City of Fort Collins Utilities

Energy Policy

2016 ANNUAL UPDATE

Energy Policy Update

This report provides an update of 2016 activities and results related to the *Fort Collins Utilites' Energy Policy*, adopted in 2015. The Energy Policy reflects our community's values of reliability, safety, affordability, greenhouse gas (GHG) emissions reduction, pollution prevention and energy independence. It provides goals for the prioritization of decision making, programs and services related to the quantity of use, and the sources of energy for electricity, thermal end-uses and transportation.

Find out more:
fcgov.com/utilities/what-we-do
fcgov.com/conserve
fcgov.com/climateaction

2016 Key Outcomes

- Electricity use per person has decreased by over 12% since 2005.
- Efficiency programs saved over 29,700 megawatt-hours; enough to serve over 3,750 typical Fort Collins homes.
- Fort Collins buildings were over 18% more efficient than in 2005.
- Renewable energy comprised over 14% of electricity sources.
- Electric reliability remained high, with an average system downtime of less than 19 minutes per customer.
- Fort Collins electricity rates remain in the lowest quartile of those in Colorado.

To the Point: We can lead in energy efficiency and renewables with affordable rates and high reliability.

2005 to 2016 Look how far we've come.

Comparing electricity greenhouse gas emissions

Metric/Indicator	2016 Value	% Change from 2005
Community electricity GHG emissions *	1,031,255 megatons	-14% GOOD
Utilities share of Platte River Power Authority (Platte River) electricity GHG emissions **	1,433,168 megatons	-17% GOOD

*Utilities' electric emissions reporting includes qualifying renewable energy credits. Without these credits, emissions were down 12%.
**Utilities is a 48% equity share owner of Platte River.

To the Point: Electricity emissions are substantially lower from both a community-use perspective and from our utility-ownership perspective as a member owner of Platte River.

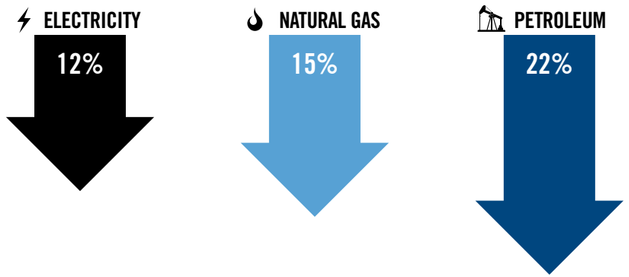
Report Contents

Community Energy Use

Fort Collins energy and climate goals encompass all forms of energy used in the community, including electricity, natural gas and petroleum-based liquid fuels. To understand the challenges of transitioning the community's energy systems, this section characterizes energy use and sources with both primary energy and greenhouse gas metrics.

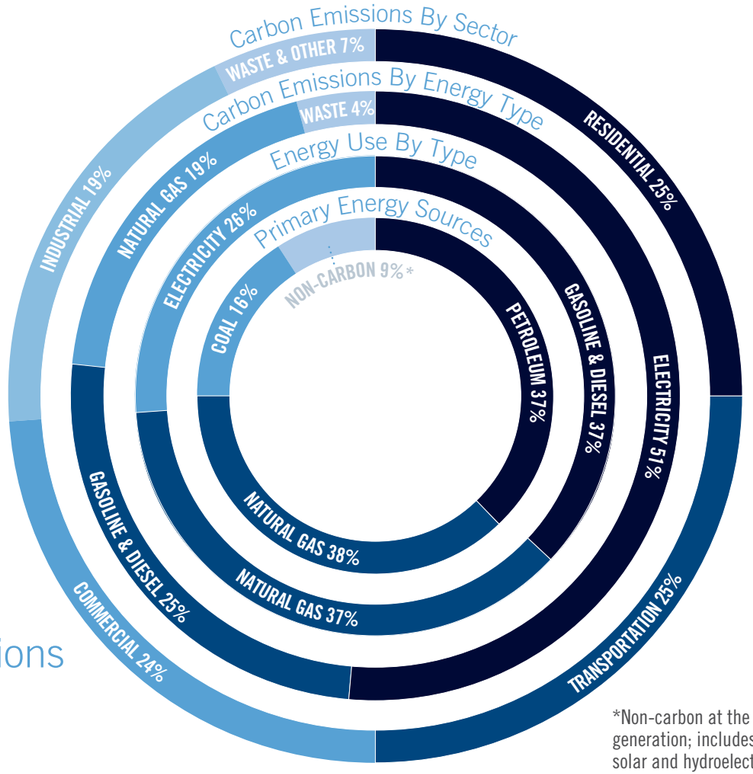
2016 Energy Use Per Person

Compared to 2005



To the Point: Per capita energy use is lower for all three primary energy sources, demonstrating that Fort Collins continues to improve efficiency.

Energy Sources & Carbon Emissions



*Non-carbon at the point of generation; includes wind, solar and hydroelectric.

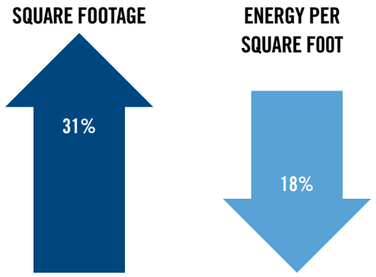
To the Point: Electricity is the largest single energy-use source of greenhouse gas emissions, followed by transportation fuels and natural gas used for heating and industrial processes.

Built Environment and Efficiency

The building sector is Fort Collins' top energy consumer and contributor to greenhouse gas emissions. Efficiency is generally the lowest cost resource, compared to new sources of energy. For new construction, building right the first time locks in energy savings and offers benefits for decades to come. By reducing the overall demand for energy, efficiency also makes all new resource options more feasible and cost effective.

Building Energy Use

Compared to 2005



2016 Efficiency Program Savings

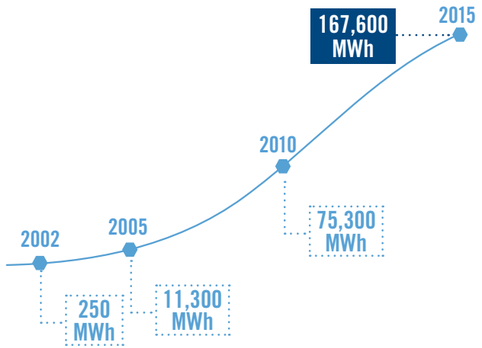
- **29,700,000 kilowatt-hours (kWh)**
- **Equivalent to 2% of the community's electric use or over 3,750 typical Fort Collins homes**

The Energy Policy efficiency target was 1.75% in 2016, rising to 2% in 2018 and 2.5% in 2020.

To the Point: Customers are taking advantage of efficiency programs at a record pace and energy-use intensity data demonstrates the results.

Cumulative Energy Savings

Megawatt-hours (MWh) saved



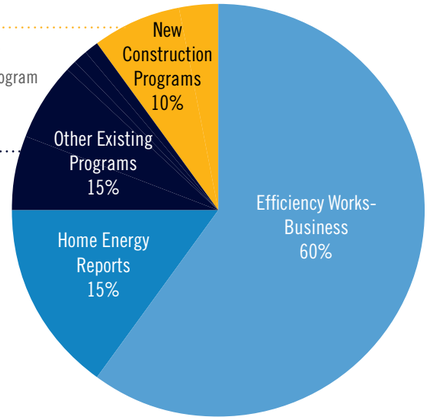
How We Saved:

Efficiency Programs

New Construction Programs
Energy Code and Green Building Integrated Design Assistance Program

Other Existing Efficiency Programs

- Appliance Rebates and Recycling
- Home Lighting
- Conservation Corps
- Peak Partners Demand Response
- Efficiency Works-Home



Efficiency Works – Neighborhood Pilot

The 2016 pilot demonstrated that a streamlined process and community-based marketing could dramatically improve results. Participation doubled and resulted in 50% higher energy savings and 60% higher carbon savings per home over the traditional model.

To the Point: Efficiency savings accumulate over time and are delivered by a wide range of programs, with businesses driving 60% of the reductions.

“Fort Collins will provide the **innovation** and leadership necessary to **succeed** in our transition to **clean, low-carbon energy** systems.”

Kevin R. Gertig, Utilities Executive Director

Electricity Supply

The objective of Utilities' electricity supply system is to design and maintain the infrastructure to facilitate a diverse, efficient, economical, reliable, clean and secure transition to higher levels of renewable energy sources–both distributed and utility scale.

As a member owner, Utilities receives all electricity from Platte River, while customers also are able to provide electricity with on-site generation.

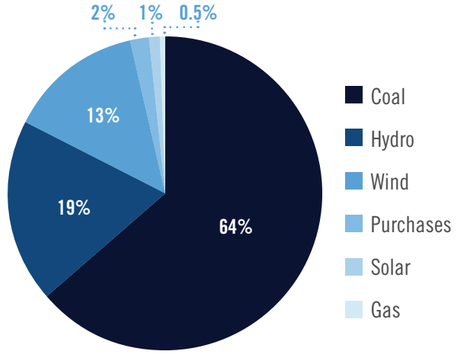
Rawhide Flats Solar Project

Platte River commissioned a 30-megawatt solar array, located at the Rawhide Energy Station. The solar array will add an additional 2% to Utilities' renewable energy resources in 2017.

2016 Electricity Results and Resource Mix

- **14% renewable** (target 20% by 2020)*
- **1% local renewable** (target 2% by 2020)
- **64% coal** (target maximum 60% by 2020)

*includes wind, solar and bundled renewable energy credits



Peak Partners Demand Response

Utilities' demand response system includes over 2,000 Wi-Fi thermostats, over 1,000 electric water heaters, in-home displays and commercial openADR communications. The program is evolving toward a distributed energy resource management system with incorporation of electric vehicles and battery storage.

Solar Energy

Fort Collins Utilities received the **Solsmart Gold Certification** from the International City Manager's Association, recognizing supportive policies and procedures for expansion of solar energy.

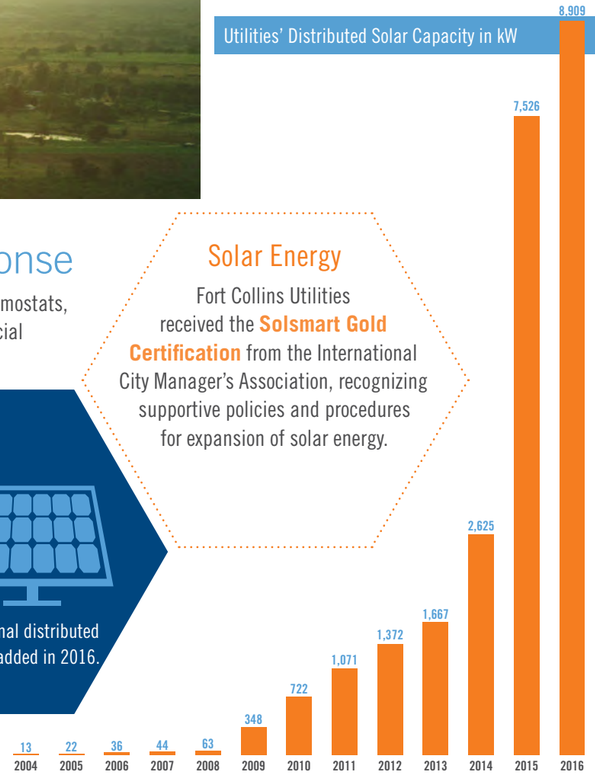
SOLAR PV

1,383 kW of additional distributed solar capacity was added in 2016.

Electric Reliability

Utilities continued to exceed reliability targets with a SAIDI* rating of 19 minutes. This is well below the target of 24 minutes and the national average of 63 minutes.

*System Average Interruption Duration Index

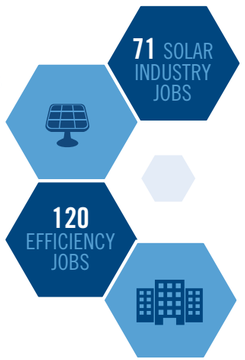


To the Point: Utilities continues to focus on cleaner sources of electricity, high reliability and advanced grid systems.

Community Economics and Partnerships

The Energy Policy directs and supports Utilities' leadership in the transition to a clean-energy economy. The City has the potential to stimulate local innovation and entrepreneurial activity, attract new partners and outside capital, and encourage funding for cutting-edge research and development.

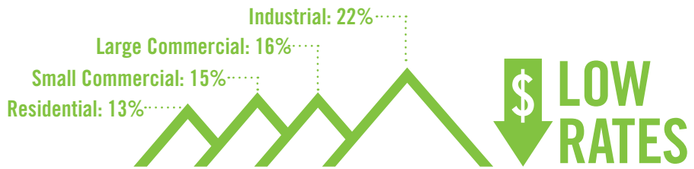
Efficiency and solar programs supported an estimated 191 jobs.



Efficiency programs generated nearly **$38 million** in local economic benefits through reduced utility bills, direct rebates and leveraged investment.

Utilities' Electric Rates

2016 rate class ranking among Colorado utilities



Source: Colorado Association of Municipal Utilities (CAMU)

Key Partnerships

Platte River Power Authority and the other member cities are essential partners for efficiency, renewable energy and resource planning.

The Lose-a-Watt competition, through the Georgetown University Energy Prize, was a two-year community-scale efficiency challenge. A winner will be announced in 2017.

Xcel Energy is a key partner, as most Fort Collins Utilities customers also are Xcel customers. Utilities is participating in a unique collaboration on data, outreach and programs through the Partners in Energy Program.

Colorado State University is providing advanced electricity system modeling via a grant from the National Science Foundation and the Sustainable Healthy Cities initiative.

Elevations Credit Union became the Home Efficiency Loan Program partner in 2016 to continue helping customers finance efficiency improvements.

Looking Ahead

This is a dynamic time for the energy industry, with rapidly evolving technology and economics. Several key initiatives for 2017 and beyond include:

Building Energy Scoring: Utilities will be looking at the benefits of scoring building energy performance. This can be a tool to support efficiency improvements and provide important information for owners and occupants.

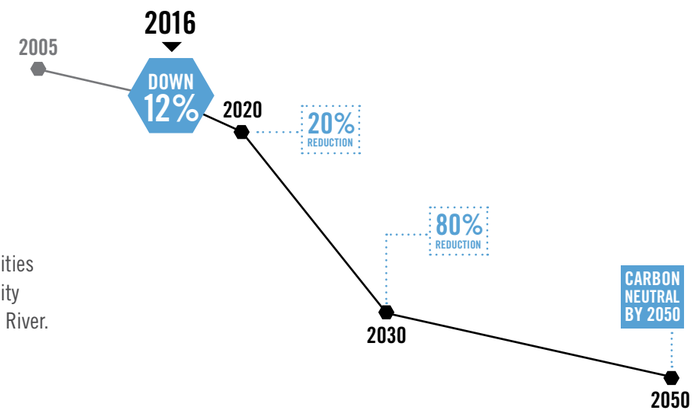
Time-of-Use Rates: Taking advantage of our advanced metering system, Council will be reviewing options for time-of-use rates. This fundamental pricing change will open new avenues for innovation.

Customized Resource Planning: Platte River is modeling electricity supply scenarios with dramatically higher levels of renewable energy to provide a roadmap for future decision making.

Electricity Markets: A group of intermountain west utilities are investigating the formation of an organized electricity market that will include Fort Collins Utilities and Platte River.

As a community, we are moving in the right direction to reduce carbon emissions.

We are more than halfway to the 2020 goal!



It Takes a Community

How can you help?

Here in Fort Collins, we are fortunate to have a community that embraces conservation, active lifestyles and innovative solutions. **We have ambitious goals, and as a community, we can work together to get there.**

Find out more:

fcgov.com/utilities/what-we-do
fcgov.com/conserve
fcgov.com/climateaction

City Contacts

City Council/City Manager

- Wade Troxell, Mayor
- Gerry Horak, Mayor Pro Tem, District 6
- Bob Overbeck, District 1
- Ray Martinez, District 2
- Ken Summers, District 3
- Kristin Stephens, District 4
- Ross Cunniff, District 5
- Darin Atteberry, City Manager

Utilities Contacts

- Kevin R. Gertig
  Executive Director
- Lisa Rosintoski
  Customer Connections Manager
- Tim McCollough
  Light & Power Operations Manager
- John Phelan
  Resource Conservation Manager

Energy Policy Vision: Fort Collins is a leader in the transition to sustainable and resilient local energy systems to serve the community's 2050 carbon neutral future.





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