.S. Census Bureau, 2022 c).



Figure 2. Photograph taken in Rocky Mountain National Park (Xcel Energy Partners in Energy)

Energy Use and Savings

Xcel Energy provided data on natural gas use, program participation and energy conservation program savings for Grand County as a whole and for each of the county's six municipalities. Mountain Parks Electric provided the equivalent data for county-wide and community-specific electricity use. See **Appendix A: Baseline Energy Analysis** for a comprehensive picture of Grand County baseline energy data.

Premises

Premises provide a count of the service addresses and meters served by utilities in Grand County. For residential customers, this is the equivalent of an individual house or dwelling unit in a multifamily building. For business customers, this is an individual business or a separately metered portion of a larger business's energy use. Evaluating how the number of premises changes over time can provide a picture of community growth and inform an understanding of normalized energy use per premise. See the **Residential Strategies** and **Business Strategies** sections for an overview of energy use per premise, and **Appendix A: Baseline Energy Analysis** for more detail.



10,054 Xcel Energy
gas residential
premises



17,157 Mountain
Parks Electric
residential premises



1,100 Xcel Energy
gas Commercial &
Industrial Premises



3,006 Mountain
Parks Electric
Commercial &
Industrial Premises

Energy Use

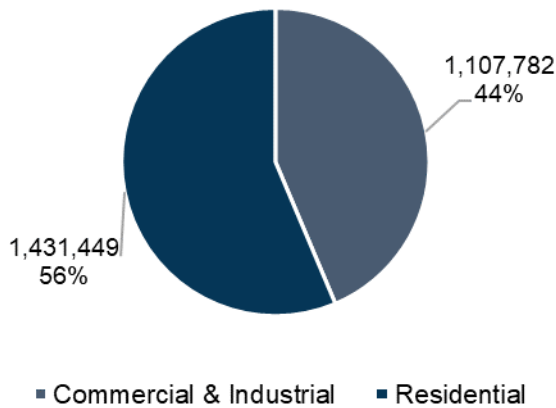
Total Energy

In 2022, 2,539,231 MMBtu (million British thermal units) of energy was consumed in Grand County. **Figure 3** shows total countywide energy use broken out by sector and utility.

The residential sector accounted for 56% of total energy use and consumed an average of 113 MMBtu of energy per premise in 2022, while the commercial sector accounted for 44% of total energy use and consumed an average of 632 MMBtu per premise. Gas use accounted for 63% of total energy use, while electricity accounted for 37% of the total.

See **Appendix A: Baseline Energy Analysis** for a more detailed breakdown and comparison of energy use by sector, utility, and community.

a) 2022 Energy Use by Sector



b) 2022 Energy Use by Utility

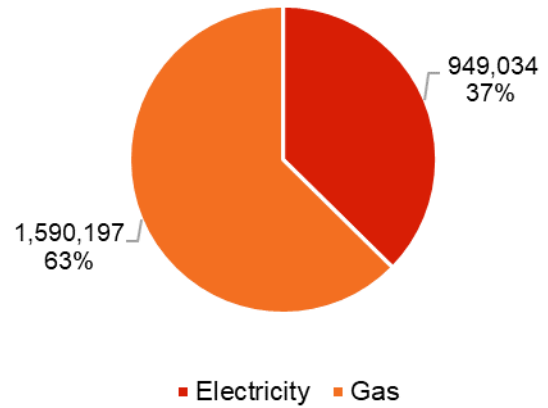


Figure 3. a) 2022 Energy Use by Sector in Grand County, Displayed as MMBtu and Percent of Total Energy Use and b) 2022 Energy Use by Utility in Grand County, Displayed as MMBtu and Percent of Total Energy Use

Gas

Total 2022 gas consumption in Grand County was 1,590,197 Dth (dekatherms). However, total gas consumption and use per sector vary substantially between Grand County communities, as shown in **Figure 4**.

Despite having the second smallest year-round population, the Town of Winter Park consumed the most total gas in 2022, while Hot Sulphur Springs consumed the least. The split between commercial, residential, and municipal use also varies by community with the economic hubs of Winter Park and Granby having a higher proportion of commercial use than the more residential communities of Fraser and Grand Lake.

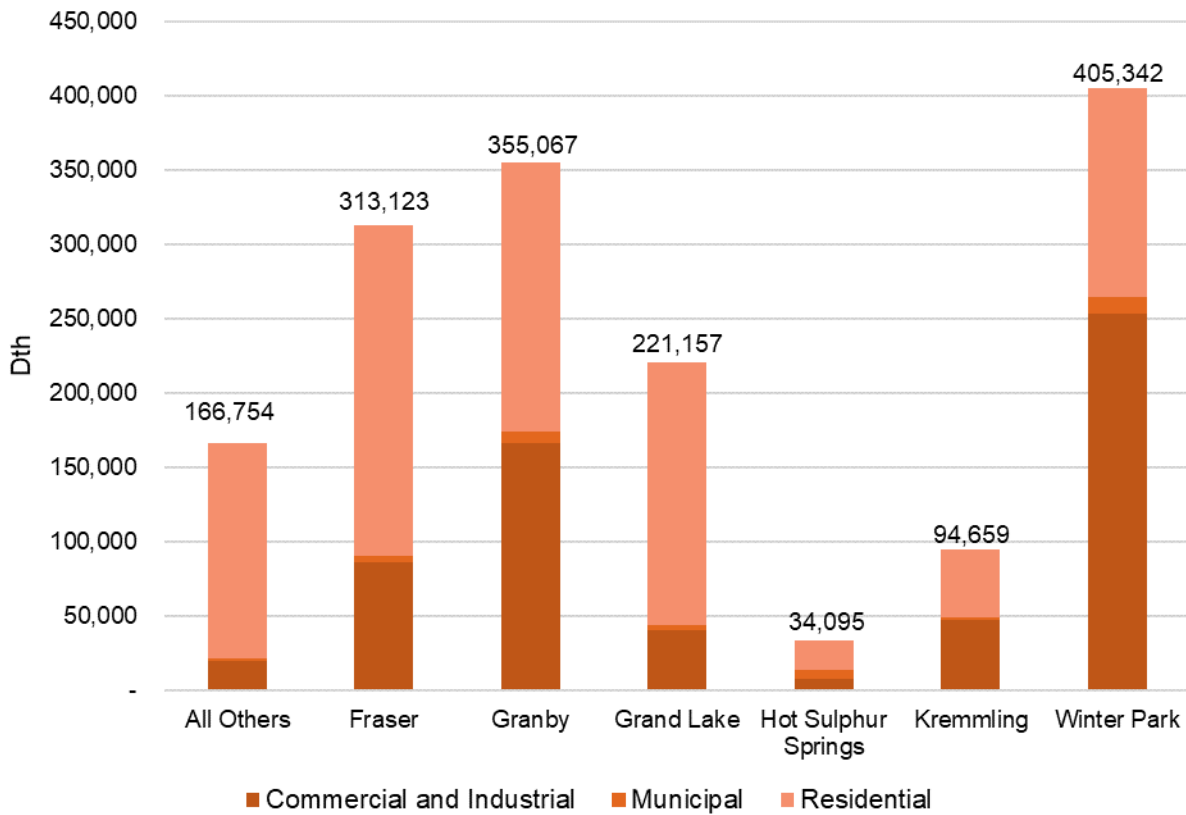


Figure 4. 2022 Gas Consumed in Grand County by Community and Sector, Displayed in Dekatherms

Electricity

Total countywide electricity consumption in 2022 was 278,134 MWh (Megawatt hours). As shown in **Figure 5**, unincorporated communities and premises not located within defined communities (all others) consumed more electricity in 2022 than to the incorporated towns. Similar to the pattern described above for natural gas, Winter Park consumed the most electricity of the incorporated towns and the distribution between commercial, municipal, and residential varied significantly between communities.

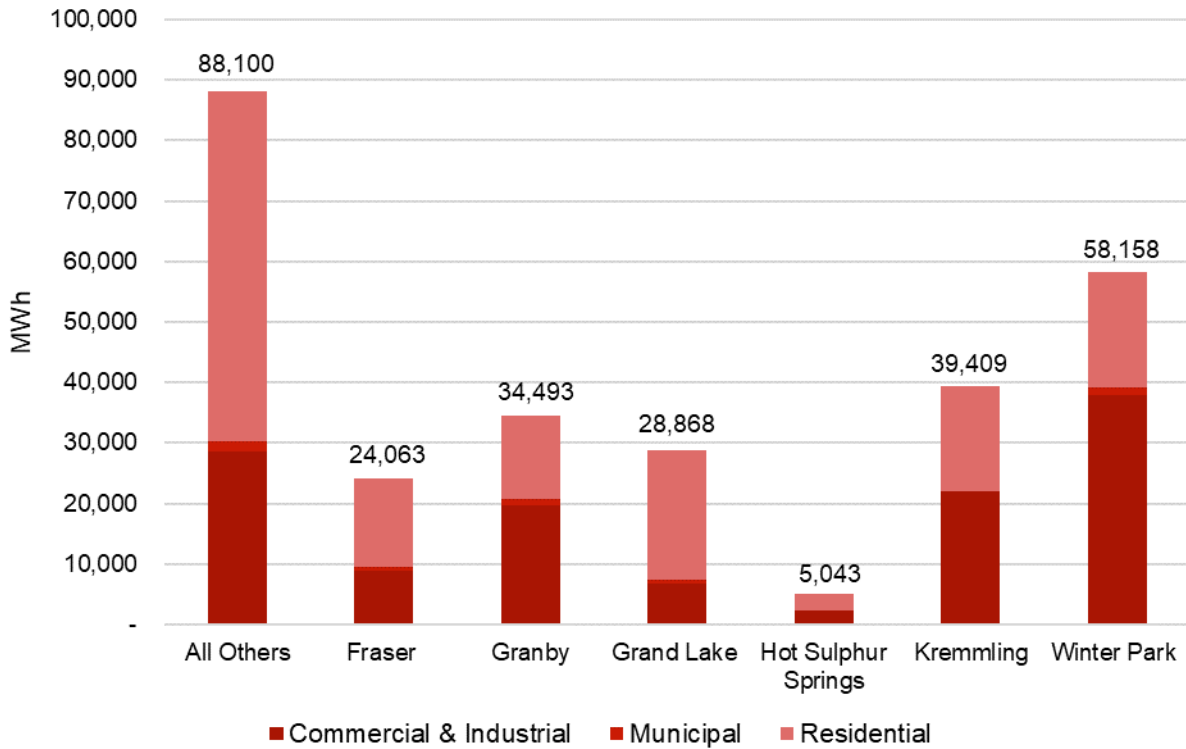


Figure 5. 2022 Electricity Consumed in Grand County by Community and Sector, Displayed in Megawatt Hours

Energy Efficiency Program Participation

Xcel Energy Program Participation

In 2022, there were 31 participants in Xcel Energy residential energy efficiency or demand-side management (DSM) programs, with no commercial program participation. As shown in **Figure 6**, Fraser and Granby saw a higher number of participants than other communities. See **Appendix A: Baseline Energy Analysis** for a more detailed breakdown and comparison of program participation.

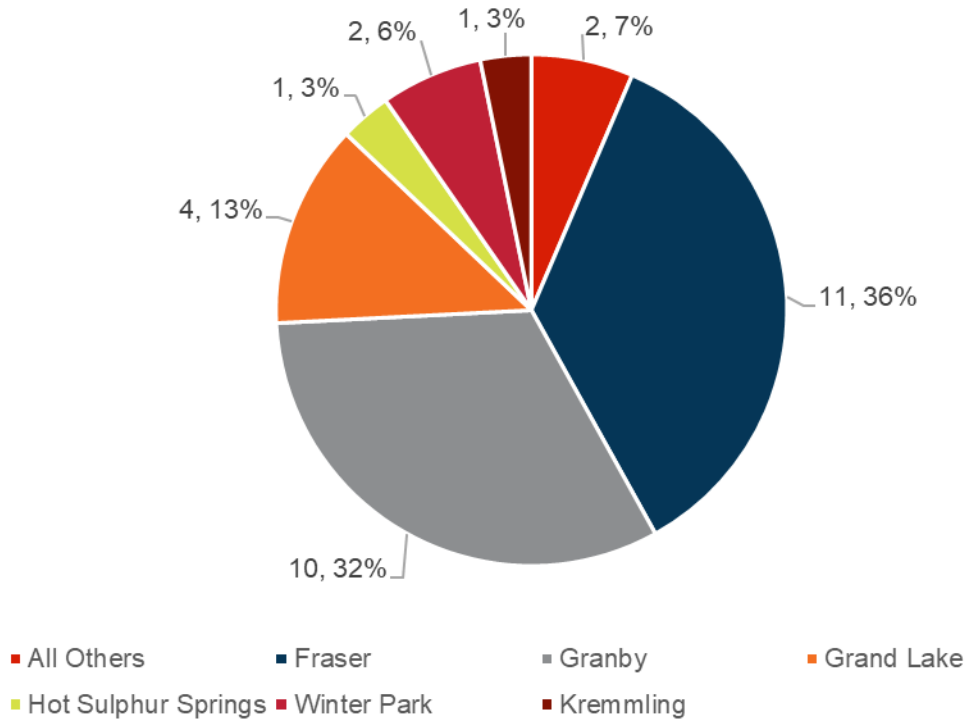


Figure 6. 2022 Xcel Energy Demand Side Management Program Participation, Displayed in Number of Participants and Percent of Total Participation

Grand County customers participated in a range of Xcel Energy residential DSM programs, as shown in **Table 2**, with the Residential HVAC program showing the highest savings.

Table 2. 2022 Participation in Xcel Energy Residential DSM Programs

Program	Participant Count
Residential HVAC	19
Single-Family Weatherization	3
Home Energy Audit	3
Home Energy Squad	3
Energy Savings Kits	2
HomeSmart	1

Mountain Parks Electric Program Participation

In 2022, customers participated in a range of residential and commercial Mountain Parks Electric energy efficiency programs, as shown in **Table 3**.

Table 3. 2022 Participation in Mountain Parks Electric Residential and Commercial Programs

Sector	Program	Measure	Units	Total Annual kWh Reduction
Residential	Heat Pump - Quality Install	8	installs	759
	Smart Thermostat	24	units	7,920
	Induction Cooktops/Ranges	11	units	627
	Energy Star Clothes Washers	33	units	3,389
	Energy Star Clothes Dryer	26	units	4,160
	Heat Pump Clothes Dryer	3	units	954
	Energy Star Dishwashers	6	units	215
	Energy Star Refrigerators	16	units	808
	ES Refrigerators w/ Recycling	20	units	6,002
	Refrigerators Recycled only	40	units	9,984
	Electric Water Heaters	3	units	N/A
	Heat Pump Water Heaters	4	units	4,360
	Desuperheaters	1	units	372
	Low Income Weatherization	6	homes	29,515
Business	Commercial LED Lighting - Retro	14	projects	371,672
	Commercial LED Lighting - New Cons.	1	projects	46,535

WHERE WE ARE GOING



Energy Vision Statement

During the planning process, the Energy Action Team created a vision statement for this Energy Action Plan. This statement helped guide the planning process and reflects the community's values and intention.

The Grand County community envisions a future where all residents, businesses and visitors have access to energy that is affordable, dependable, and clean.

We value regional collaboration and will use our collective local influence to pursue forward-looking best practices that save energy, deliver financial savings, and enhance quality of life while maintaining our natural environment.

Focus Areas

To achieve a community-wide commitment to energy stewardship, the Energy Action Team identified the following focus areas to prioritize strategies and resources.

Foundational Strategies: This focus area includes strategies to address existing information and communication barriers to energy action at a regional scale and lays a foundation for success in the residential and business focus areas.

Residential Strategies: Strategies to advance energy efficiency opportunities in Grand County residential properties, including incentives and education for full-time residents, second homeowners, and short-term rental managers. This focus area aims to clarify and streamline the journey from energy audit to efficiency improvements for residential energy customers.

Business Strategies: Strategies to advance energy efficiency opportunities for large and small businesses in Grand County through incentives and education for large and small businesses. This focus area aims to clarify and streamline the journey from energy audit to efficiency improvements for commercial energy customers.

These focus areas were chosen to provide a holistic approach to energy stewardship in Grand County by capitalizing on the sectors that currently use the most energy and creating a framework to address energy challenges at the regional scale.

Goal

During the planning process, analysis of community energy and program participation data revealed that, while Grand County energy use is comparable to peer communities, participation in energy efficiency programs is low for both the residential and commercial sectors. Increasing program participation has the potential to realize financial savings and other benefits for Grand County residents and businesses while improving energy efficiency.

Based on data analysis and the results of a community-wide survey, the Energy Action Team decided to establish residential and commercial utility program participation goals that are anticipated to be achievable during the 18-month implementation period for this plan.

RESIDENTIAL ENERGY GOAL

464

annual participants across Xcel Energy and Mountain Parks Electric residential energy efficiency programs by 2026.

BUSINESSES ENERGY GOAL

40

annual participants across Xcel Energy and Mountain Parks Electric commercial and industrial utility energy efficiency programs by 2026.

HOW WE ARE GOING TO GET THERE



The planning team identified seven strategies necessary to achieve Grand County’s vision and goals:



Foundational Strategies

- **Strategy F-1:** Establish a working group for countywide coordination on energy and sustainability issues
- **Strategy F-2:** Create a one-stop virtual shop for Grand County energy efficiency information
- **Strategy F-3:** Conduct outreach related to code requirements for new construction



Residential

- **Strategy R-1:** Educate Grand County residents about energy audit and efficiency opportunities
- **Strategy R-2:** Post energy efficiency audit, help residents make identified improvements



Business

- **Strategy B-1:** Reach out to businesses to promote energy audit and efficiency opportunities
- **Strategy B-2:** Post energy efficiency audit, help businesses make identified improvements

The following sections of this plan provide implementation details for each of these strategies, organized by focus area.



Foundational Strategies

Overview

The diverse, rural nature of Grand County, coupled with the fact that gas and electric service is provided by two separate utilities, has created challenges when it comes to promoting energy efficiency.

First, collaborative and coordinated action at the county scale has been absent to date. While several Grand County municipalities have separately established sustainability and energy goals, this Energy Action Plan represents the first countywide effort specifically related to energy efficiency. Second, there is a wide range of building and energy codes adopted by the county and towns, resulting in the potential for confusion among contractors about requirements. Third, utility customers have not had a reliable one-stop-shop for energy efficiency resources and information, with information fragmented across Mountain Parks and Xcel Energy's websites. The strategies in this focus area seek to address these challenges.

Strategies

Strategy F-1: Establish a working group for countywide coordination on energy and sustainability issues

This strategy aims to establish a forum for countywide coordination among Grand County local governments, non-profits, businesses and other key stakeholders during the 18-month implementation period for this Energy Action Plan and beyond. While the working group will initially focus on implementation of the Energy Action Plan strategies, the group could expand to include coordination on other energy and sustainability topics relevant to the region.

Target Audience

Local governments, nonprofits, businesses, and key stakeholders operating in Grand County.

Desired Outcomes

- Create a structure to support collaborative implementation of this Energy Action Plan.
- Provide forum for ongoing regular coordination on energy-related topics.
- Provide space for development of new emerging strategies not identified in this Energy Action Plan.
- Increase collaboration and discussion among local governments in Grand County about energy efficiency, GHG reductions, and renewable energy offerings.

Scope and Timeline

Q3 2024

- Prepare to establish Grand County energy working group, including:
 - Confirm working group members.
 - Poll members on dates and times to schedule initial monthly working group meetings.
- Recruit two working group participants to act as co-chairs for a one-year term.
- Host first working group meetings with topics to include:
 - Scheduling of recurring meetings.

- Confirm sequencing and timeline for strategy implementation.
- Initial outreach opportunities.
- Identify goals for the first year of implementation.

Q4 2024

- Continue to host monthly one-hour working group meetings.
- Identify and launch any subgroups needed to work on specific topics.
- Prepare for 2025 by holding an end-of-the-year meeting to plan for specific outcomes and work products from the working group.
- Reevaluate frequency and structure of working group meetings.

Q1 – Q4 2025

- Continue to host regular working group meetings.
- Identify new co-chairs for the next one-year term of the working group.
- Track progress and reassess approach as needed.
- Prepare to continue meetings after Energy Action Plan implementation period closes, including confirmation of roles and responsibilities going forward.

Roles and Responsibilities

PM Team (Mountain Parks Electric & Sustainable Grand)

- Identify and recruit working group members.
- Participate in working group meetings and any subgroup sessions as needed.
- Mountain Parks Electric to provide data updates to support progress tracking.
- Collaborate with Xcel Energy Partners in Energy and co-chairs on working group agenda development.
- Support working group meeting leadership and facilitation.

Xcel Energy Partners in Energy

- Support scheduling, agenda development, facilitation, and note-taking for working group implementation of Energy Action Plan.
- Provide data updates to support progress tracking.

Grand County Working Group

- Participate in core working work and subgroups.
- Rotating leadership of the working group with two co-chairs per year (support agenda development, opening meetings).

Required Resources

- Sustainable Grand and Mountain Parks Electric staff time.
- Grand County community and key stakeholder time to participate in and co-chair working group.
- Partners in Energy staff time for materials preparation and facilitation.

Strategy F-2: Create a one-stop virtual shop for Grand County energy efficiency information

Having an easily accessible one-stop-shop for information and resources related to energy efficiency could create an easier process for Grand County residents and businesses to obtain an energy audit and make improvements. Developing a robust, trusted resource for energy information could also simplify communication and outreach for Grand County communities by creating a resource hub and avoid multiple organizations having to keep track of rapidly changing opportunities and incentives.

While Sustainable Grand is currently filling some of the needs identified, serving as a hub for business and residential customers to understand utility programs and sign up for an energy audit, this strategy aims to identify any additional needs or scope for a one-stop-shop and to clarify roles and responsibilities going forward. Additionally, the strategy focuses on developing a sustainable funding and operation structure for a one-stop-shop to exist long-term and consistently provide reliable and accurate information and resources to Grand County residents and businesses.



A one-stop-shop for energy efficiency information was highlighted as a core need by many local government participants during workshops and focus groups. While local communities appreciate the work that Sustainable Grand is doing, there was recognition that increased awareness of what does currently exist, new resources, and a sustainable maintenance and funding structure are needed to ensure the effectiveness of a one-stop-shop long-term.

Target Audience

Sustainable Grand, Grand County, Mountain Parks Electric, Grand County communities.

Desired Outcomes

- Ensure that Grand County residents and businesses continue to have one website and a clear contact for energy rebate information, resources, and energy audit scheduling.
- Determine whether Sustainable Grand or another local partner is the most appropriate host for a one-stop-shop going forward.
- Reduce the burden on municipalities for staying on top of information and updates related to energy opportunities.
- Ensure the one-stop-shop is accessible to all residents of Grand County.

Scope and Timeline

Q3 2024

- Research the work of other nonprofits (e.g. High Country Conservation Center, Cloud City Conservation Center, Clean Energy Economy for the Region) that offer energy efficiency services, focusing on those that facilitate collaboration at the county level.
- Identify potential funding models and sources to support Sustainable Grand's ongoing work and/or continued development of one-stop-shop.
- Discuss information gaps and opportunities to improve the current system through Grand County working group collaboration (Strategy F-1).

Q4 2024

- Review research on one-stop-shop examples and present feedback and discussion during regular working group meeting.
- Develop a work plan for one-stop-shop development to fill identified gaps and needs.
- Begin development of one-stop-shop resources, including a landing page with a roadmap of what is to come for incorporation into outreach materials (Strategy R-1 and Strategy B-1).

Q1 – Q4 2025

- Develop and launch any new one-stop-resources, such as web content and streamlined audit sign-up systems.
- Continue to maintain and update one-stop-shop resources, identifying any new resources or opportunities for improvement.
- Continue to communicate one-stop-shop resources through implementation of Strategies R-1 and B-1.

Roles and Responsibilities

PM Team (Mountain Parks Electric & Sustainable Grand)

- Provide feedback on research findings presented by Partners in Energy.
- Support decision making related to the appropriate owner of the one-stop-shop going forward.
- Support one-stop-shop materials development.

Xcel Energy Partners in Energy

- Research how other communities provide one-stop-shop for information and resources.
 - Develop memo or presentation of findings for the working group.

Grand County Working Group

- Provide input and feedback on needs and opportunities for a one-stop-shop for energy information and resources.
- Contribute to content and materials development, for example by communicating any relevant local programs or resources available to residents and businesses.

Required Resources

- Grand County PM Team staff time.
- Partners in Energy staff time for conducting research.

Strategy F-3: Conduct outreach related to code requirements for new construction

Grand County currently has a patchwork of building and energy code adoption. As of April 2024, Winter Park, Granby, and Fraser have adopted, and Grand County is preparing to adopt, the 2021 International Energy Conservation Code (IECC). Grand Lake and Hot Sulphur Springs are using the 2015 IECC and Kremmling is using the 2006 IECC. Newer codes have higher requirements for energy efficiency which can result in energy and financial savings over the life of the building. However, the patchwork of codes has the potential to create inconsistency and confusion related to requirements for new construction across the county.

[Colorado House Bill HB22-1362](#) was passed in May 2022 and requires cities and counties to adopt at least the 2021 IECC, including electric and solar ready provisions, when they update other building codes between July 1, 2023, and July 1, 2026. After July 1, 2026, cities and counties will be required to adopt model low energy and carbon codes currently in development.

This strategy focuses on opportunities for peer learning and support as communities adopt updated energy codes, encourage beyond-code construction, or adopt stretch codes that go beyond state IECC requirements. Additionally, this strategy aims to address knowledge gaps and ensure consistency in code implementation, enforcement, and compliance countywide. Increased education and resources throughout the valley could also encourage efficiency beyond energy code adoption.

Target Audience

Municipalities, contractors, homebuilders, and architects operating in Grand County.

Desired Outcomes

- Ensure effective, consistent, and collaborative implementation and enforcement of energy codes countywide.
- Increase clarity and awareness of updated code requirements among contractors.
- Smooth adoption and implementation of updated energy codes.
- Support for the encouragement of beyond-code construction or adoption of stretch codes.
- Promote workforce development through education and training programs for those impacted by updated code requirements.

Scope and Timeline

Q3 2024

- Use working group created through implementation of strategy F-1 to discuss current code and future adoption plans per state law.
- Identify gaps in contractor knowledge, municipal code adoption, and/or enforcement of existing codes.
- Identify opportunities to encourage construction that goes beyond current code requirements, including leveraging of Xcel Energy incentives for above-code construction.

Q4 2024

- Develop outreach plan and any materials needed to fill identified gaps in contractor knowledge.
- Develop outreach or other materials to support code adoption by municipalities.
- Inventory and leverage existing training and materials available through the [State of Colorado](#) and [Xcel Energy](#).

- Utilize working group connections to plan and schedule trainings for 2025.

Q1 -Q4 2025

- Conduct virtual and in person trainings with Grand County contractors, builders, and architects related to new code requirements.
- Upon completion of a training, report findings back to the working group.
- Utilize collective intelligence of the working group to inform future efforts, including the next phase of outreach and training in 2026, if needed.

Roles and Responsibilities

PM Team (Mountain Parks Electric & Sustainable Grand)

- Lead conversation at working group regarding what information is lacking on energy and building code trainings.
- Review materials and recruit attendees to participate in training sessions.

Xcel Energy Partners in Energy

- Inventory available resources and work as a connector to other resources.

Grand County Working Group

- Provide input and feedback on outreach and training needs during regular working group meetings.
- Utilize networks and recruit participants to energy and building code training sessions.

Required Resources

- Partners in Energy staff time for preparing training materials.
- Venue for in-person training sessions.

Workforce Development

During development of this plan, workforce availability was identified as an existing barrier to energy action in Grand County. This includes availability of trained contractors to complete energy audits and energy efficiency improvements. This challenge is not unique to Grand County and there are ongoing efforts at the state level and in other Colorado communities to develop workable, sustainable workforce solutions. While workforce development was determined to be beyond the scope of this Energy Action Plan, the PM team and working group will continue to monitor existing efforts and to leverage solutions as they emerge. Additionally, the team may reference and leverage the [Xcel Energy Partners in Energy Workforce Development Collaboration Toolkit](#)





Residential Strategies

Overview

The residential sector accounts for 56% of total energy use in Grand County. While residential energy use per premise varies across the county as seen in **Figure 7**, consumption is generally comparable to or below that seen in other mountain communities (see **Appendix A: Baseline Energy Analysis** for detailed energy data).

Grand County has a very high number of second homes and short-term rental units with a full-time population of almost 15,724 and over 16,700 housing units (U.S. Census Bureau, 2022 a). According to the 2022 American Community Survey estimates, 63% of housing units in the county are vacant, meaning they do not serve as a primary residence (U.S. Census Bureau, 2022 b).

The vacancy rate ranges from 12% in the predominantly residential town of Kremmling up to 87% in Winter Park, a town that sees heavy year-round tourism (**Figure 7**). Despite this variation, energy use per premise is relatively similar across Grand County communities, indicating that second homes and short-term rentals are responsible for a significant portion of total energy use. Electricity premise counts were unavailable for unincorporated Grand County at the time of writing this plan.

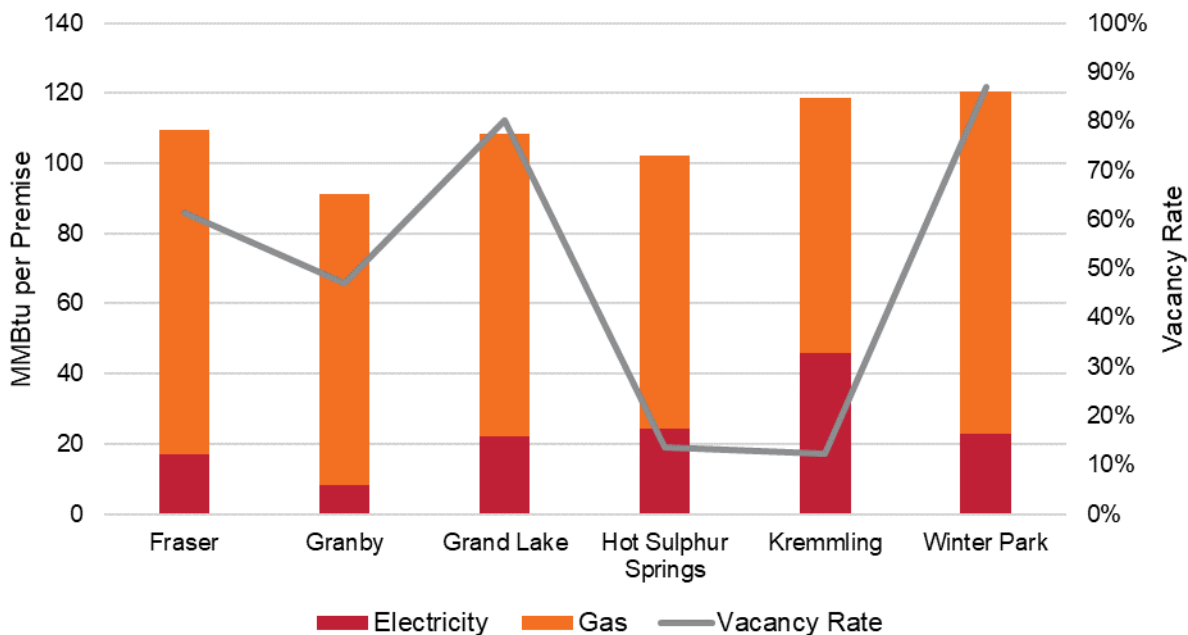


Figure 7. 2022 Residential Energy Use in MMBtu and Housing Unit Vacancy Rate by Community

Part-time residents and short-term rental units pose a challenge for energy action since they can be harder to reach through traditional local communication channels, may be less sensitive to energy price signals, and may face challenges with scheduling audits and improvements.

In addition to differences in housing unit vacancy, Grand County communities are also diverse in terms of demographics. The percentage of people defined as low income using the EPA’s EJScreen tool ranges from 9% in Grand Lake up to 41% in Kremmling and the percentage of the population that are people of color ranges from 2% in Grand Lake up to 34% in Kremmling (EPA, 2023). These differences have implications for equitable access to energy choices, information, and resources. While this plan focuses on opportunities for alignment and collaboration at the county scale, it is also important to recognize the differences between Grand County communities and the need for tailored approaches to reach different audiences.



Current barriers to energy action identified by participants in a residential focus group included lack of public knowledge about energy efficiency audits and their benefits, the high number of secondary homeowners who aren’t prioritizing energy efficiency, lack of contractor availability to make identified improvements, and a general perception that “audits are for people who care about the environment”.

What is Happening Now: The Residential Customer Journey to an Energy Efficiency Audit

At the time of plan development, Sustainable Grand operates as a hub for connecting residents to energy efficiency audits.

The nonprofit uses its website to share information with residents and links to a form hosted by Energy Smart Colorado that they can fill out to inquire about an energy efficiency audit. Upon completion of this form, residents will be connected with an energy auditor and receive help to submit information for a rebate that will subsidize the cost of the audit. Rebate information is then routed to Xcel Energy or Mountain Parks Electric depending on whether the residential customer has natural gas, electric, or a combination of the two utilities.



Why Should I Get an Energy Assessment?

Knowledge is power. This is the main benefit of a home energy audit: knowledge of your home’s efficiency and what you can do to improve. After a home energy audit, you will basically have a road map for how to reduce your home energy usage. The next steps are up to you based on the issues you want to address, your budget, and your goals. Once any and all upgrades are complete, you can enjoy benefits such as:

- Lower energy bills: Applying the insights from the energy audit can save you money in the long run.
- Greater comfort inside your home: Upgrading insulation inside your home can eliminate drafts, cold spots, and other issues stemming from air leaks.
- Better air quality: Sealing air leaks can stop contaminants from entering your home.
- Reduced environmental impact: Residential homes account for more than one-fifth of total energy use in the United States. Efficient homes use less fossil fuels. As a result, investing in home energy upgrades is good for the planet as a whole.

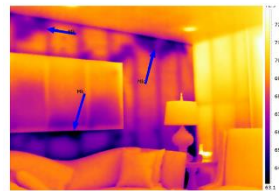


Figure 8. Screenshot from the energy efficiency audit page on SustainableGrand.org

If a resident has income restrictions, they will be connected with Energy Outreach Colorado, which can offer additional resources for income qualified residents.



A community survey conducted as part of this planning process revealed that one-third of respondents had not heard of existing utility energy efficiency programs and another third are only somewhat familiar with the programs. The final third of respondents who were familiar with the programs were very likely to have used them, indicating that outreach and education has significant potential to increase energy program participation and savings.

Strategies

Strategy R-1: Educate Grand County residents about energy audit and efficiency opportunities

Several no-cost and low-cost opportunities for residents to save money are available via Xcel Energy, Mountain Parks Electric, and Energy Outreach Colorado home audit programs and energy efficient rebates. The purpose of this strategy is to educate Grand County residents about these opportunities and encourage participation in energy programs through a countywide effort.

Target Audience

Full-time residents, low-income full-time residents, part-time residents, and short-term rental owners/managers not familiar with available energy programs.

Desired Outcomes

- Increase energy efficiency program participants in Mountain Parks Electric and Xcel Energy to 436 by 2026.
- Develop communication streams marketing energy audits to hard-to-reach audience groups (e.g., part-time residents and short-term rentals).

Scope and Timeline

Q3 2024

- Identify priorities, time-sensitive opportunities, and needs for preliminary outreach, for example:
 - Identify upcoming events that could be an opportunity for community outreach and engagement.
 - Develop flyer for distribution at events and at physical community locations (e.g., basic program information, checklist of measures and incentives that residents could reference, information about where to start with energy efficiency).
- Develop an outreach plan that outlines key messages, inventories existing communication channels, and identifies roles and timeline for broader community outreach.

Q3 2024 – Q4 2025

- Implement outreach plan, including:
 - Develop and communicate resident success stories into outreach by contacting residents who have completed audits and efficiency improvements.
 - Develop collateral to communicate available rebates and programs through existing channels and connect to the one-stop-shop developed in Strategy F-2 once available, for example:
 - One-pager for inclusion in local agency communications
 - Digital signage information
 - Utility bill notices
 - Newsletter content
 - Social media content
 - Attend public events to raise awareness of existing opportunities.
- Track progress metrics from both Xcel Energy and Mountain Parks.

Roles and Responsibilities

PM Team (Mountain Parks Electric & Sustainable Grand)

- Review outreach plan.
- Review collateral as it is developed.
- Lead on-the-ground community outreach.
- Provide Mountain Parks Electric participation results for tracking progress.

Xcel Energy Partners in Energy

- Develop outreach plan.
- Develop and design collateral.
- Support outreach, for example through attendance at up to two virtual events and/or connection to materials and giveaways for use at in-person events (e.g., LED lightbulb kits).
- Provide data on Xcel Energy participation results for tracking progress.

Grand County Working Group

- Support distribution of outreach materials, for example via social media, attendance at local events, and other outreach channels.

Required Resources

- Grand County PM Team staff time required for outreach planning, collateral review, conducting outreach, and tracking results.
- Xcel Energy Partners in Energy funding provided for printing and some advertising costs.
- Xcel Energy Partners in Energy giveaways (e.g. specialty LED kits) provided to support outreach.

Strategy R-2: Post energy efficiency audit, help residents make identified improvements

For many residents, the first step in their energy journey is to complete an energy efficiency audit. This strategy aims to improve the conversion rate and customer journey from home energy audit to efficiency improvements by following up with residents who have had an audit, identifying and removing known barriers, and providing a seamless connection to efficiency rebates and resources.



Focus group participants mentioned during the planning process that points of friction exist (e.g. finding available contractors, cost) for Grand County residents looking to make energy efficiency improvements once they receive audit recommendations.

Target Audience

Full-time residents, low-income full-time residents, part-time residents, and short-term rentals that have received an energy audit.

Desired Outcomes

- Empower individuals who have received audits to make energy efficiency improvements.
- Create a process to follow up after energy audits to increase the conversion rate to energy efficiency improvements.

- Increase energy efficiency program participants in Mountain Parks Electric and Xcel Energy to 436 by 2026.

Scope and Timeline

Q4 2024

- Engage energy auditors and contractors to understand current processes and barriers (e.g., are they aware of and offering rebates to residents, if not why?)
- Document known gaps in the current process that limit individuals from making improvements, informed by the community survey conducted during plan development, contractor engagement, and local community experiences.
- Develop a process for identifying and tracking residents who have completed an audit to ensure conversion to efficiency improvements.

Q1 2025

- Identify resources needed to fill gaps (e.g., local contractor lists, education, and outreach).
- Develop communications plan and materials to reach out to residents who have received an energy audit, including a survey or individual engagement to:
 - Encourage use of available programs to complete improvements identified during the audit.
 - Develop success stories for outreach.
 - Understand and document why identified improvements were not completed.
 - Understand any process improvements needed to improve the customer journey from considering an audit through completion of identified improvements.

Q2 – Q4 2025

- Track residential energy audits, post-audit outreach and conversion rate to home efficiency improvements.
- Refine materials with feedback from PM Team and local governments.

Roles and Responsibilities

PM Team (Mountain Parks Electric & Sustainable Grand)

- Lead contractor engagement to identify gaps that need addressing.
- Provide feedback on resources developed to address gaps.
- Mountain Parks Electric to track and provide information on completed energy audits.
- Sustainable Grand to lead follow-up engagement with residents who have completed an energy audit.

Xcel Energy Partners in Energy

- Support contractor engagement, for example, by helping to identify key questions.
- Develop collateral intended to address gaps for contractors and residents.
- Support the development of case studies and examples of success.

Grand County Working Group

- Support contractor engagement by identifying and connecting with existing contacts (e.g., builders association).
- Provide feedback on outreach approach and materials.
- Support outreach to residents.

Required Resources

- Grand County PM Team staff time required for content review.
- Partners in Energy staff time for developing content.



Business Strategies

Overview

Commercial premises account for 44% of Grand County’s total energy consumption and this focus area identifies opportunities to engage with commercial energy customers on energy efficiency. As shown in **Figure 9**, commercial energy use per premise varies significantly across the county. Commercial energy use per premise is particularly high in the tourism hub of Winter Park compared to other Grand County communities. Electricity premise counts were unavailable for unincorporated Grand County at the time of writing this plan.

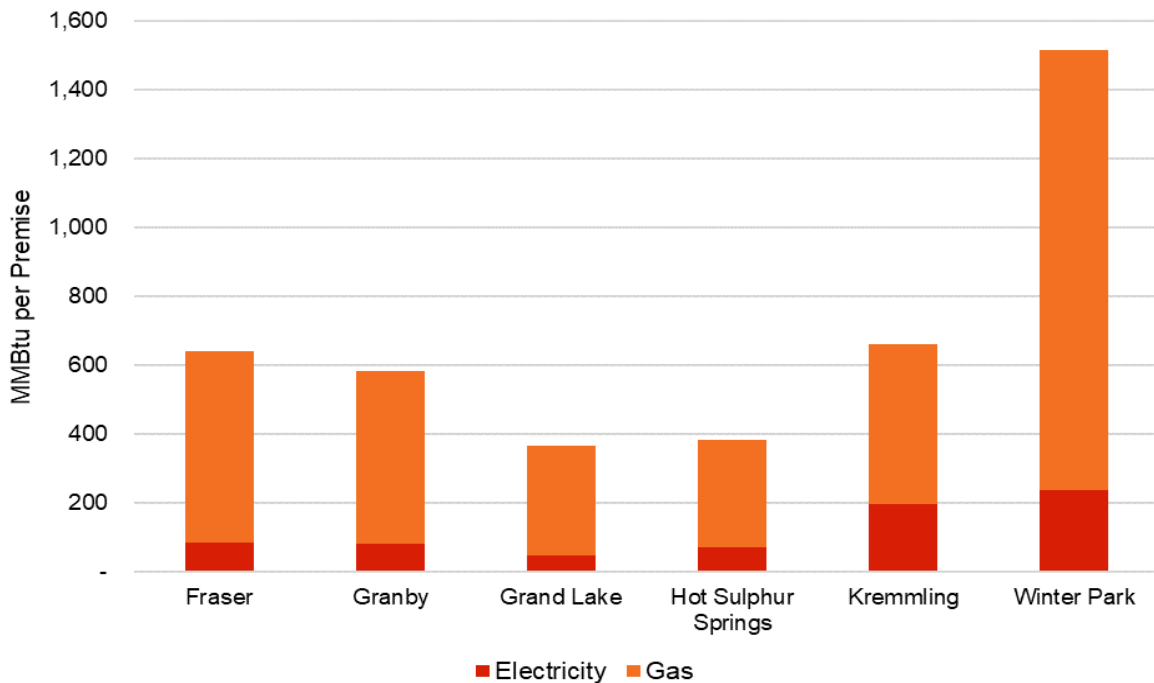


Figure 9. 2022 Commercial and Industrial Energy Use by Community in MMBtu

What is Happening Now: The Business Customer Journey to an Energy Efficiency Audit

Starting in March 2024, Sustainable Grand began offering energy efficiency audits to businesses. These audits are performed via Energy Smart Colorado and are funded via a U.S. Department of Agriculture grant. The grant has restrictions on the size of business and number of employees, which prevents very large employers in the county from obtaining an efficiency audit.



A focus group identified significant barriers facing business customers who want to get audits and make improvements. Participants described a long and winding path to get a commercial energy audit and make improvements, indicating that there is room for improvement in communication and journey management. While the addition of commercial energy audits to Sustainable Grand’s offerings in 2024 may help to address some of the concerns identified, participants emphasized the need for increased awareness of these resources among local communities and businesses alike.

Strategies

Strategy B-1: Reach out to businesses to promote energy audit and efficiency opportunities

This strategy promotes energy efficiency opportunities to businesses throughout Grand County and encourages participation in commercial energy audits.

Target Audience

Businesses in Grand County (including small, medium, and large businesses)

Desired Outcomes

- Increase participation in Xcel Energy and Mountain Parks Electric energy efficiency programs to 30 annual participants by 2026.
- Develop communications streams marketing energy audits to businesses.

Scope and Timeline

Q3 2024

- Develop an outreach plan that outlines key messages, communication channels, roles, and timeline for outreach to businesses of different sizes.

Q4 2024 – Q4 2025

- Implement outreach plan, including but not limited to:
 - Develop and communicate success stories from businesses that have obtained an audit and made improvements. Stories will highlight resources and grant opportunities available to reduce upfront costs.
 - Develop collateral to communicate available rebates and programs, including existing audit programs for small businesses and resources for larger businesses.
 - Business walks for in-person distribution of outreach materials.
 - Leveraging existing business communication channels such as Chambers of Commerce.
- Track progress metrics from both Xcel Energy and Mountain Parks.

Roles and Responsibilities

PM Team (Mountain Parks Electric & Sustainable Grand)

- Review outreach plan.
- Review collateral as developed.
- Lead outreach distribution.
- Provide Mountain Parks Electric participation results for tracking progress.

Xcel Energy Partners in Energy

- Develop outreach plan and collateral.
- Support outreach, for example through attendance at up to two virtual events.
- Provide data on Xcel Energy participation results for tracking progress.

Grand County Working Group

- Identify existing business communication channels such as Chambers of Commerce, local business networking events.
- Support distribution of outreach materials.

Required Resources

- Grand County PM Team, Xcel Energy Partners in Energy, and community time required for outreach planning, collateral review, conducting outreach, and tracking results.

Strategy B-2: Post energy efficiency audit, help businesses make identified improvements

This strategy reduces the points of friction that businesses face when trying to make energy efficiency improvements and identify barriers to making improvements where they exist.

Target Audience

Businesses in Grand County (including small, medium, and large businesses) that have received an energy audit.

Desired Outcomes

- Empower businesses who have received audits to make energy efficiency improvements.
- Increase participation in Xcel Energy and Mountain Parks Electric energy efficiency programs to 30 annual participants by 2026.
- Create a process to follow up after energy audits to increase conversion rate to energy efficiency improvements.

Scope and Timeline

Q4 2024

- Engage with businesses to understand gaps in the current process that prevent them from making improvements (e.g. finding available contractors).
- Combine with outreach to contractors in [Strategy R-2](#) to document known gaps in the current process that limit businesses from making improvements.
- Develop a plan for identifying and tracking businesses who have completed an audit.

Q1 2025

- Identify resources needed to fill gaps (e.g., local contractor lists, education, and outreach).
- Develop communications plan and materials to reach out to businesses who have received an energy audit, including a survey or engagement to:
 - Encourage use of available programs to complete improvements identified during the audit.
 - Collect and document success stories to use in outreach to other businesses.
 - Understand and document why identified improvements were not completed.
 - Identify any improvements needed to improve the customer journey from considering an audit through completion of identified improvements.
- Consider developing a public facing “reward” (e.g. green sticker in window from Sustainable Grand) that indicates certain amount of audit upgrades completed in time window by business.

Q2 – Q4 2025

- Track commercial energy audits, post-audit outreach, and conversion rate to business efficiency improvements.
- Refine materials with feedback from PM Team and local governments.

Roles and Responsibilities

PM Team (Mountain Parks Electric & Sustainable Grand)

- Lead business engagement to identify gaps that need to be addressed.
- Provide feedback on resources developed to address gaps.
- Mountain Parks grant writer to communicate potential funding opportunities available or forthcoming that might help businesses reduce the cost of improvements.
- Sustainable Grand to provide data on business energy audit participation.
- Sustainable Grand to lead follow-up engagement with businesses who have completed an energy audit.

Xcel Energy Partners in Energy

- Support business engagement, for example by helping to identify key questions.
- Develop collateral intended to address gaps.
- Provide data on business program participation.

Grand County Working Group

- Support business engagement by identifying and connecting with existing contacts (e.g., business associations).
- Provide feedback on outreach approach and materials.
- Support outreach to businesses.

Required Resources

- Grand County PM Team staff time required for content review.
- Partners in Energy staff time for developing content.
- Community time to support outreach and engagement.

Energy Action Plan Impact

Over the next 18-months, the combined targets and strategies outlined in this plan will result in the following impacts:

Table 4. Savings Associated With Baseline Mountain Parks Electric Program Participation and Achieving the Energy Action Plan Goal.

Mountain Parks Electric	Residential	Business
Baseline Participation	201	15
Baseline kWh Savings	69,066	73,083
Goal Participation	402	30
Goal kWh Savings	138,131	146,166

Table 5. Savings Associated With Baseline Xcel Energy Program Participation and Achieving the Energy Action Plan Goal.

Xcel Energy	Residential	Business
Baseline Participation	31	5
Baseline Thm Savings	4,273	21,952
Goal Participation	62	10
Goal Thm Savings	5,456	43,904

These impacts were estimated by assuming the same programs are participated in throughout the implementation period of this energy action plan. The actual programs that will see participation during the implementation period may vary from the baseline, and consequently the savings impact may be different than the estimates above.

HOW WE STAY ON COURSE



This Energy Action Plan is a living document. Goals and strategies will be assessed and refined as needed based on data and community capacity. Implementation of this plan is anticipated to span 18-months, through the end of 2025, and will then be reevaluated.

Grand County Working Group

Ongoing collaboration between Grand County communities and key stakeholders will be key to successful implementation of this Energy Action plan and to future energy action beyond the timeframe for this plan. [Strategy F-1](#) calls for the establishment of a working group for countywide coordination on energy issues.

Once established, the working group will support implementation of this plan by attending regular coordination meetings and serving as liaisons to the Grand County community. The working group will include representatives from Grand County municipalities, non-profits, and other key local stakeholders. While the working group is initially anticipated to focus on implementation of this Energy Action Plan, the group may also expand to include coordination on sustainability and climate topics more broadly. The intent is for working group members to have rotating leadership of the group, with two participants serving as co-chair at any one time.

Project Management

The day-to-day implementation of this plan will be led by the Project Management Team, consisting of Sustainable Grand, Mountain Parks Electric, and Xcel Energy Partners in Energy. Partners in Energy will provide project management and technical support throughout the 18-month implementation period, as described in the roles and responsibilities section of each strategy work plan. Partners in Energy will also continue to facilitate regular project management team check-in meetings and will support the establishment of the Grand County Energy Working Group.

Data and Reporting

Partners in Energy will provide biannual progress reports with metrics of success and overall progress towards goals for Xcel Energy rebates and programs. These reports will be available publicly and shared with both the community and the Grand County Working Group. Mountain Parks Electric will be responsible for sharing electricity consumption and program participation data. In February, 2024, Mountain Parks Electric announced a new wholesale power supply partnership with Guzman Energy to commence on February 1, 2025. This new partnership will result in a change to the energy efficiency programs offered by Mountain Parks Electric. The utility will collaborate with the Grand County Working Group to reevaluate goals and impact once the structure of new programs is known.

APPENDIX A: BASELINE ENERGY ANALYSIS



Xcel Energy provides natural gas service to Grand County and provided data for all premises within the county for 2019–2022. The data helped the Energy Action Team understand Grand County’s energy use and opportunities for energy conservation. Mountain Parks Electric provides electricity service to the community and provided countywide electricity data for 2022. Data included in this section establishes a baseline against which progress toward goals will be compared to in the future.

Greenhouse Gas Emissions

Greenhouse Gas Emissions (GHGs) from electricity and gas consumption in Grand County totaled to 276,123 MT CO₂e. These emissions have been broken out by utility and sector in **Figure 10**.

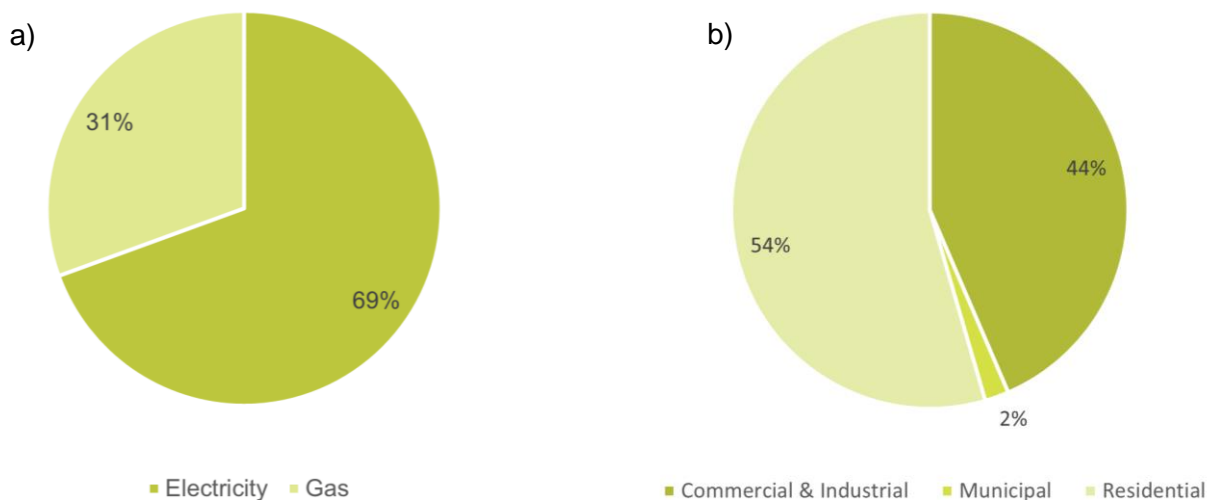


Figure 10. a) 2022 Energy-Related Greenhouse Gas Emissions by Utility in Grand County, Displayed as Percent of Total Emissions and b) 2022 Energy-Related Greenhouse Gas Emissions by Sector in Grand County, Displayed as Percent of Total Energy Emissions

Gas Consumption

Natural gas consumed by Xcel Energy customers in Grand County totaled to 15,901,968 therms in 2022 and has been relatively steady since 2019, as shown in **Figure 11**. Average gas consumption per year from 2019 through 2022 was 15,215,508 therms. In total, Grand County residents and businesses spent approximately \$12.6 million on gas in 2022 and **Figure 12** shows expenditures by community and sector.

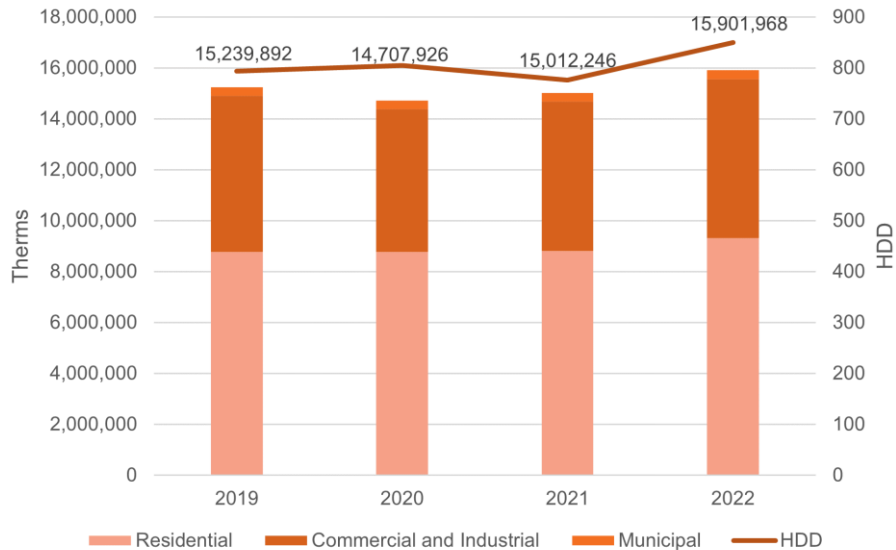


Figure 11. 2019 – 2022 Grand County Gas Consumption by Sector and Heating Degree Days (HDD)

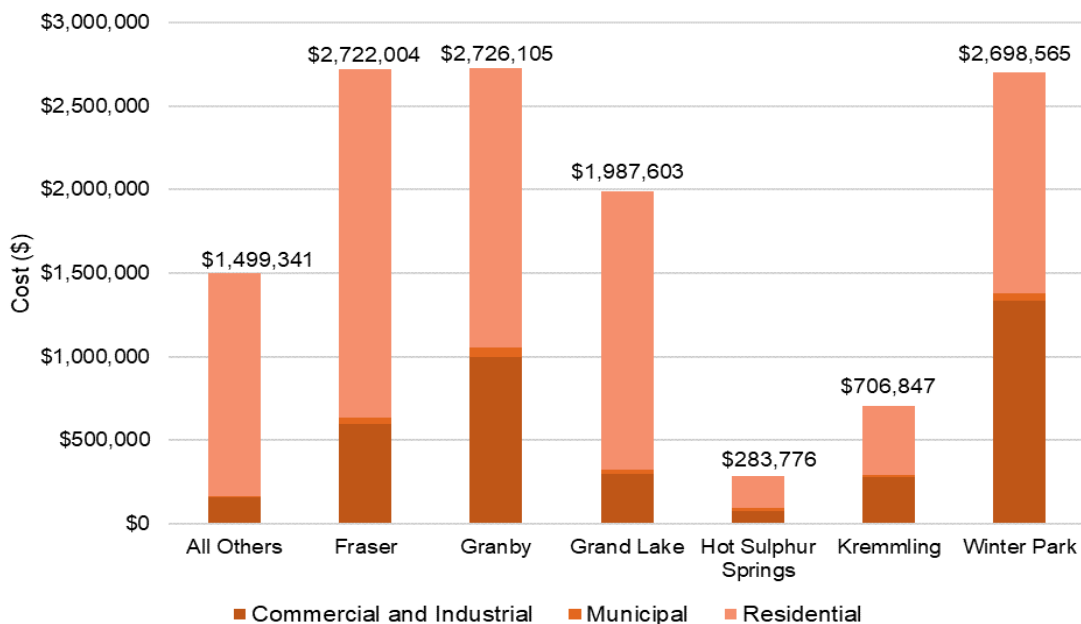


Figure 12. 2022 Grand County Gas Expenditure by Community and Sector

Electricity Consumption

Electricity consumed by Mountain Parks customers in Grand County totaled to 278,134 MWh in 2022. Consumption by sector and municipality can be seen in **Figure 14**. Only 2022 electricity use data was available for this planning effort. In total, Grand County residents and businesses spent approximately \$20.7 million on electricity in 2022 (excluding unincorporated Grand County residents). **Figure 13** shows electricity expenditures by community and sector.

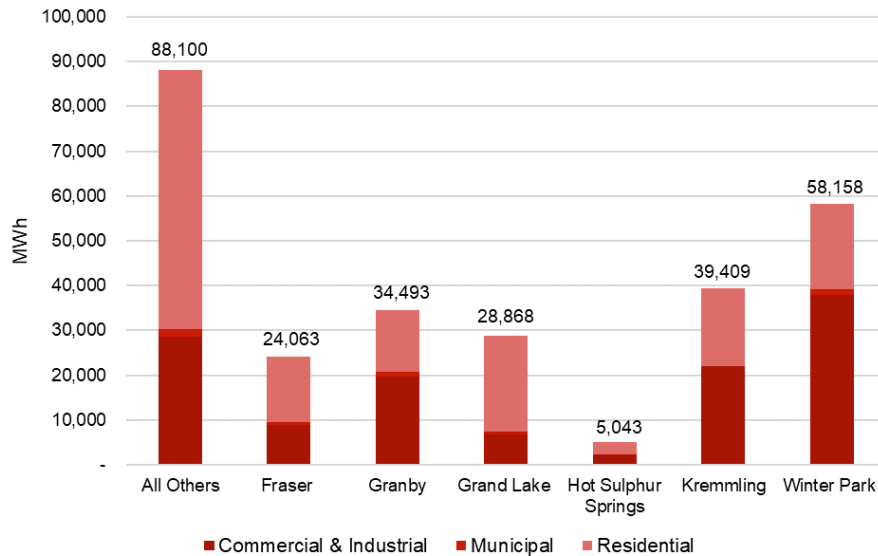


Figure 14. 2022 Electricity Consumed in Grand County by Community and Sector, Displayed in Megawatt Hours.

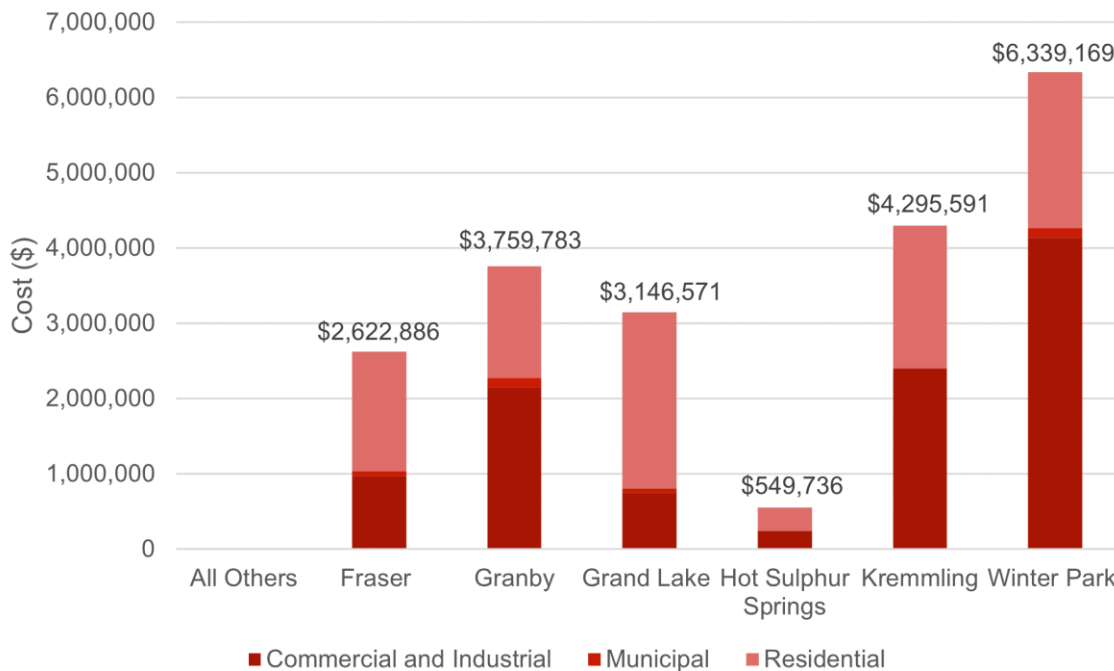


Figure 13. 2022 Electricity Costs in Grand County by Community and Sector, Displayed in dollars. Unincorporated towns (“All Others”) was unavailable during this planning process.

Peer Community Comparisons – Counties

This section compares Grand County 2022 energy use patterns to peer communities.

Commercial Peer County Comparisons

- **Electricity per premise (Figure 15):** 43,726 kWh/premise (-25% from peers)
- **Gas per premise (Figure 16):** 5,994 Thm/premise (-19% from peers)
- **Combined (Figure 17):** 748,555 kBtu/premise (-21% from peers)

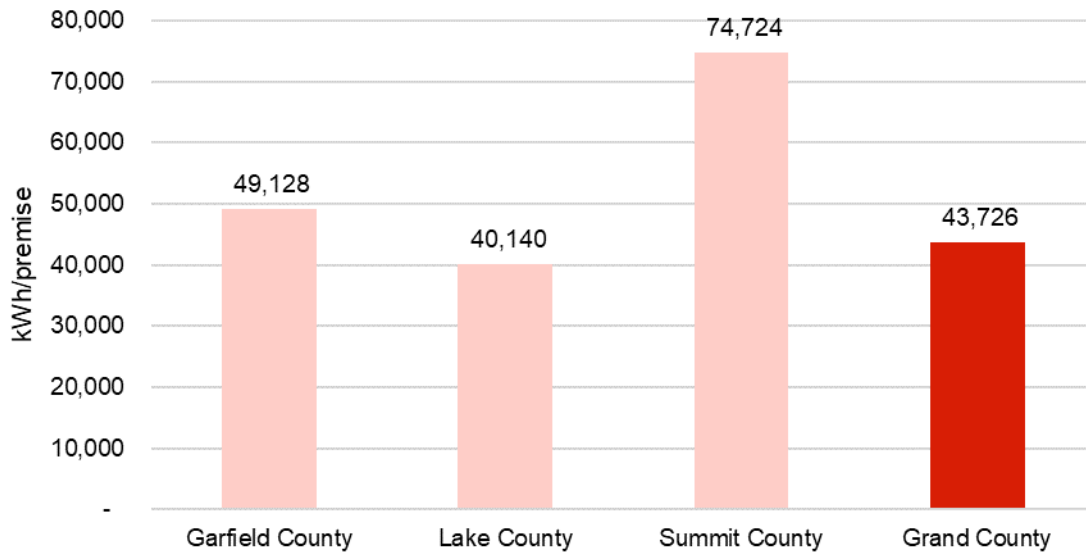


Figure 15. 2022 Commercial and Industrial Electricity Use Per Premise in Grand County, Compared to Peer Communities

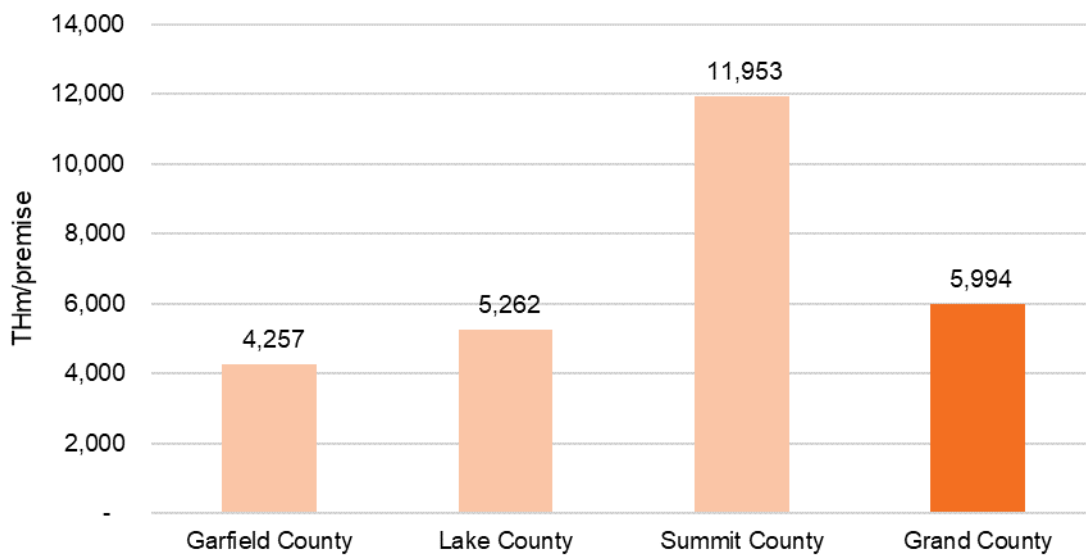


Figure 16. 2022 Commercial and Industrial Gas Use Per Premise in Grand County, Compared to Peer Communities

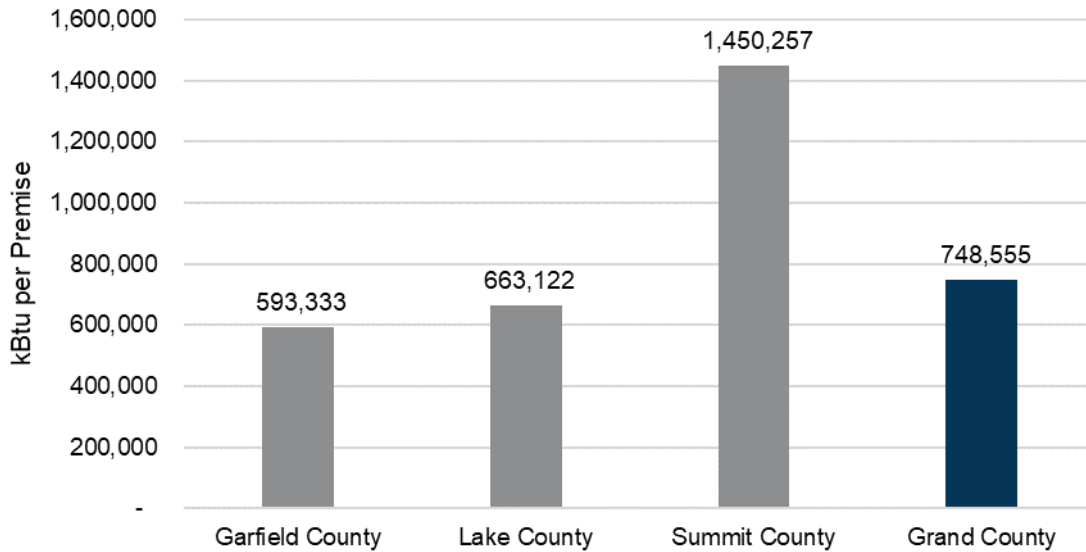


Figure 17. 2022 Commercial and Industrial Total Energy Use Use Per Premise in Grand County, Compared to Peer Communities

Residential Peer County Comparisons

- **Electricity per premise (Figure 18):** 8,505 kWh/Premise (-4% from peers)
- **Gas per premise (Figure 19):** 926 Thm/premise (-6% from peers)
- **Combined (Figure 20):** 125,598 kBtu/premise (-6% from peers)

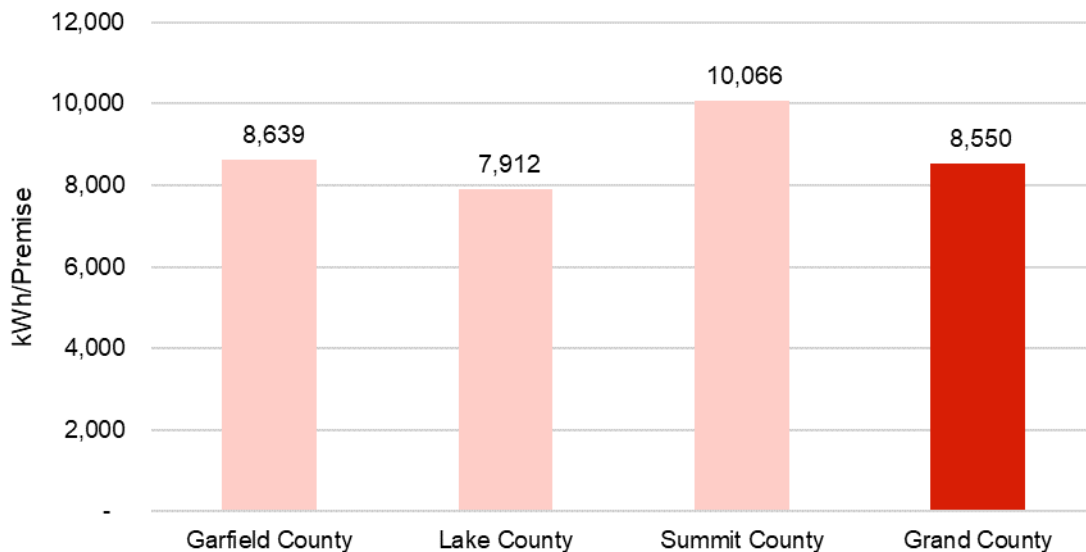


Figure 18. 2022 Residential Electricity Use Per Premise in Grand County, Compared to Peer Communities

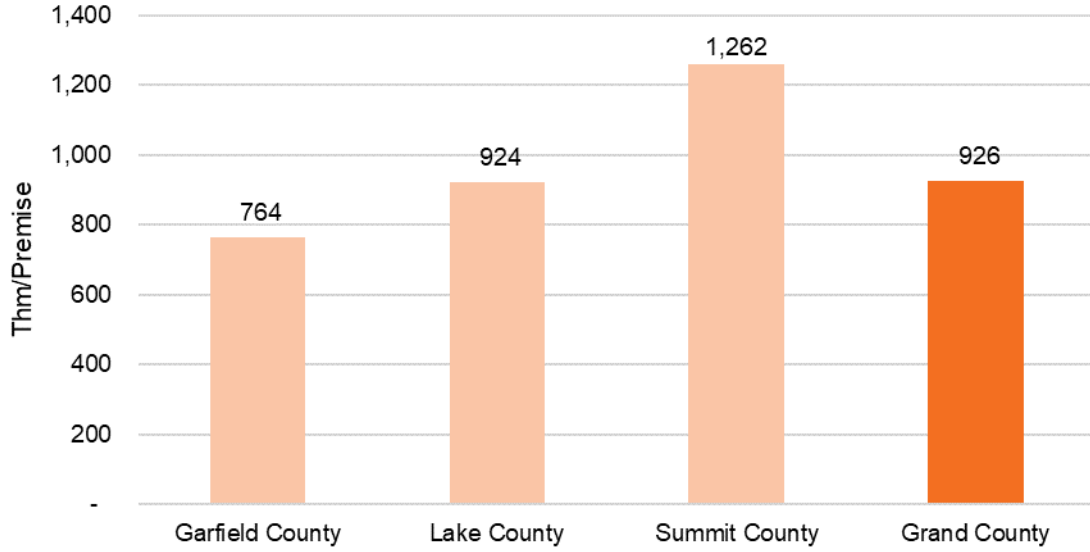


Figure 19. 2022 Residential Gas Use Per Premise in Grand County, Compared to Peer Communities

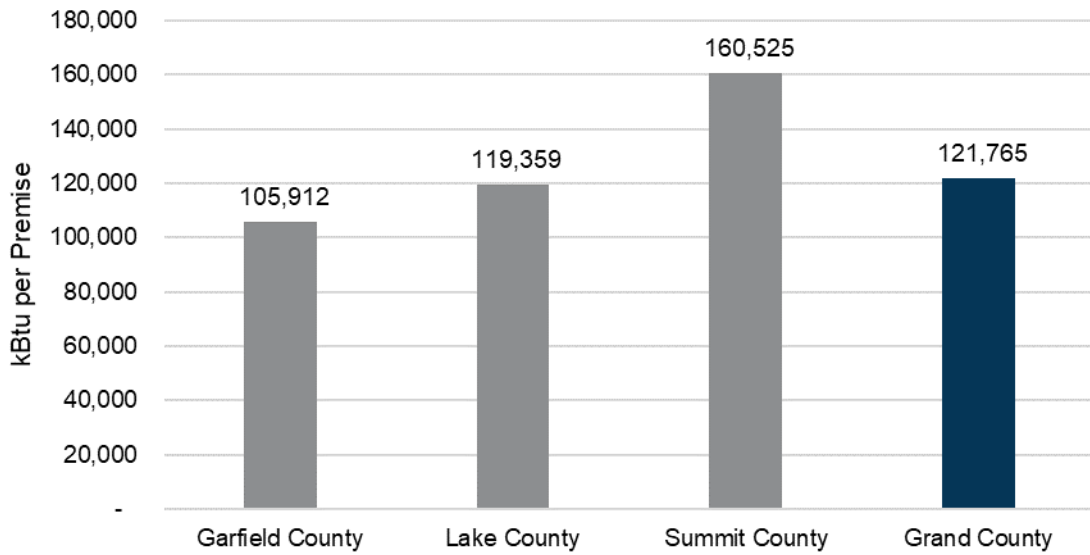


Figure 20. 2022 Residential Energy Use Per Premise in Grand County, Compared to Peer Communities

Peer Community Comparisons – Towns

This section compares 2022 energy use and patterns for incorporated towns in Grand County to peer communities.

Commercial Peer Community Comparisons

- **Average electricity per premise (Figure 21):** 35185 kWh/Premise (-23% from average of peers)
- **Average gas per premise (Figure 22):** 5,713 Thm/premise (53% greater than average of peers)
- **Average Combined (Figure 23):** 691,363 kBtu/premise (26% greater than average from peers)

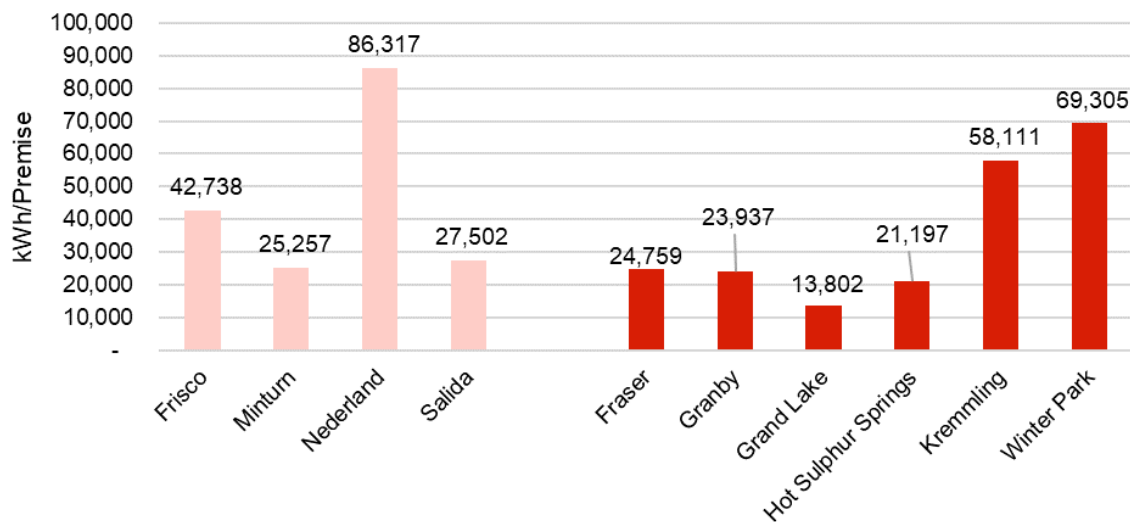


Figure 21. 2022 Commercial Electricity Use Per Premise for Grand County Communities, Compared to Peer Communities

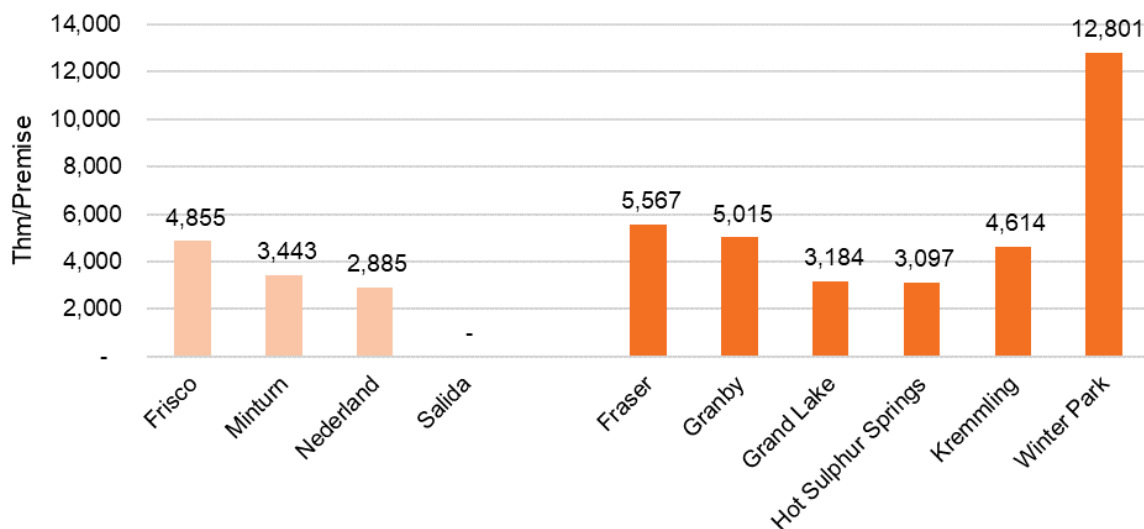


Figure 22. 2022 Commercial Gas Use Per Premise for Grand County Communities, Compared to Peer Communities

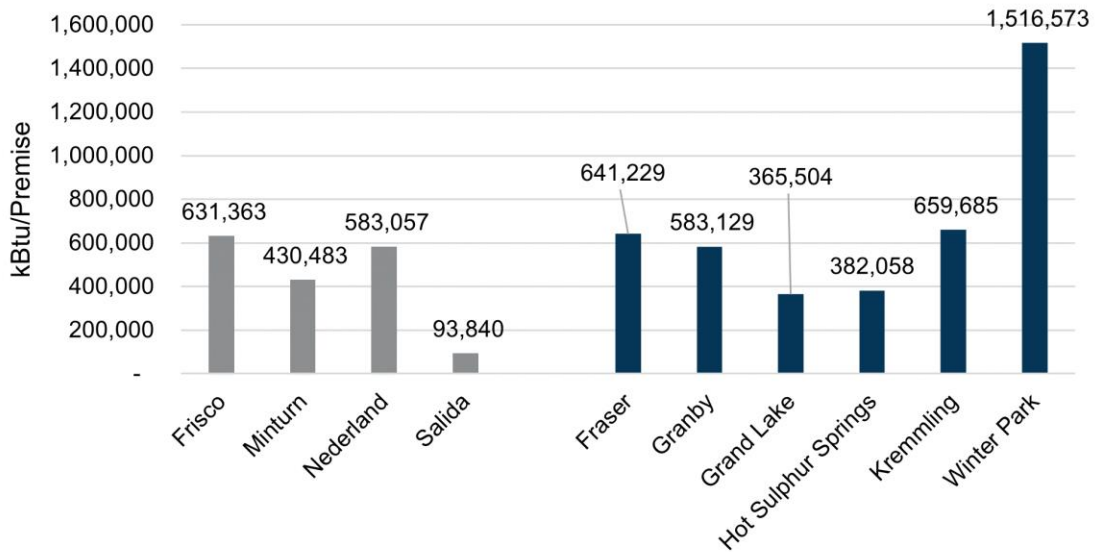


Figure 23. 2022 Commercial Energy Use Per Premise for Grand County Communities, Compared to Peer Communities

Residential Peer Community Comparisons

- **Average electricity per premise (Figure 24):** 6,844 kWh/Premise (-9% from average of peers)
- **Average gas per premise (Figure 25):** 845 Thm/premise (-9% from average of peers)
- **Average Combined (Figure 26):** 107,830 kBtu/premise (-10% from average of peers)

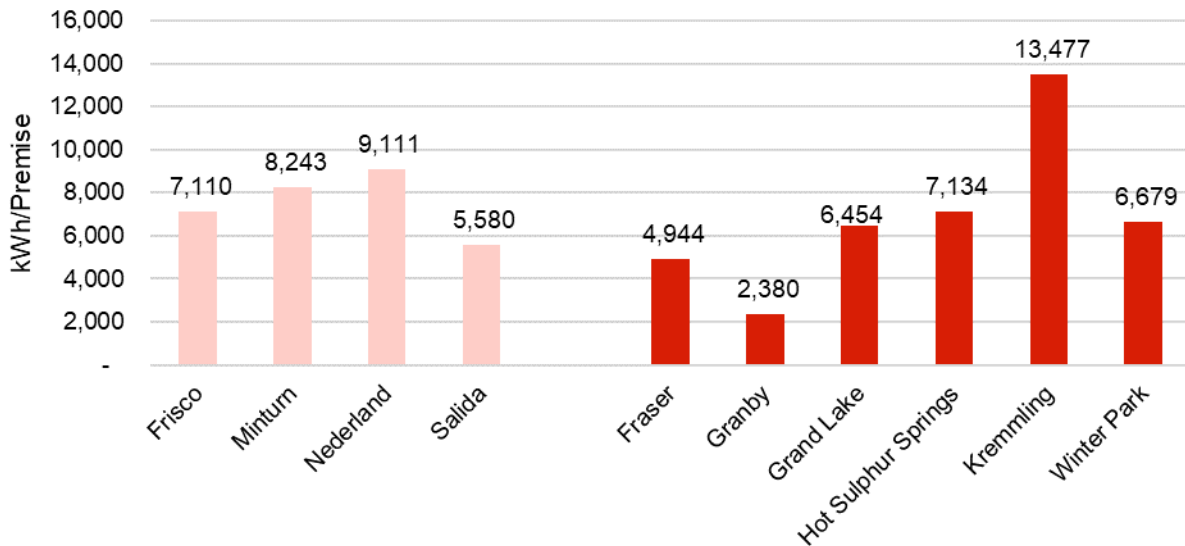


Figure 24. 2022 Residential Electricity Use Per Premise for Grand County Communities, Compared to Peer Communities

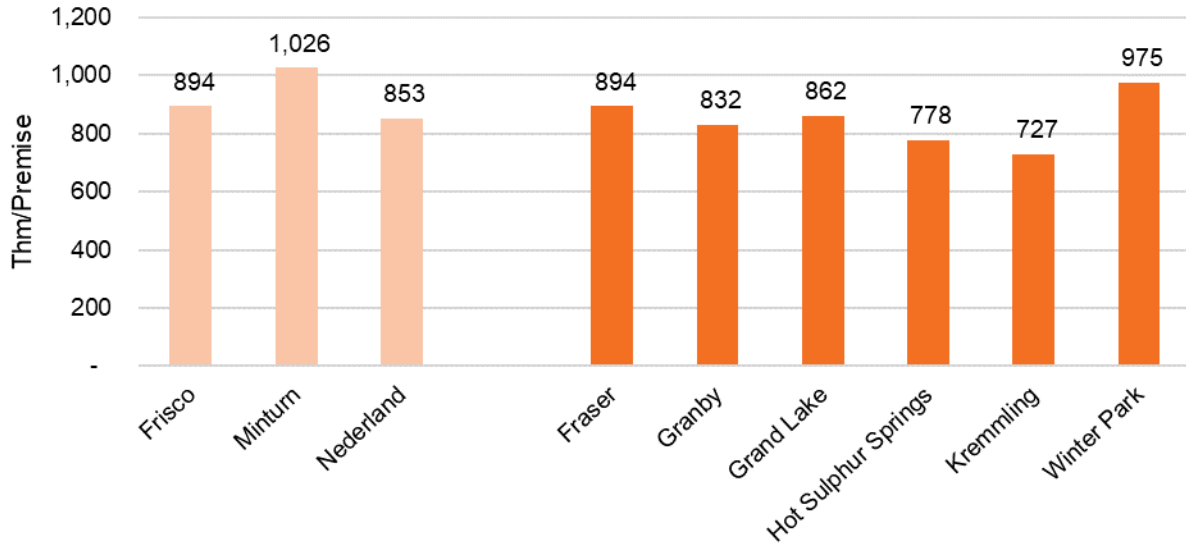


Figure 25. 2022 Residential Gas Use Per Premise for Grand County Communities, Compared to Peer Communities

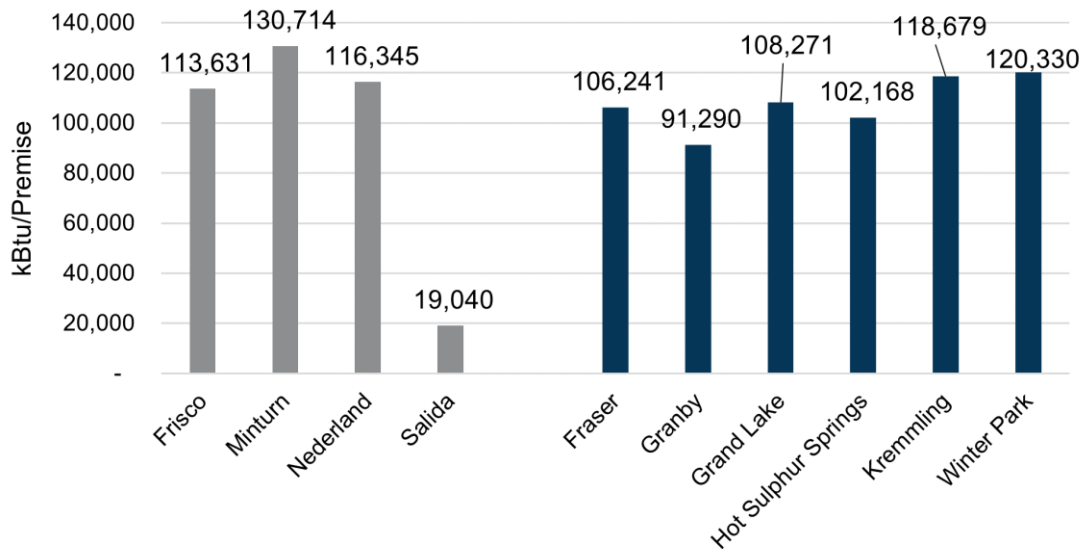


Figure 26. 2022 Residential Energy Use Per Premise for Grand County Communities, Compared to Peer Communities

Energy Efficiency Participation Rates & Community Comparisons

Participation rates for 2022 are outlined below for commercial and industrial (**Figure 27**) and residential programs (**Figure 28**), calculated as the total participation divided by the number of premises in the county.

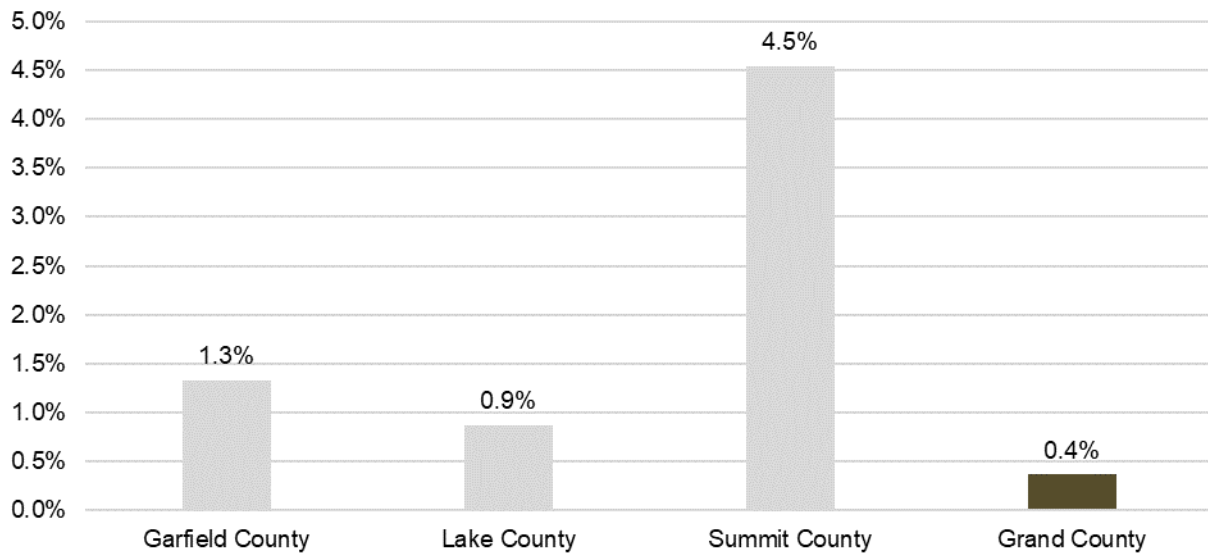


Figure 27. 2022 Grand County Commercial and Industrial Energy Program Participation Rate, Compared to Peer Communities

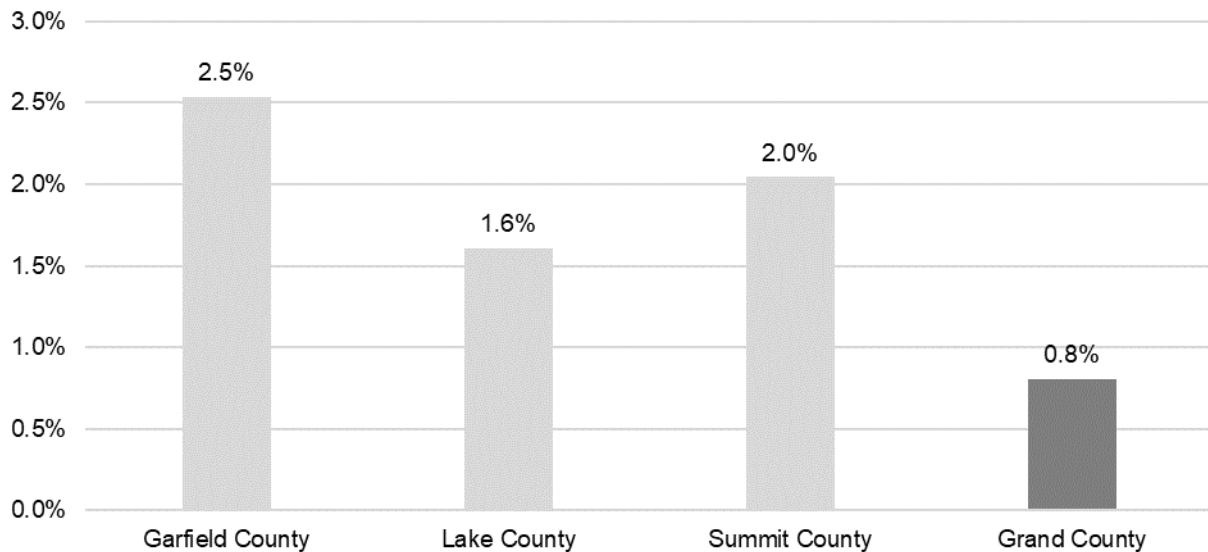
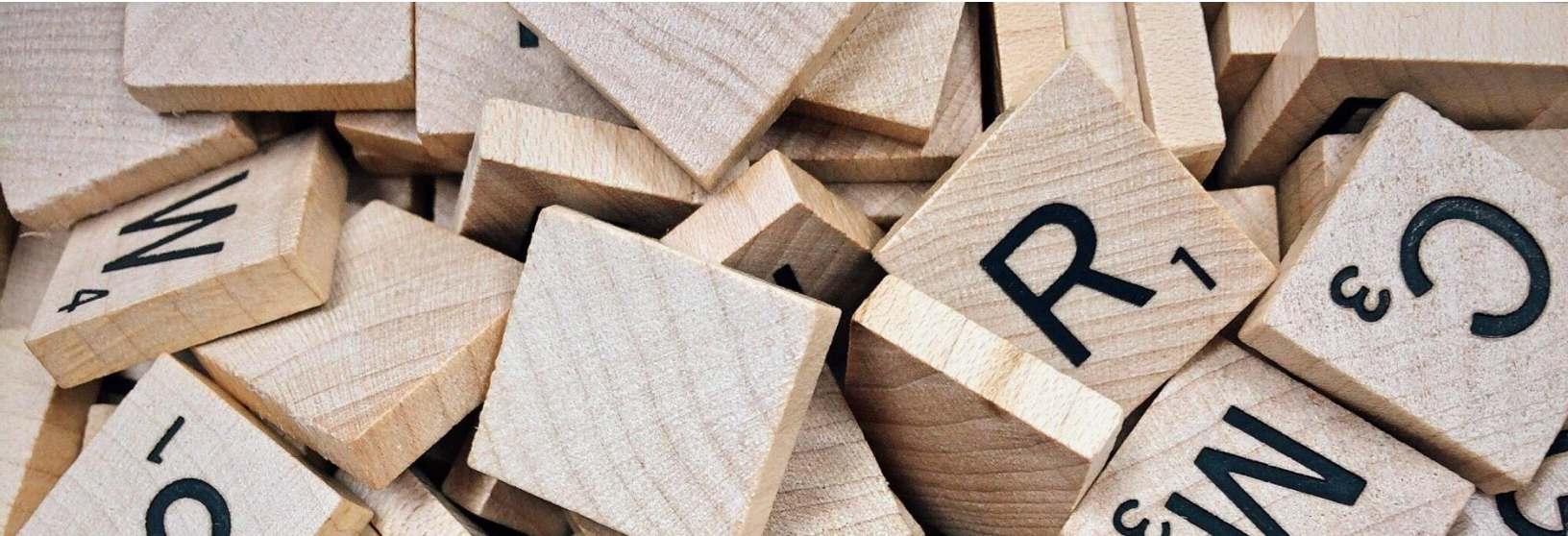


Figure 28. 2022 Grand County Residential Energy Program Participation Rate, Compared to Peer Communities

APPENDIX B: GLOSSARY OF TERMS



British Thermal Unit (BTU): the amount of heat needed to raise one pound of water at maximum density through one degree Fahrenheit

Decatherm (Dth): Quantity of energy that is equivalent to ten therms.

Energy Burden: Percentage of gross household income spent on energy costs.

Energy Reduction: The result of behavior changes that cause less energy to be used. For example, setting the thermostat to a lower temperature *reduces* the energy used in your home during the winter. Since energy reductions can be easily reversed, they are not accounted for when calculating changes in energy usage.

Energy Savings: Comes from a permanent change that results in using less energy to achieve the same results. A new furnace uses X% less energy to keep your home at the same temperature (all things being equal), resulting in energy *savings* of X%. For accounting purposes, energy savings are only counted in the year the new equipment is installed.

Greenhouse Gases (GHG): Gases in the atmosphere that absorb and emit radiation and significantly contribute to climate change. The primary greenhouse gases in the earth's atmosphere are water vapor, carbon dioxide, methane, nitrous oxide, and ozone.

Kilowatt-hour (kWh): A unit of electricity consumption.

Million British Thermal Units (MMBtu): A unit of energy consumption that allows electricity and natural gas consumption to be combined.

Metric Tons of Carbon Dioxide Equivalent (MTCO_{2e}): A unit of measure for greenhouse gas emissions. The unit "CO_{2e}" represents an amount of a greenhouse gas whose atmospheric impact has been standardized to that of one unit mass of carbon dioxide (CO₂), based on the global warming potential (GWP) of the gas.

Megawatt (MW): A unit of electric power equal to 1 million watts.

Premise: A unique combination of service address and meter. For residential customers, this is the equivalent of an individual house or dwelling unit in a multi-tenant building. For business customers, it is an individual business, or for a larger business, a separately-metered portion of the business's load at that address.

Therm (thm or therm): A unit of natural gas consumption.

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