



28th Annual Residential Environmental Program Series



Fort Collins Senior Center, 1200 Raintree Drive

Climate Protection: Every Action Counts

Fort Collins has been a leader in climate protection for almost two decades. Learn how the City of Fort Collins is continuing to address climate change and how you can help.

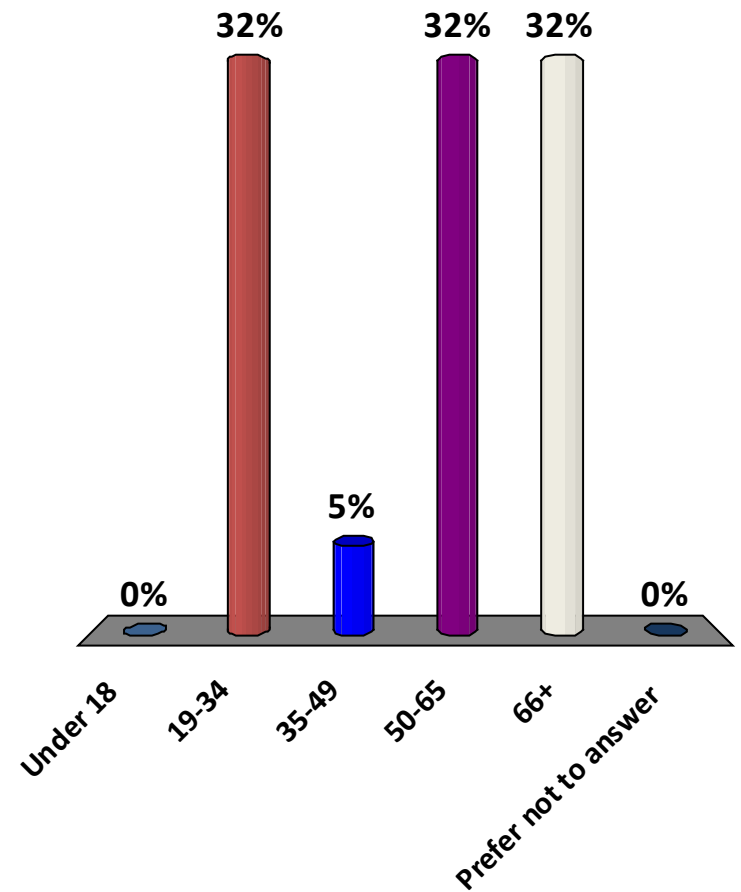
Tonight's Agenda

- Overview of climate protection actions in Fort Collins (Lucinda Smith)
- Utility Programs (Norm Weaver and Lisa Schroers)
- Transportation Programs (Paul Sizemore)
- BREAK
- Drive Electric Northern Colorado (Annie Freyschlag)
- Solid Waste Programs (Caroline Mitchell)
- Wrap up



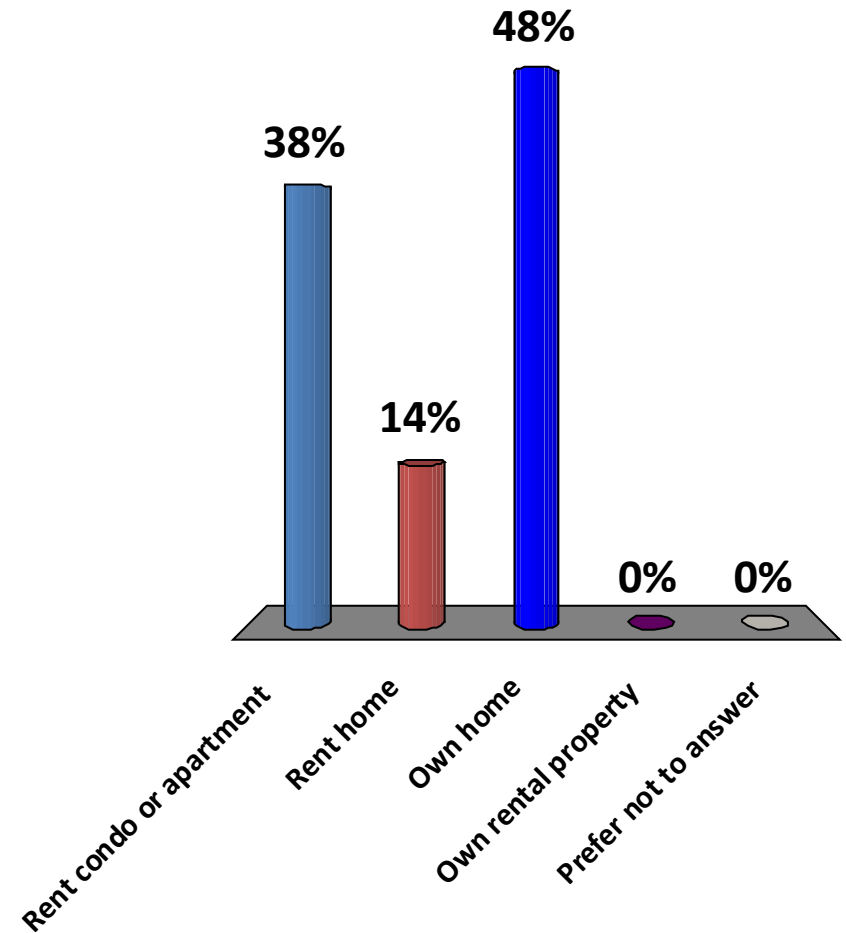
In what age range are you?

- A. Under 18
- B. 19-34
- C. 35-49
- D. 50-65
- E. 66+
- F. Prefer not to answer



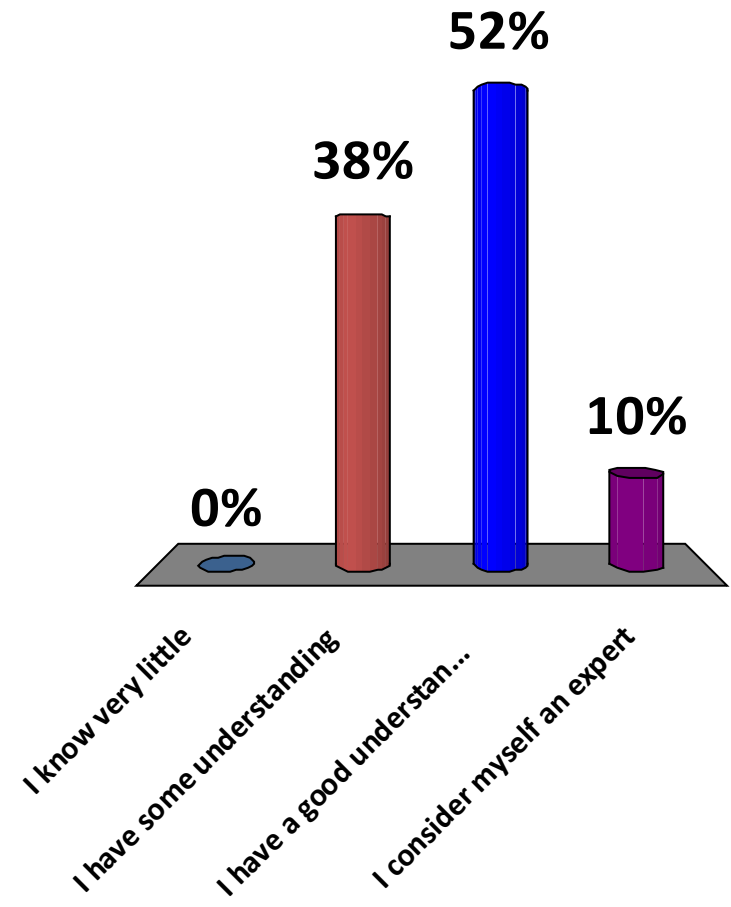
Do you rent or own your home?

- A. Rent condo or apartment
- B. Rent home
- C. Own home
- D. Own rental property
- E. Prefer not to answer

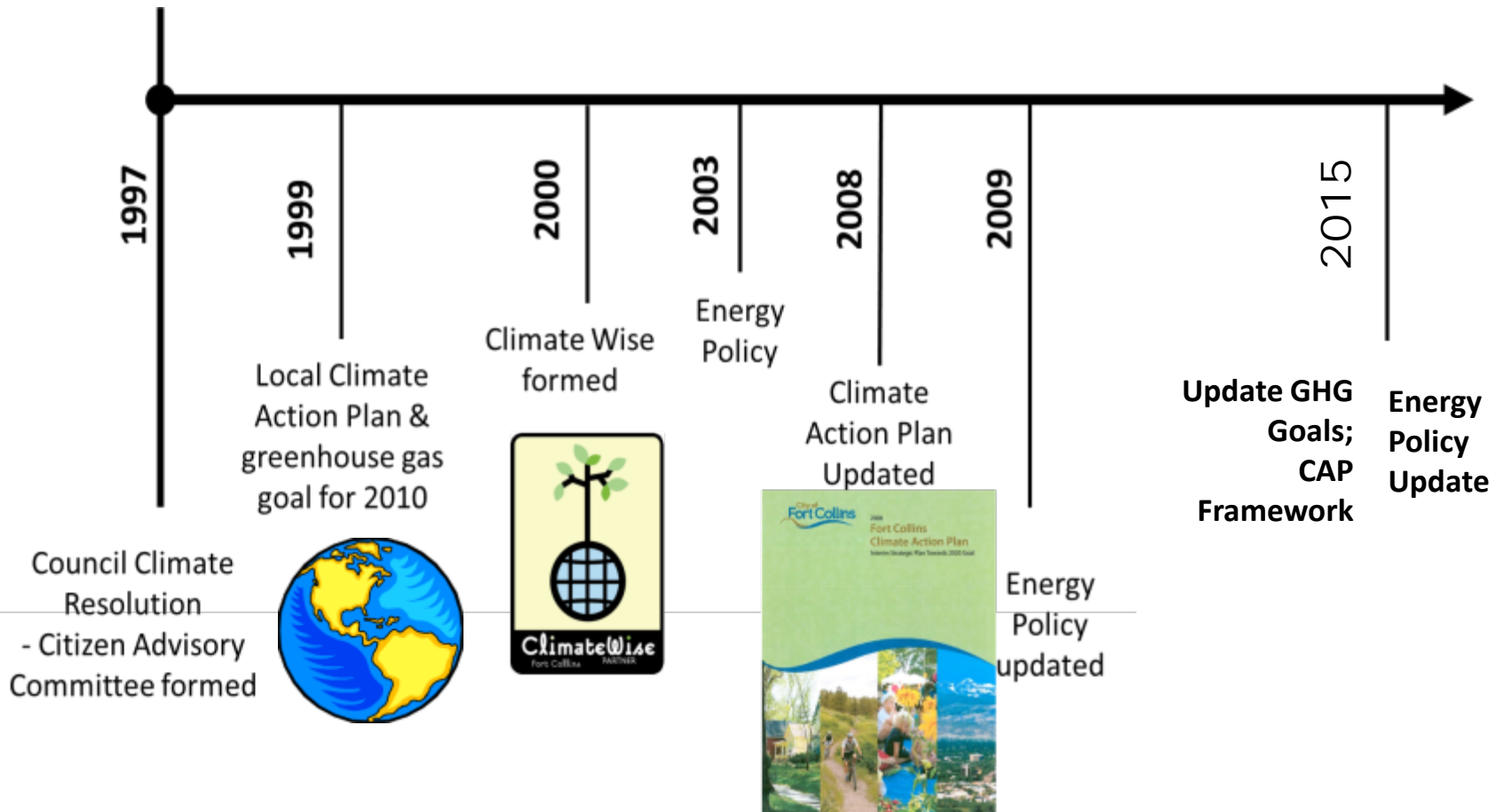


How familiar are you with the presentation topic?

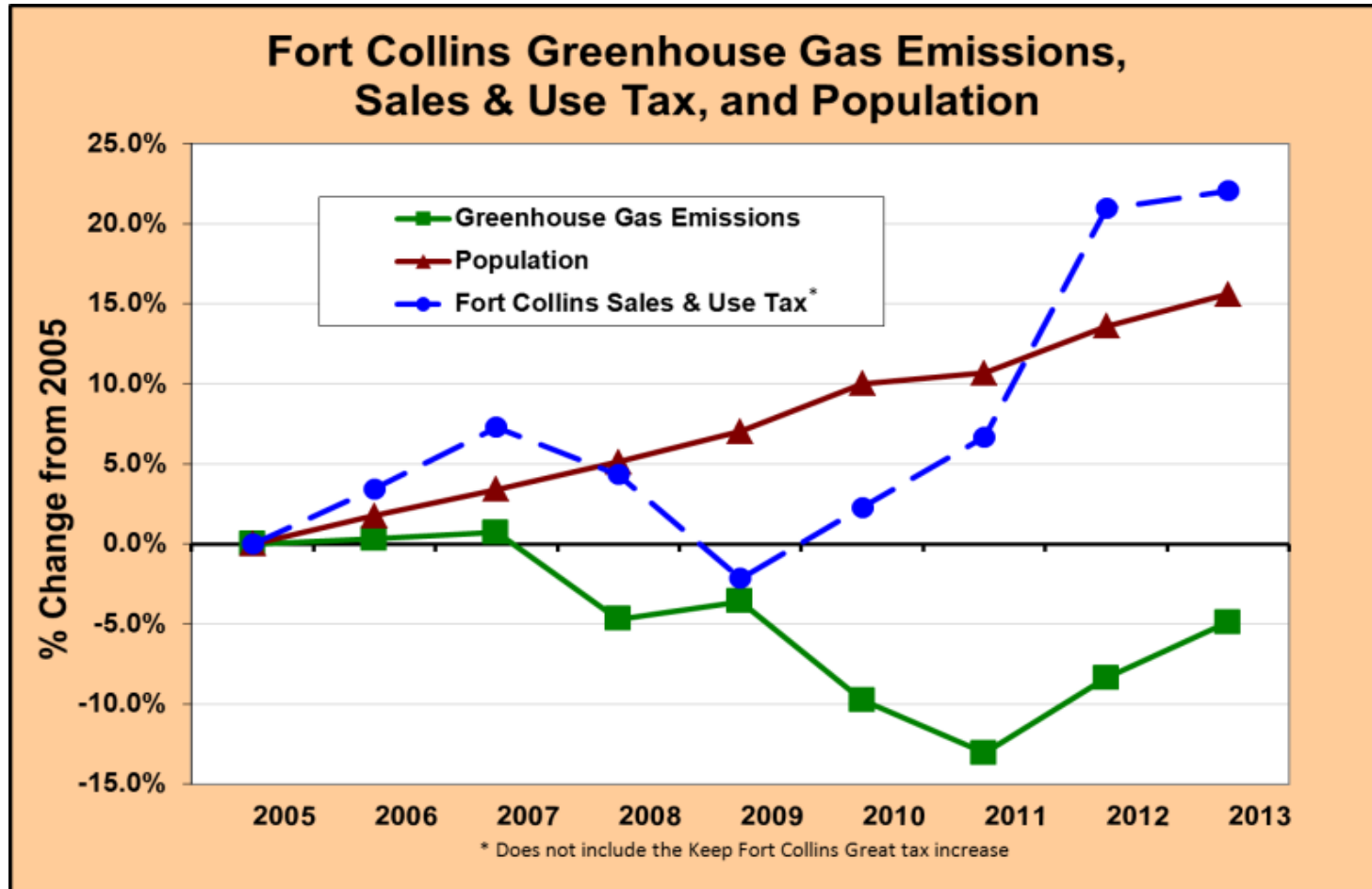
- A. I know very little
- B. I have some understanding
- C. I have a good understanding
- D. I consider myself an expert



Fort Collins Climate Action Leadership







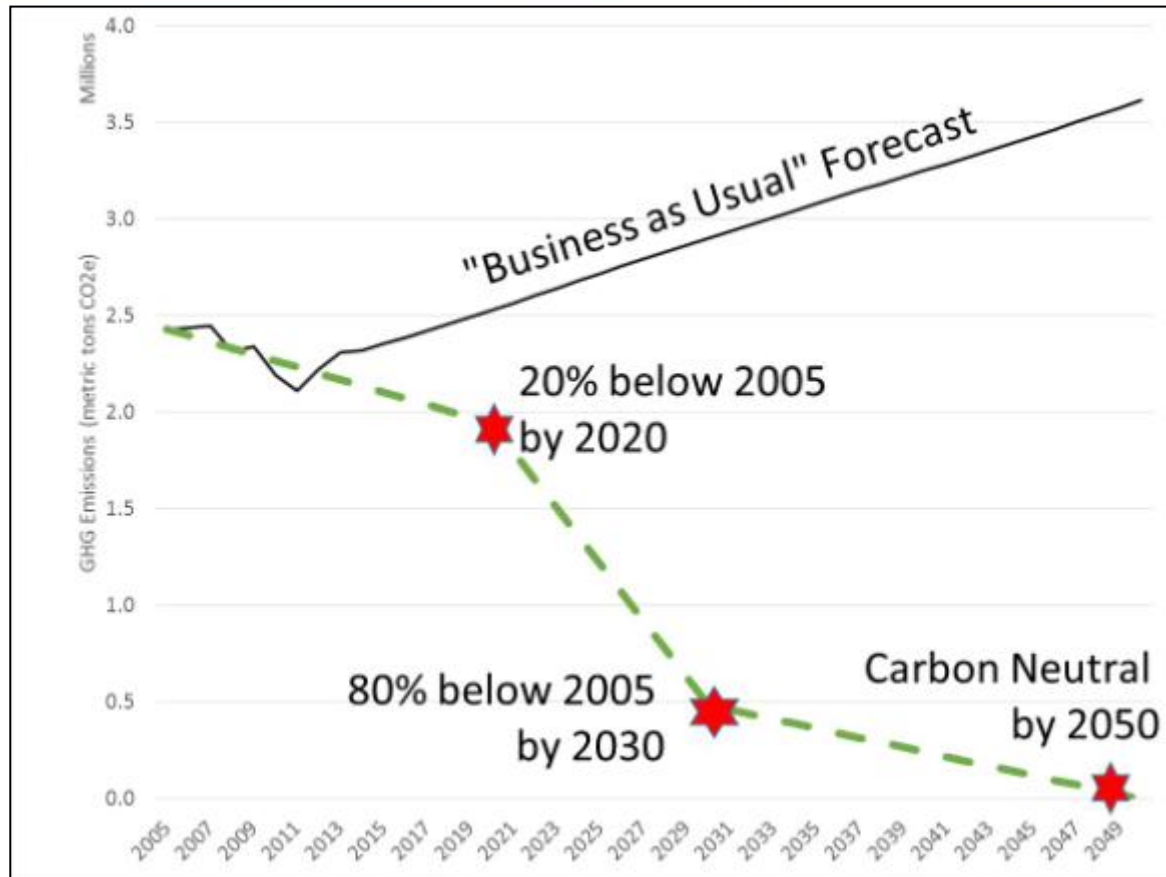
Opportunities

- Advancing technologies
- Risk mitigation

Need

- Climate change is impacting us now
- It will get worse if we don't do something about it
- Substantial reductions now can reduce costs of
- mitigation later
- Solutions are available now

Community GHG Goal planning effort looked at these objectives



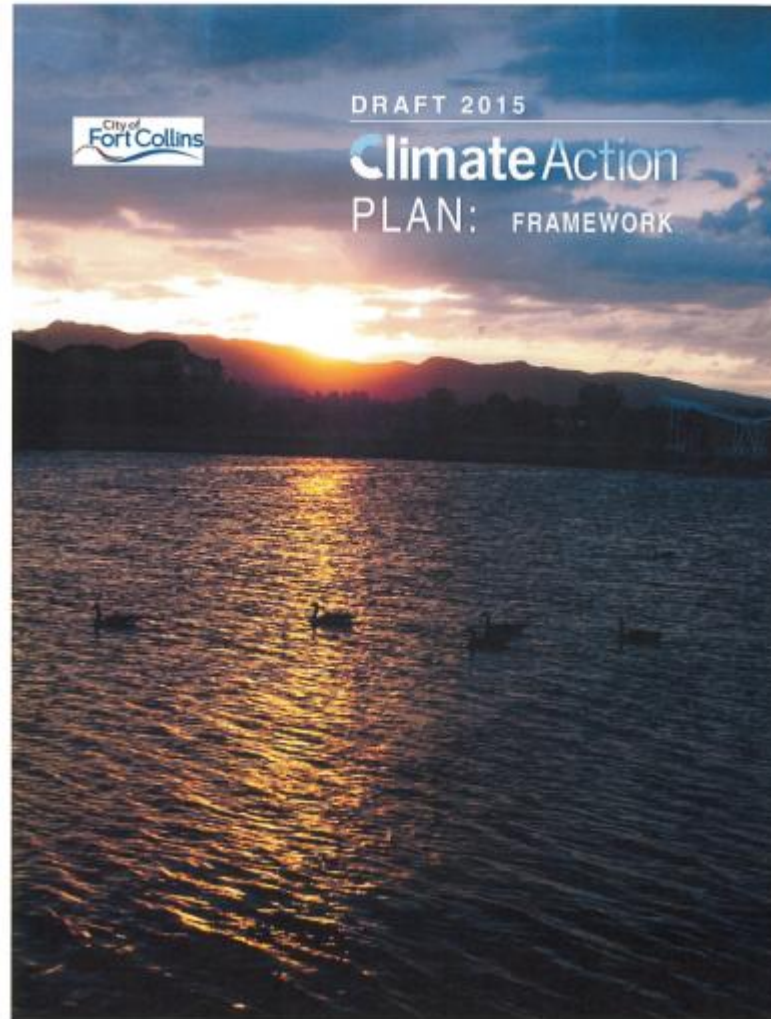
See fcgov.com/climateprotection for more information

March 3, 2015 Council Action

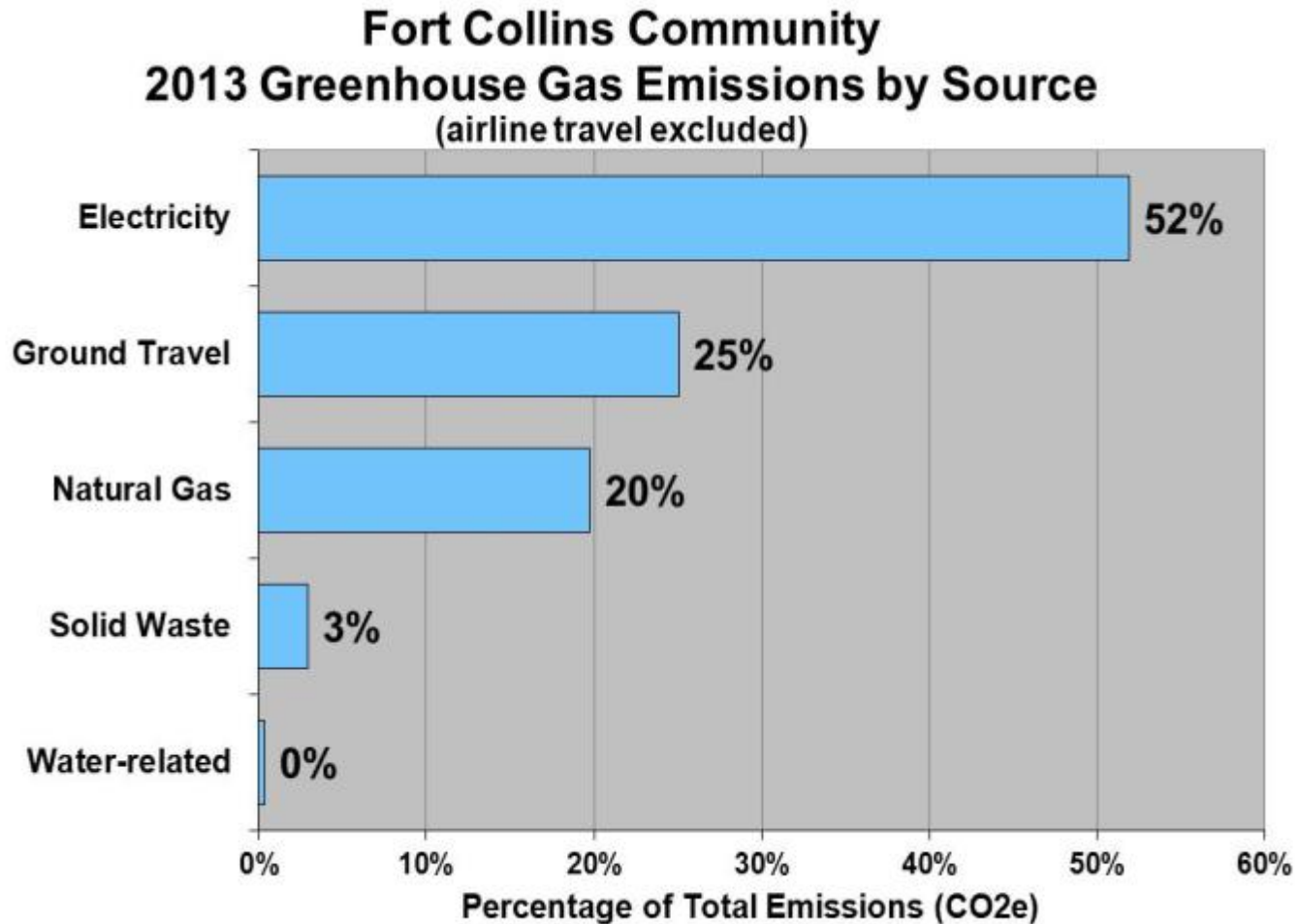
Section 1.**reaffirms goal to reduce** Fort Collins's community-wide greenhouse gas emissions to **20% below 2005 levels by 2020.**

Section 2. That the Council hereby **expresses its intent to strive to reduce community-wide greenhouse gas emissions to 80% below 2005 levels by 2030 and achieve carbon neutrality by 2050**, without compromising key community economic, social and economic values.

Section 4. That, subject to annual appropriations, the City Manager is hereby directed to provide adequate resources to **prepare a 2020 Climate Action Implementation Plan, using the 2015 CAP Framework as a guide**, to identify prioritized actions and associated near-term budget requests.....



2013 Community GHG Emissions



BUILDINGS

- Build in Efficiency from the Start
- Make Existing Homes More Efficient
- Increase Energy Efficiency – Commercial and Industrial

TRANSPORTATION

- Shift Land Use Patterns to Shorten/Reduce Number of Trips
- Drive Adoption of Multi-Modal Transportation
- Accelerate Adoption of Fuel Efficient & Electric Vehicles





ENERGY SUPPLY

- Advance Utility Scale Renewable Energy Supply
- Advance Residential and Commercial Solar Adoption
- Shift Heating Loads to Biofuels, Geothermal, and Electrification

WASTE REDUCTION and MORE

- Road to Zero Waste
- Carbon Sequestration

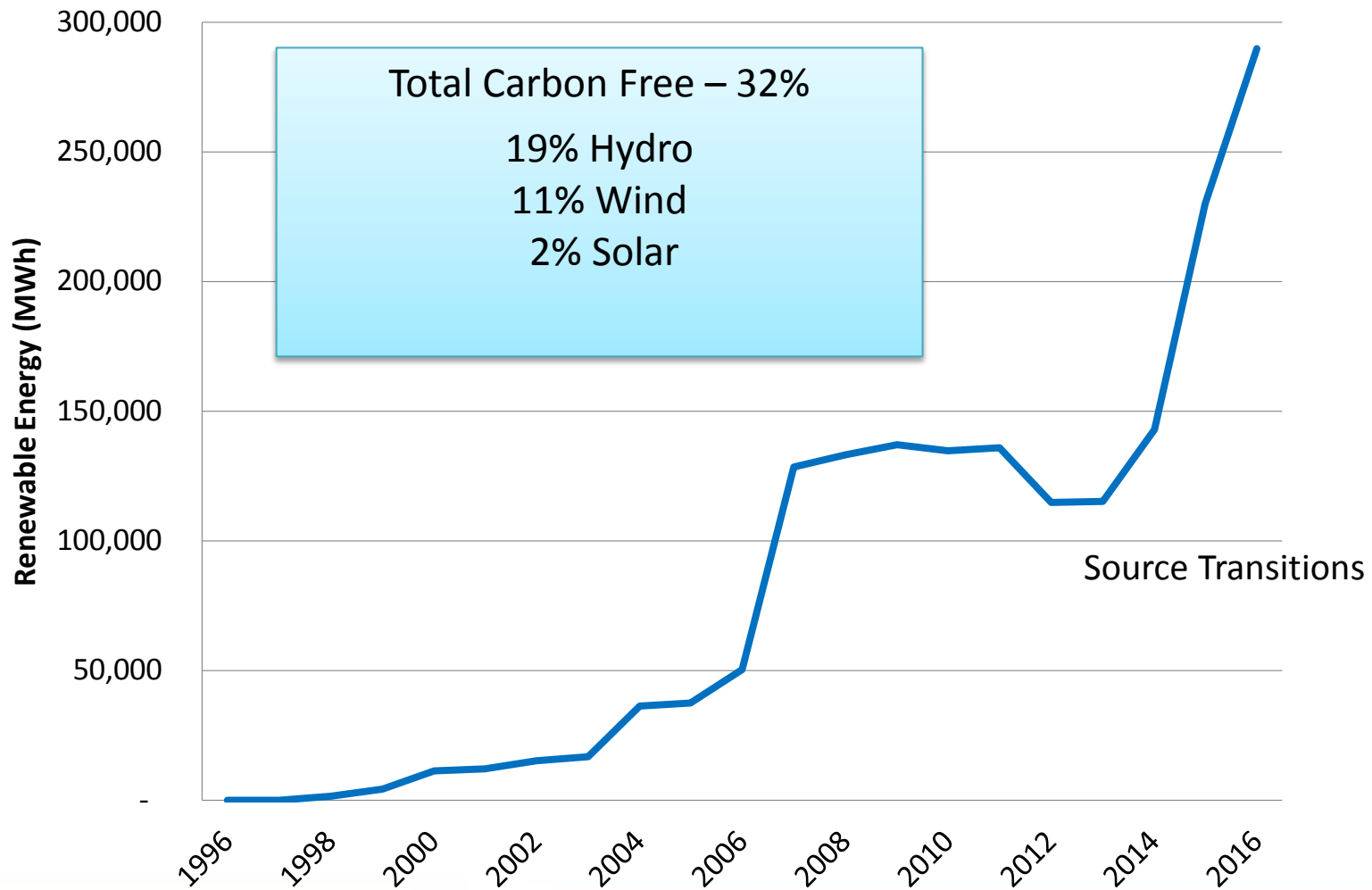
- More efficient buildings require less energy and may operate independently
- Reduced air pollution emissions lessens threat of increased ozone with warming temperatures
- Reduced waste to the landfill preserves landfill capacity
- Increased tree planting and open space protection reduces the urban heat island





- Municipal Electric Utility
- Partnerships
- Experience with Energy Innovation
- Platinum Bike Friendly Community

Platte River Current Wind and Solar Supply Trend



Key Challenges



1. How to converge finance and implementation in a systems approach which the community will endorse and has manageable risk?
2. Making it easy for the community to embrace and adopt the actions.

RANKS OF HOMELESS GROW IN FORT COLLINS



Ryan Abiswar speaks with Kelly Evans at the Sister Mary Alice Murphy Center for Hope as he takes part in the Jan. 28 Point-in-Time survey, which seeks to learn more about people experiencing homelessness in Fort Collins. Information from the survey is used to help guide decisions in service and program offerings and to better understand the state of homelessness in Fort Collins.

City boosts goals for cutting greenhouse emissions

By Kevin Duggan
Kevin.Duggan@coloradoan.com

On a bitterly cold, snowy night, greenhouse gases and climate change took center stage with the Fort Collins City Council on Tuesday.

Council members approved boosting the city's goals for reducing greenhouse emissions in the coming years with hopes of being carbon neutral by 2050. The council also directed the city manager to develop an implementation plan for reaching the city's admittedly ambitious goals.

Although council members supported the plan unanimously, some also cautioned many details of the plan—especially its costs—and how it would work have yet to be determined.

Councilmember Gino Campana noted that future councils will have to consider and approve any steps the city would take to implement the plan. Reaching the goals will not be easy, he said, and the financial considerations are critical.

"I'm OK with aggressive goals, but I want to make sure they are achievable," Campana said.

The framework for the city's

See CARBON, Page A6

Your City Government Working to Lead by Example

Did you know...

The City has Sustainability Goals that drive its daily operations? The goals are meant to inspire environmental, financial, and social stewardship.



1. Carbon:

Reduce greenhouse gas (carbon) emissions from municipal operations at least 2% per year starting in 2013, in order to achieve a reduction of 20% below 2005 levels by December 31, 2020; and ultimately to achieve carbon neutrality for the municipal organization.



2. Electricity & Natural Gas:

Reduce City energy consumption by 20% of the 2005 baseline by 2020, reduce demand peak use by 15% by 2020, and achieve a 20% kWh/sq. ft. reduction in all City facilities from 2005 baseline levels. If funding is available, purchase 20% of energy from renewable sources by 2020 with 10% provided by onsite distributive energy.



3. Fuel

Reduce traditional fuel use by the City's vehicle fleet by 20% by 2020 and reach a 1.5 average vehicle ridership (AVR) by 2020 for city employees.



4. Solid Waste Reduction

Reduce solid waste from public access facilities by 5% each year; municipal workplace and office by 10% by weight each year; and each industrial byproduct at least 10% each year.



5. Education & Outreach

Information about the municipal sustainability program will be available to all levels of the community — students in grades K-12 and university, the general public — as well as internal customers.



6. Funding

Foster a culture of sustainability in the organization and advance municipal goals through various funding mechanisms (i.e. Innovation Fund, grants). Identify and implement innovative improvements to the City's physical plant and operational procedures that are not otherwise funded.



7. Parks & Natural Areas

Maintain a 30% forest canopy density in suitable areas of City Parks and 70% of native vegetative cover in Natural Areas.



8. Water

Reduce municipal operations water irrigation use and increase efficiency per acre. Reduce building water use by 20% by 2020.



9. Sustainable Purchasing

Implement sustainable purchasing practices throughout the City organization and establish means to verify departments' compliance with revised purchasing policy. Establish quantifiable goals of 2% increase in office and industrial purchases annually starting in 2013.



10. Employee Safety & Health

Incorporate a city-wide program fostering a culture of health and safety. Increase the number of employees that participate in the Wellness Program from 45% to 75% by 2020. Lower accident frequency and severity.



11. Local Food

20% of food purchased by City staff for City functions will be grown within 50 miles or prepared by a local business, beginning in 2013.

Lighting

- Parking lot lights switched to LED and the exterior lighting from metal halide to high efficiency induction lighting.
- All new office lighting is also LED.
- Lighting system is manual “on” but shuts off after ten minutes of inactivity.
- 14 solar tubes added to provide natural daylight in areas where windows are not possible.



Fort Collins Senior Center Lobby



The Twinberry Auditorium – high tech learning

Waste and Recycling

- The Building Expansion Team managed to divert 89% of the construction waste!





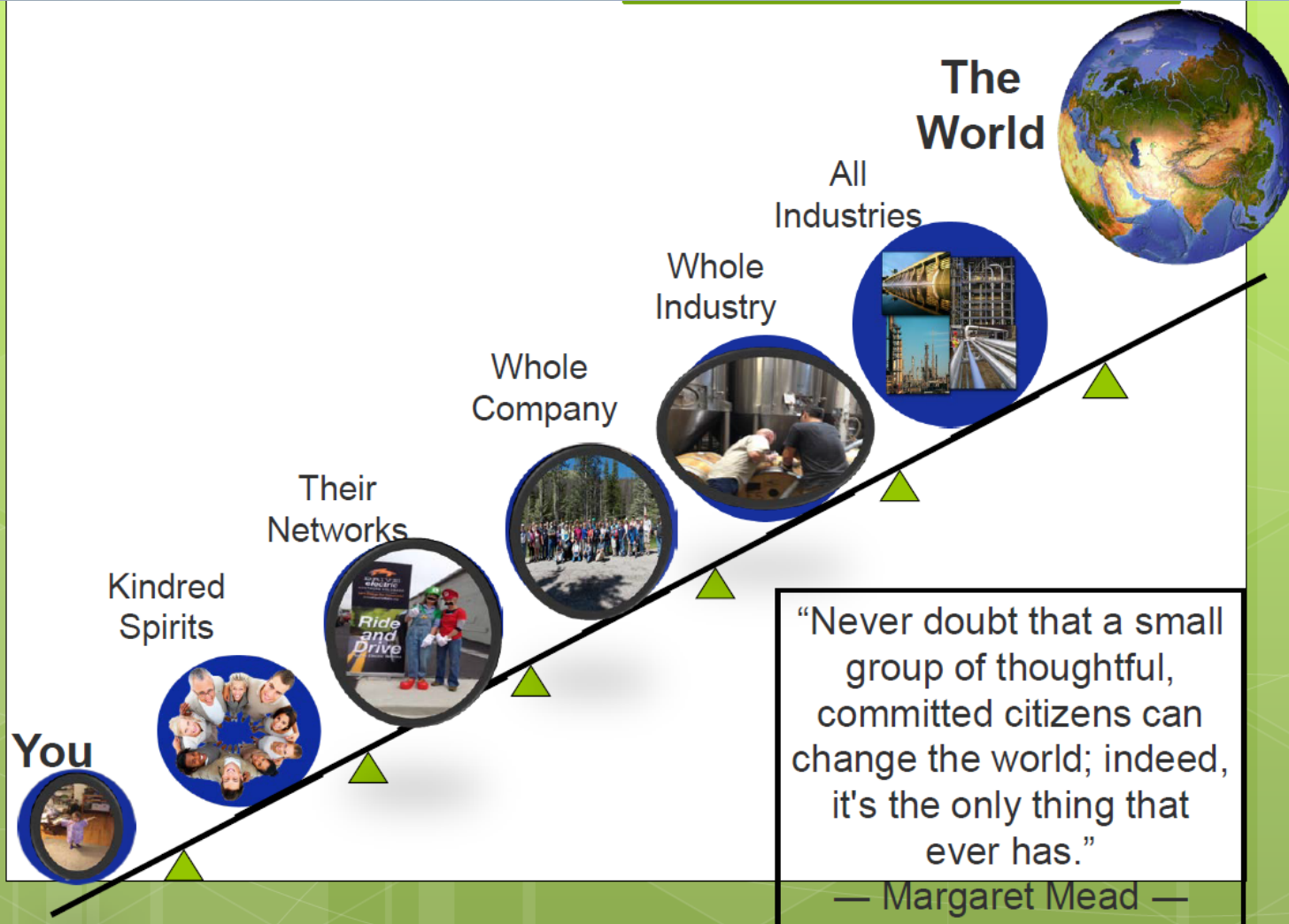
LOSE
-A-WATT
ENERGY PRIZE

WATT *will it take*
to **WIN** **\$5,000,000?**

It's easier than you think!

Fort Collins is participating in a two-year energy efficiency competition with a **\$5 million prize**. Every home counts in the contest, and the goal is to double our energy savings in 2015 and 2016.

Every Action Counts



Lucinda Smith
Environmental Services Dir.
970-224-6085
lsmith@fcgov.com

Travis Paige
Community Engagement Mgr.
970-416-2627
tpaige@fcgov.com

fcgov.com/climateprotection

fcgov.com/utilities



Residential Conservation Programs.

Efficiency Works - Home



- Home efficiency audits
- Single family residential homes & townhomes
- Customized report
- Rebates:
 - Insulation/Air sealing
 - HVAC
 - Windows
- Participating Contractors
- Financing available

Home Efficiency Loan Program

- Single family residential properties (rentals included)
- FCU electric /water customers
- Projects:
 - Insulation/air sealing
 - HVAC
 - Windows,
 - Solar PV
 - water service line repair/replacement
- Home efficiency audit required
- Amounts: \$1,000 - \$15,000
- Terms: 5, 7, 10, 15, 20 years
- Interest rate: 2.5% for 2015
- Conveniently repay on your utility bill
- Monthly payment for loan can potentially be offset by electrical savings from improvements – Bill Neutrality

Fort Collins Solar Programs



- Residential Rebates
- Commercial Rebates
- On-bill Financing
- Riverside Community Solar
- Green Energy

Peak Partners



- WiFi Thermostats
- Digital Control Units (DCU) for electric water heaters
- Free installation
- Reduce electricity usage at peak times
- Incentives for DCU's
- Partnered with Comverge



Web Portal

- Free online tool
- Monitor your use
- Control your costs
- Conserve resources



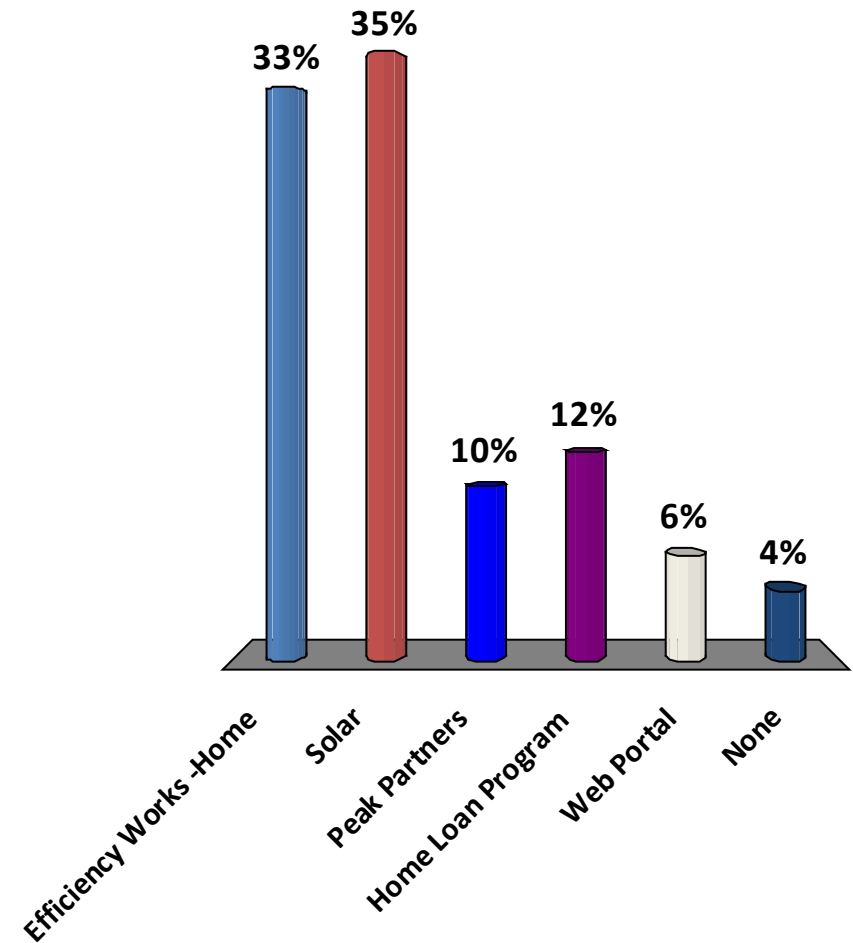
Consumer Products Rebates



- Dishwashers
- Clothes Washers
- Refrigerator/Freezer recycling
- LED Lighting – P.O.P.
- WaterSense Toilets
- WaterSense Shower heads
- Sprinkler Equipment

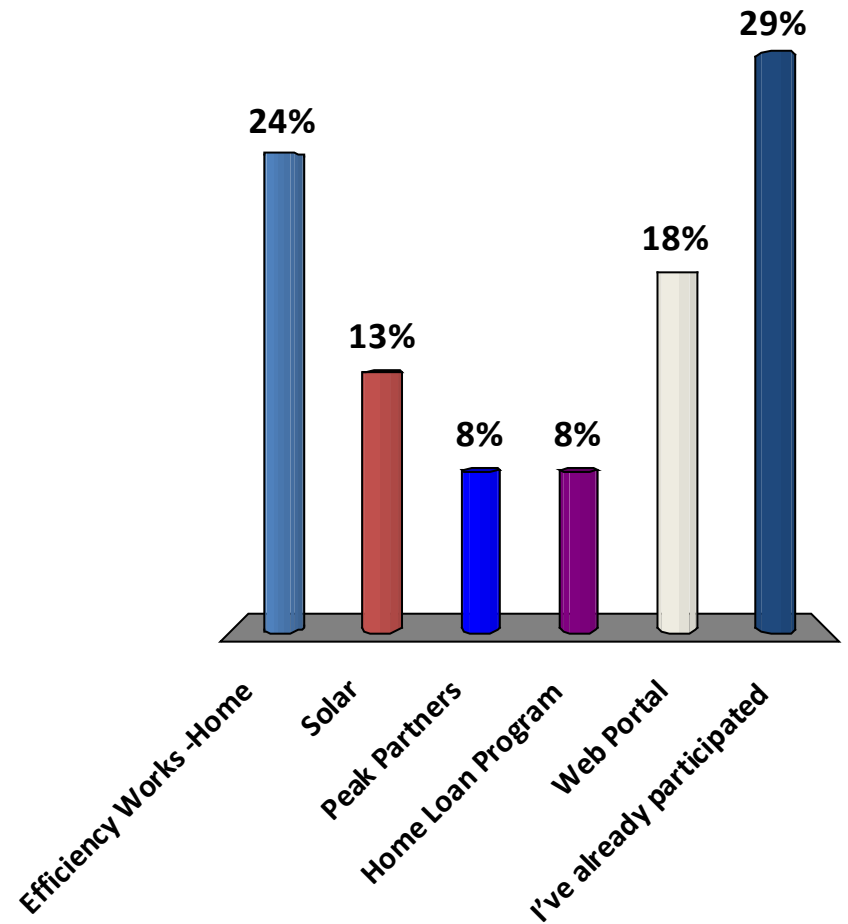
Which of these programs were you aware of before tonight's presentation?

- A. Efficiency Works -Home
- B. Solar
- C. Peak Partners
- D. Home Loan Program
- E. Web Portal
- F. None



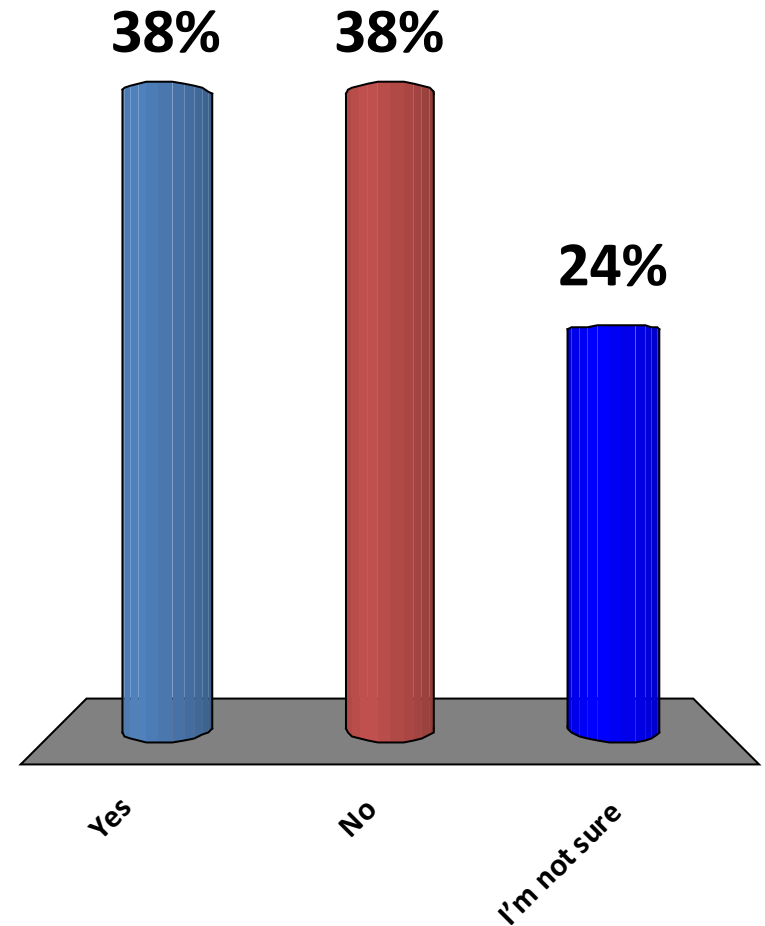
Which of these programs would you be likely to participate in?

- A. Efficiency Works -Home
- B. Solar
- C. Peak Partners
- D. Home Loan Program
- E. Web Portal
- F. I've already participated



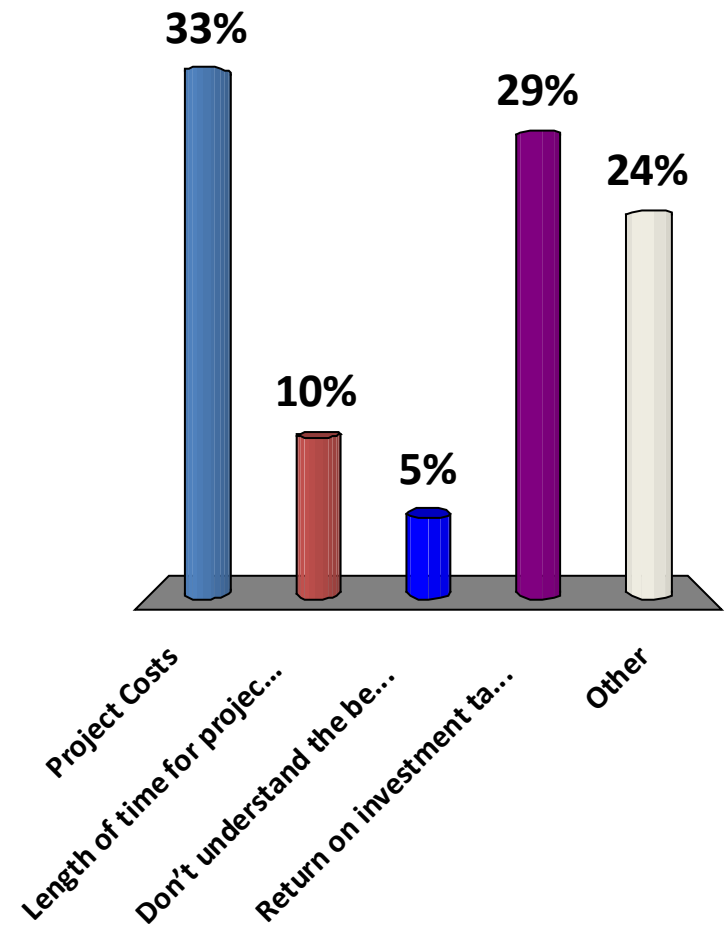
Does the 2.5% interest rate, with terms up to 20 years, incentivize you to utilize a HELP loan to make your home more energy efficient?

- A. Yes
- B. No
- C. I'm not sure



What are potential barriers to participation in the programs mentioned tonight?

- A. Project Costs
- B. Length of time for project completion
- C. Don't understand the benefits
- D. Return on investment takes too long
- E. Other



Transportation Programs and Greenhouse Gas Reduction



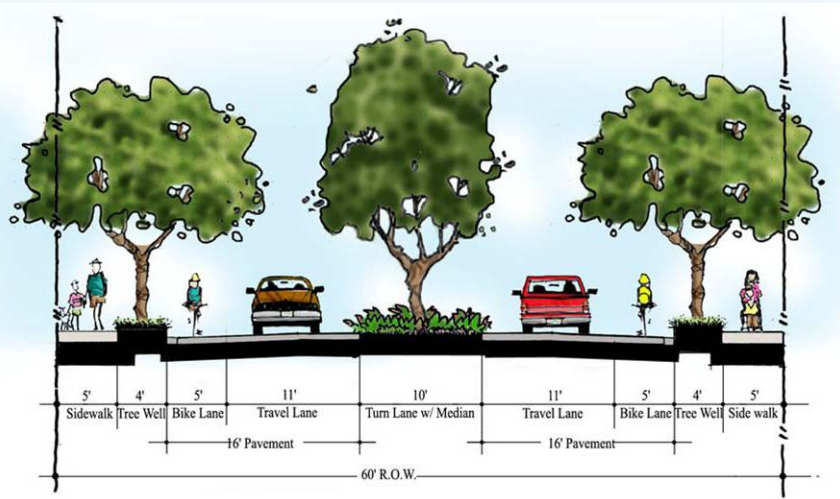
Residential Environmental Program Series
March 4, 2015

Paul Sizemore, FC Moves Program Manager
psizemore@fcgov.com

FC MOVES...

- ✓ Is a department within the **P**lanning, **D**evelopment, and **T**ransportation (**PDT**) Service Area
- ✓ Looks at the transportation system's long range (planning) needs as well as current (programming) needs, through these functions:

Transportation Planning



Safe Routes to School

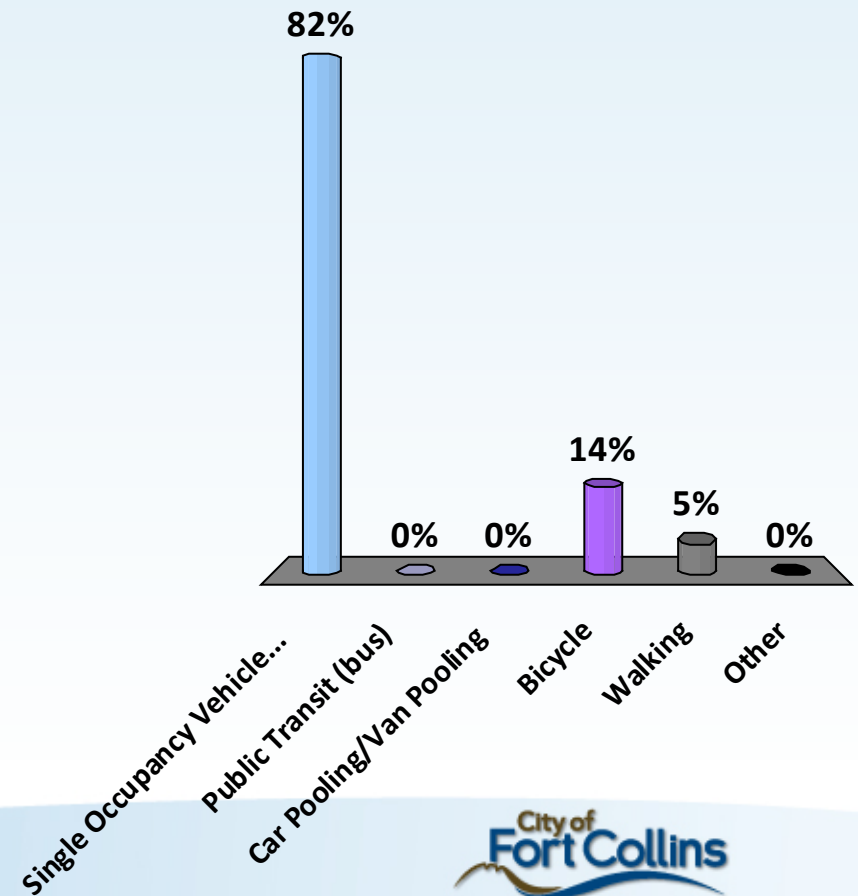


FC Bikes

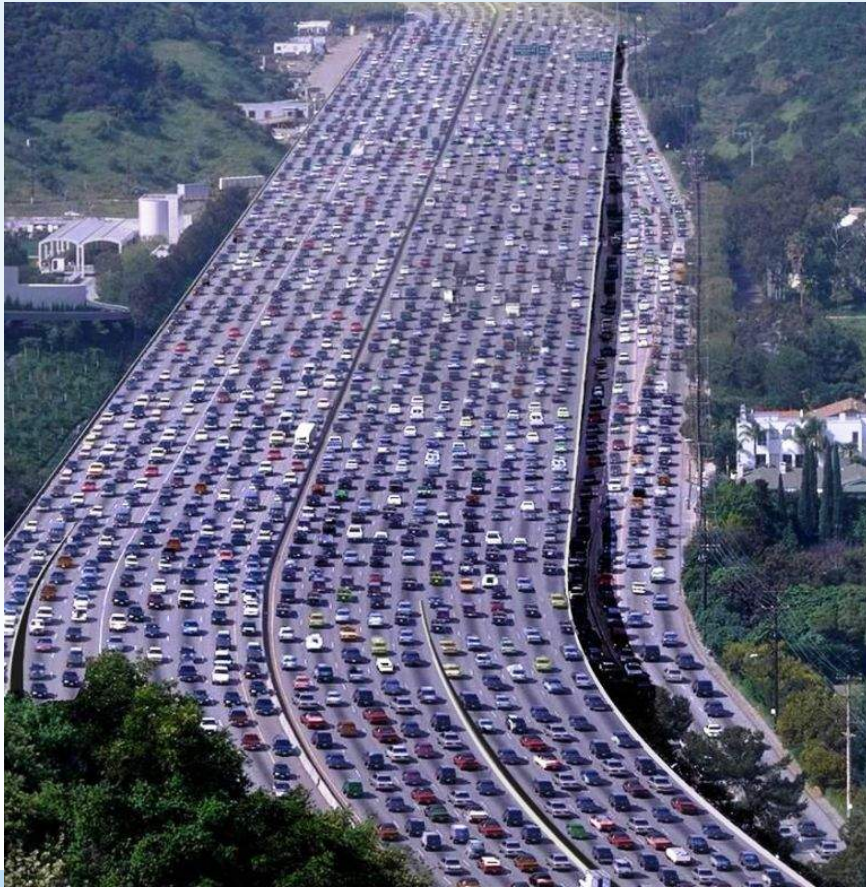


What is your primary means of transportation?

- A. Single Occupancy Vehicle (car)
- B. Public Transit (bus)
- C. Car Pooling/Van Pooling
- D. Bicycle
- E. Walking
- F. Other



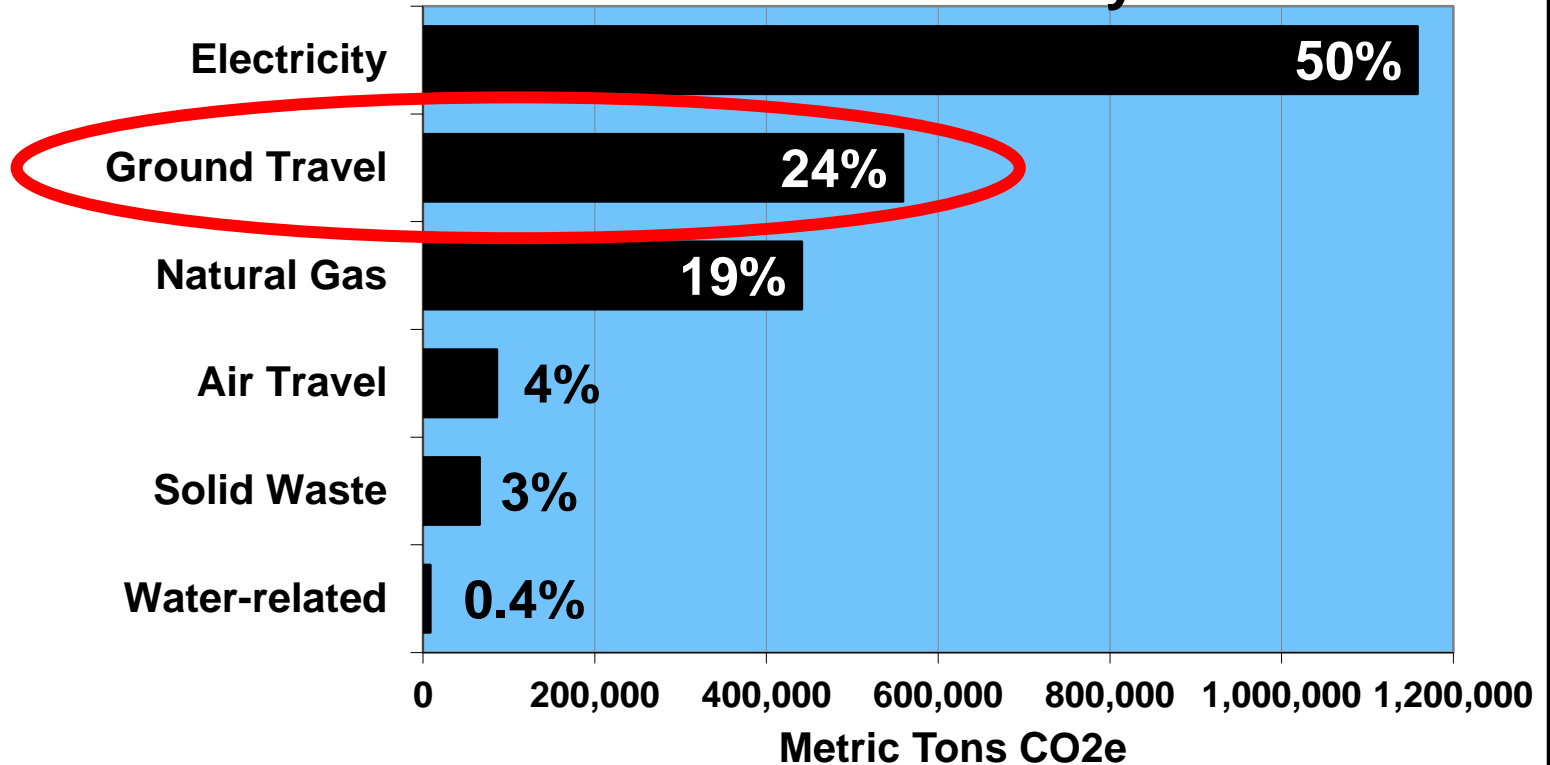
Commuting in Fort Collins



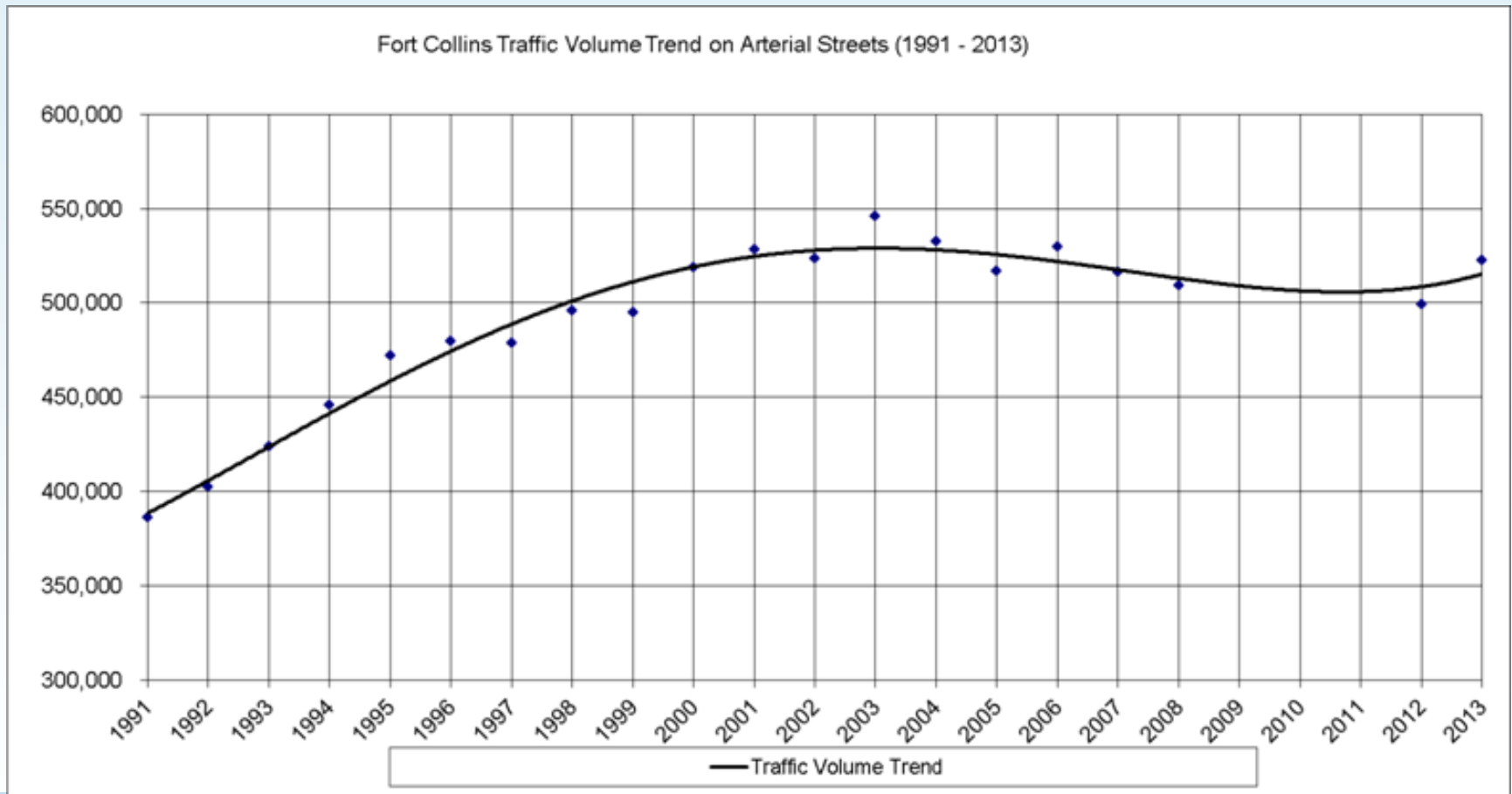
- Approximately 70% of commuting trips in Fort Collins are by single occupancy vehicle (SOV)
- National average is about 75%
- SOV trips are the primary source of Transportation GHG emissions

Why does this matter?

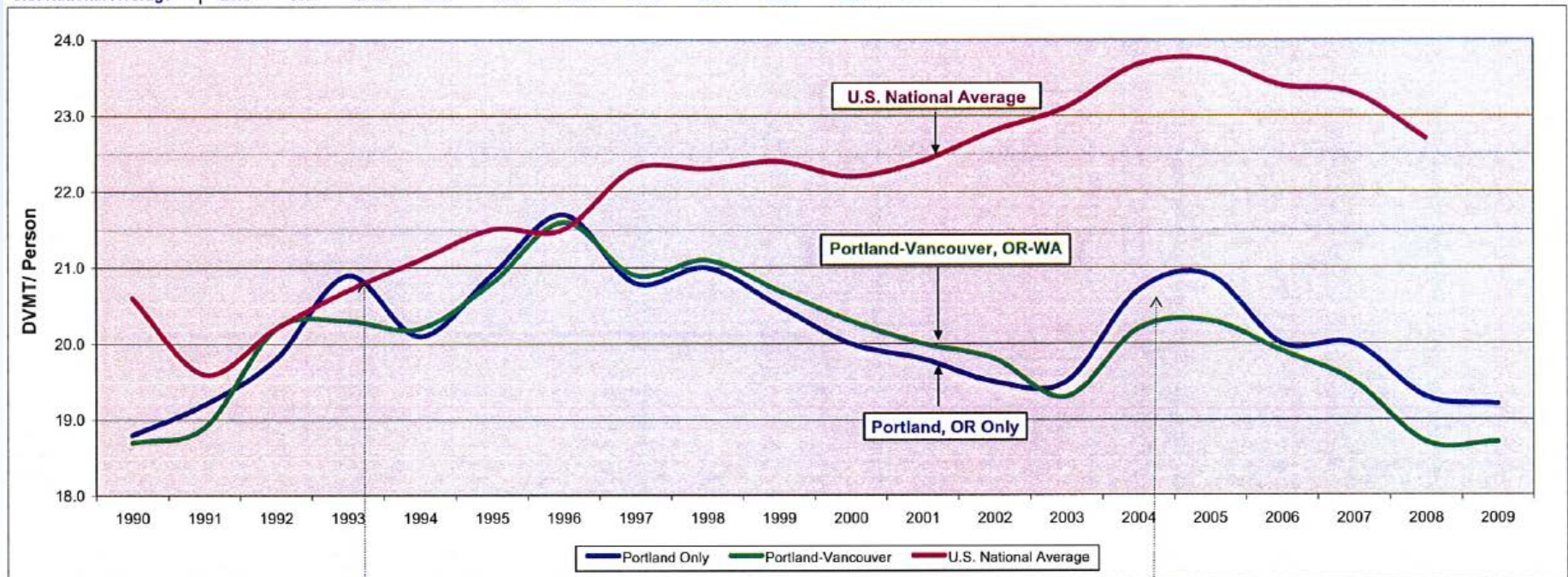
Fort Collins Community 2013 Greenhouse Gas Emissions by Source



The Good News Is:



Some Places Have Already Turned It Around

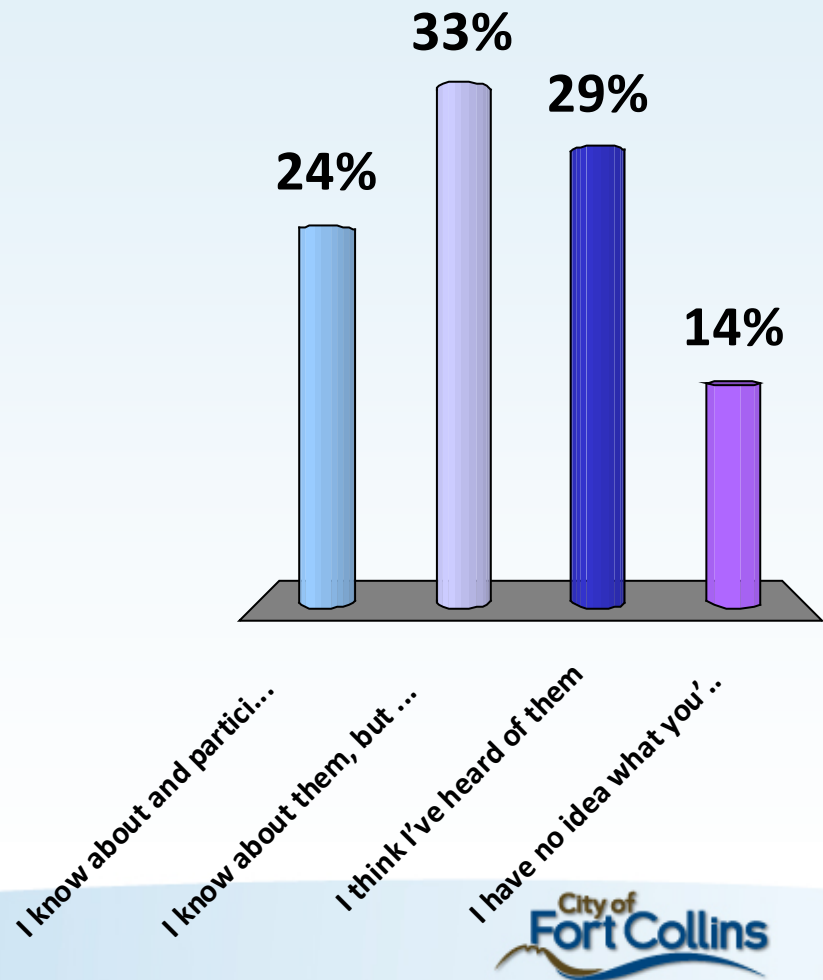


Three Ways You Can Help Meet Our GHG Goal

I. Participate in Community Programs and Activities

How much do you know about community programs and activities related to sustainable transportation?

- A. I know about and participate in these programs
- B. I know about them, but haven't participated
- C. I think I've heard of them
- D. I have no idea what you're talking about





- Two events planned for 2015:
 - June 7th on West Elizabeth Street
 - September 20th on Remington Street



Bike to Work Day!

- Summer Bike to Work Day will be on June 24, 2015



BIKE *winter*
fcgov.com/bikewinter

Bring a lunch and join the discussion on updating the Bike Plan.
BIKE LUNCH TALK
WED. DEC. 4 FROM 12:30-1:30 PM
281 N. COLLEGE AVE. IN CONFERENCE ROOM A
RSVP: FCGOV.COM/BIKEWINTER

Learn how to ride safely and comfortably during the colder months.
WINTER CYCLING 101
WED. DEC. 4 FROM 4-6 PM
ODELL BREWING COMPANY
RSVP: FCGOV.COM/BIKEWINTER

Get a free bike light to ensure you're riding bright!
LIGHT UP THE NIGHT
FRI. DEC. 5 FROM 6-8 PM
OLD TOWN SQUARE BIKE LIBRARY KIOSK (OR OAK STREET PLAZA) AND CSU REC CENTER AND COUNCIL TREE LIBRARY

Ride to work and get a free breakfast at one of the many stations around Fort Collins.
WINTER BIKE TO WORK DAY
WED. DEC. 11
BREAKFAST STATIONS FROM 7-9:30 AM
SEE FCGOV.COM/BIKEWINTER FOR MAPS AND MORE.

Celebrate winter cycling and help raise money for children's bike giveaways.
BIKE FORT COLLINS AFTERNOON SOIREE
WED. DEC. 11 FROM 4:30-6:30 PM
OLD TOWN SQUARE BIKE LIBRARY KIOSK

WE KNOW SNOW
Cyclists, to view priority snow plow routes, visit fcgov.com/WeKnowSnow.

fcfbikes
Please post and tweet your thoughts!



Bicycle Safety and Education Classes

- Traffic Skills 101: every other month- next open class is July 18 then September 26
- Learn-to-Ride Classes: May 21, 28; June 3,10; TBD July, August, September
- Learn from, or become, a Bicycle Ambassador:
bicycleambassadorprogram.org



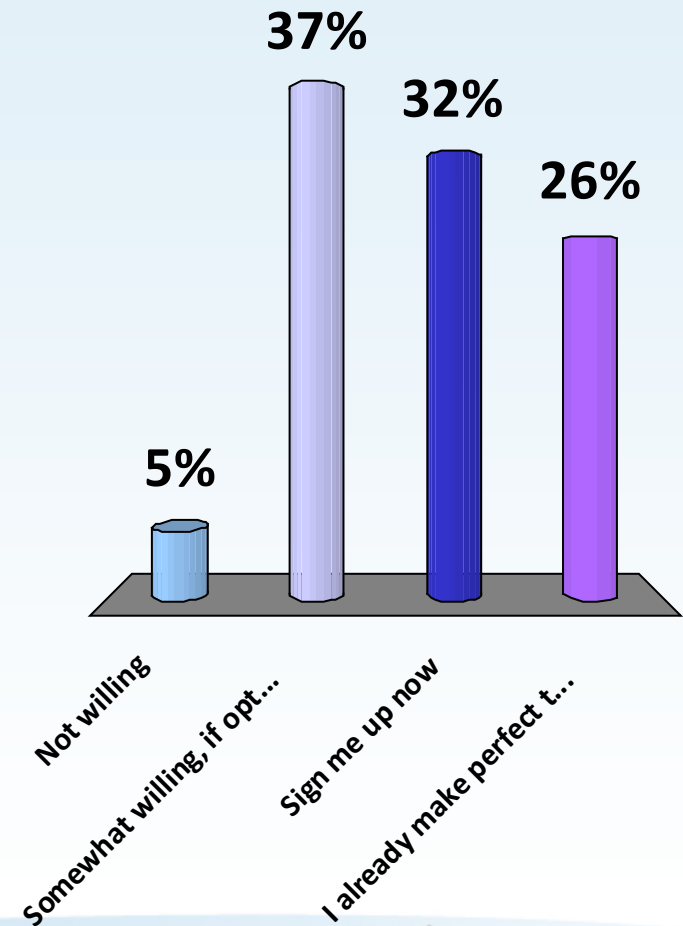
Bicycle
AMBASSADOR
PROGRAM



II. Make Sustainable Transportation Choices

How willing are you to change your transportation habits?

- A. Not willing
- B. Somewhat willing, if options are available
- C. Sign me up now
- D. I already make perfect transportation choices



Your Commute Trips



Non-Commute Trips, Too



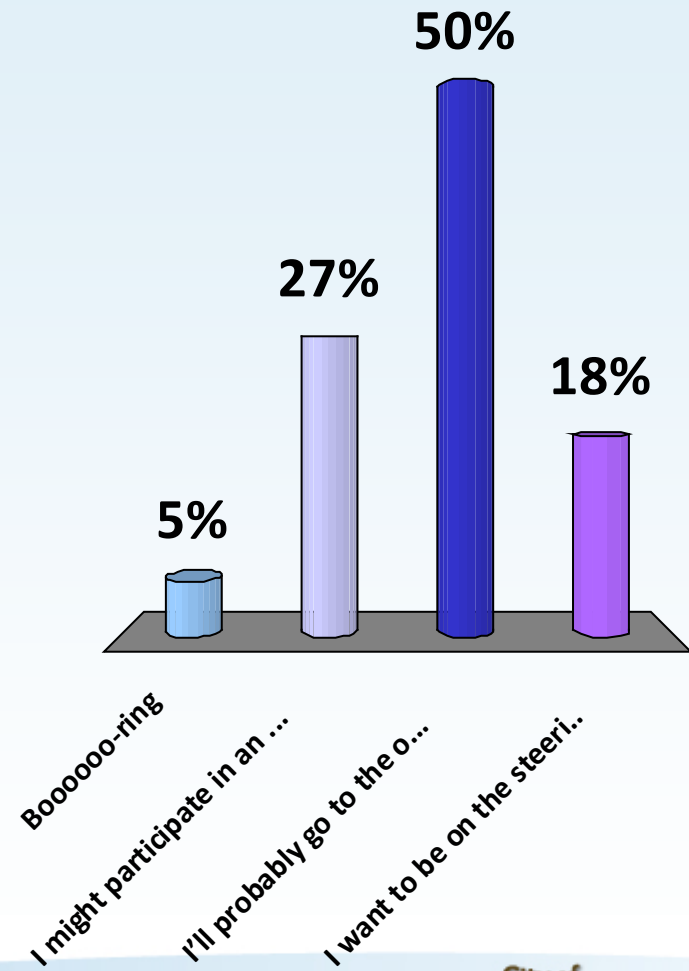
To and From School



III. Get Involved in Community Plans

When I hear about community and transportation plans being developed in my area, I think:

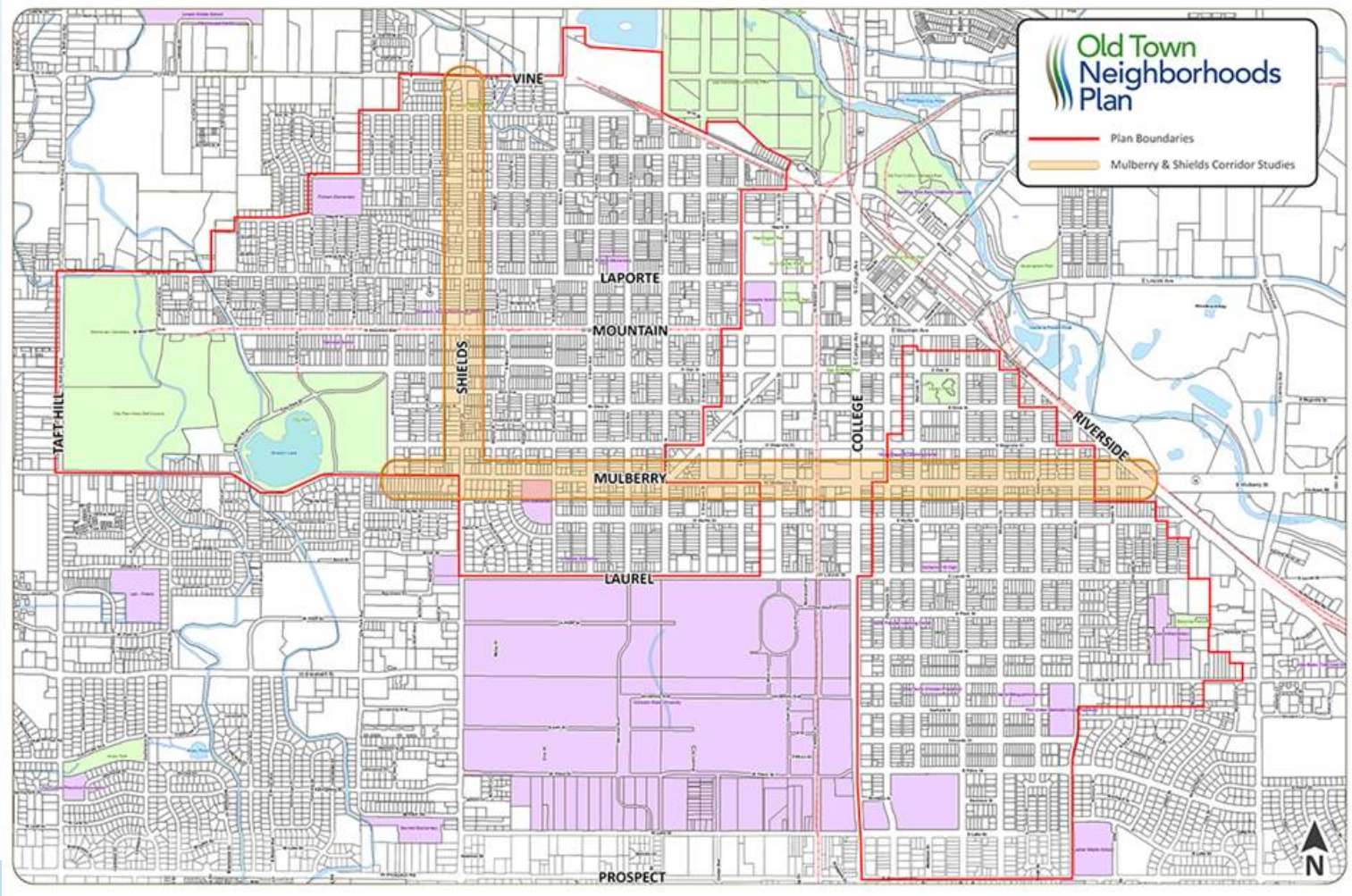
- A. Boooooo-ring
- B. I might participate in an online or mail-in survey
- C. I'll probably go to the open houses or neighborhood meetings
- D. I want to be on the steering committee!



West Elizabeth Enhanced Travel Corridor Plan



Old Town Neighborhoods Plan



Downtown Plan



The Climate Action Plan Has Big Goals, But....

- The actions we need to take to meet the transportation portion are feasible and reasonable:
 - By 2030, each person drives 30% less (because we have so many better options!)
 - When we replace our old cars, consider choices with high fuel economy.
- That's it!



Transportation Programs and Greenhouse Gas Reduction



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Drive Electric Northern Colorado

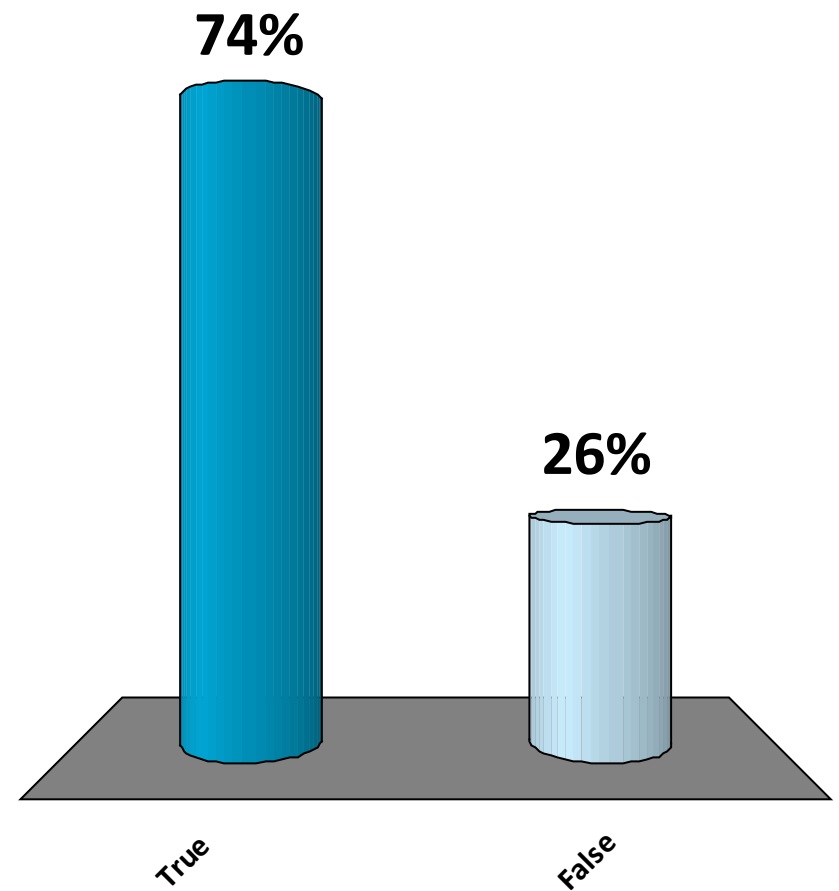
Creating a Model Deployment Community



Electrification
Coalition

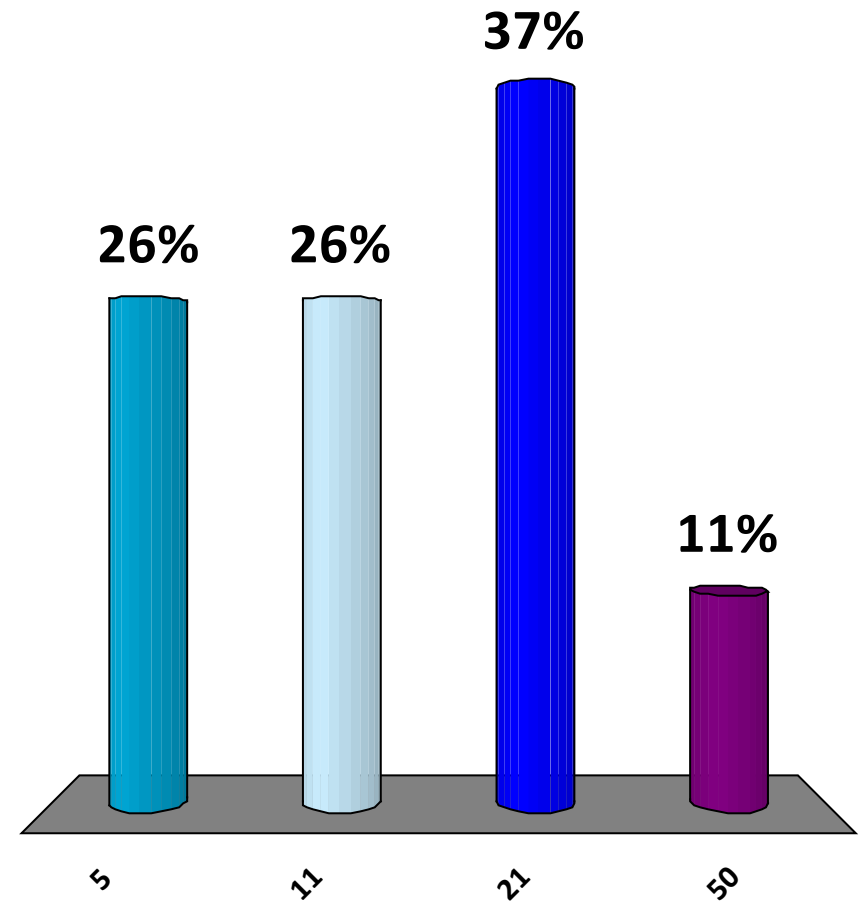
True or False: Electric Vehicles are expensive

- A. True
- B. False



How many electric vehicles are currently available on the market in the United States?

- A. 5
- B. 11
- C. 21
- D. 50



The Deployment Community Concept:



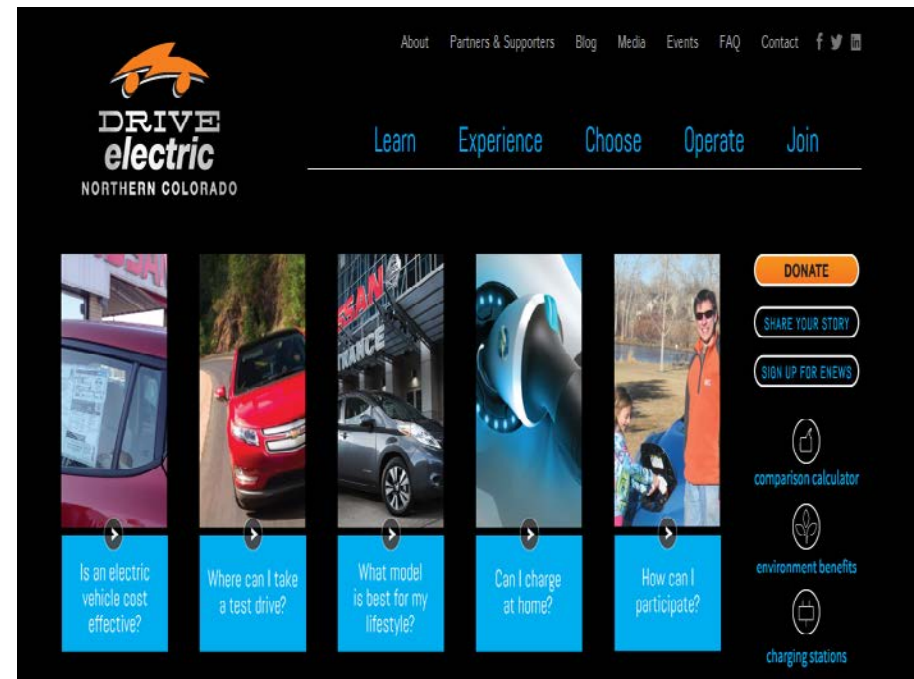
- To facilitate nationwide commercialization of plug-in electric vehicle (PEV) technology, the engagement and cooperation of a broad group of stakeholders is required. These stakeholders include state and city governments, infrastructure providers, utilities, automakers and other firms, service providers, and regulators. If the necessary ecosystem is not created, commercialization of this technology will proceed far more slowly.
- The Electrification Coalition will work with the public and private sector leaders of Fort Collins and Loveland to help identify and implement specific deployment opportunities.

Drive Electric Northern Colorado:



➤ The Electrification Coalition (EC), The City of Fort Collins, the City of Loveland, and Colorado State University have partnered together to create Drive Electric Northern Colorado (DENC) a first-of-its-kind, community-wide initiative

➤ The effort will serve as a “living laboratory,” and will create a scalable and replicable model for implementing deployment communities in other areas of the country.



General Core Strategy Concepts:



EV Readiness

- Charging infrastructure, codes, regulations, support services, time of use.

EV Education

- Existing networks, events, institutional opportunities, speakers panel, cost/ROI

EV Experience

- Car library, car share, rental cars, ride along, corporate educational events, campus programs.

Fleet

- State, city, medium duty, light duty, big and small.

Consumer Purchase

- OEM priority, best pricing, dealer coordination, incentives, dealer training.

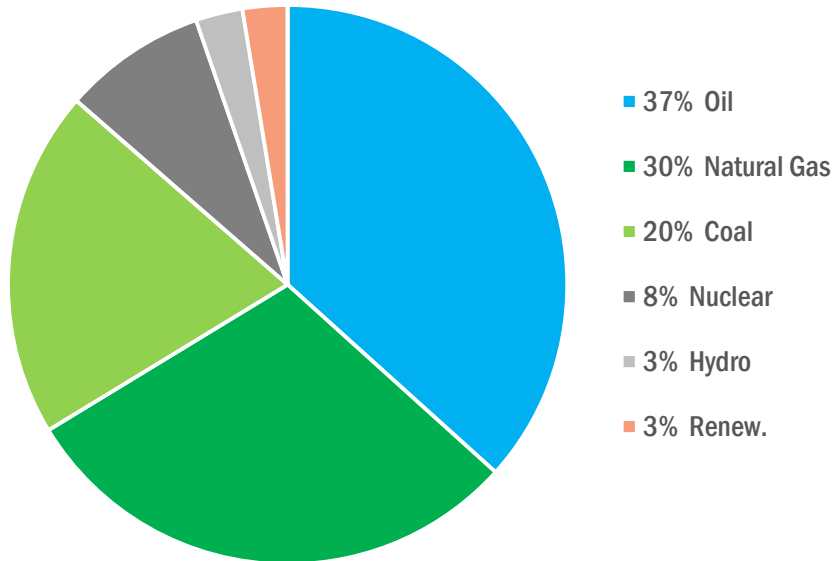
Oil Dependence by the Numbers



Petroleum fuels account for approximately 40 percent of U.S. primary energy demand, more than any other fuel.

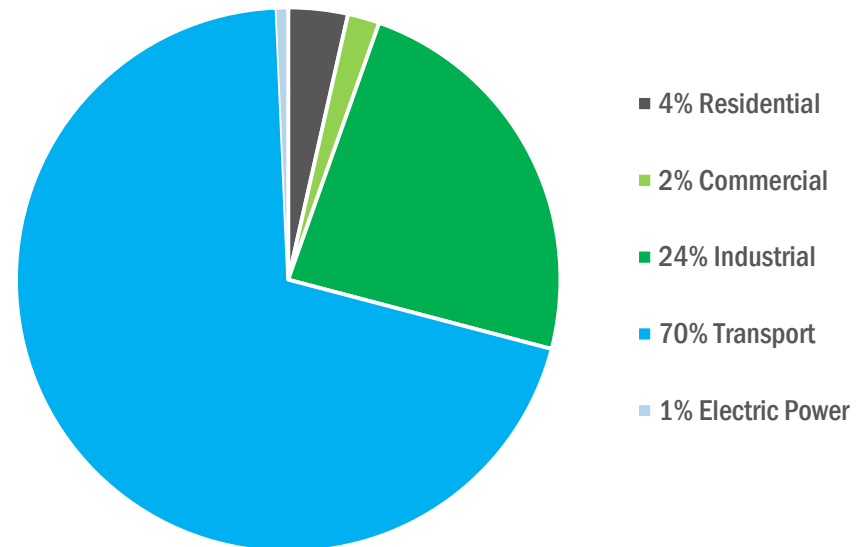
- Approximately 70 percent of U.S. oil consumption occurs in the transportation sector, with 40 percent in light-duty vehicles.
- Transportation is 94 percent reliant on oil-based fuel for energy.

U.S. PRIMARY ENERGY DEMAND, 2013



Source: DOE, EIA

PETROLEUM FUEL DEMAND BY SECTOR, 2013



Source: DOE, EIA

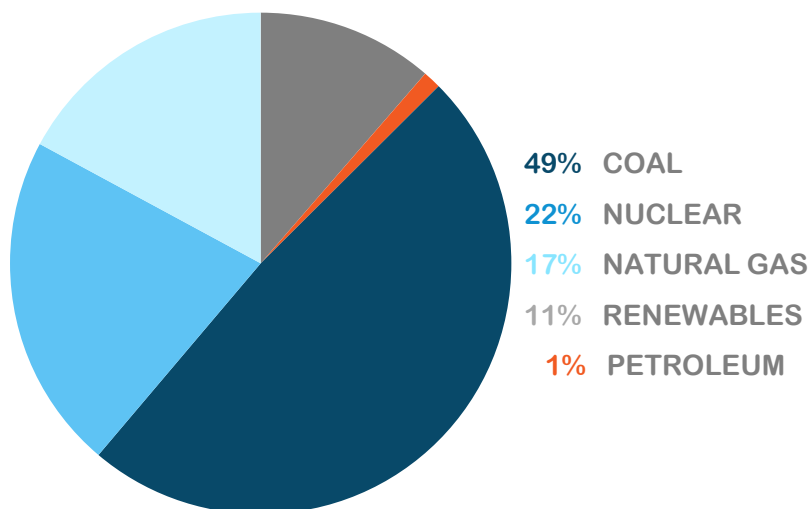
Electrification Overview

Electrification of transportation - best solutions for reducing U.S. oil dependence, insulating from oil price volatility.

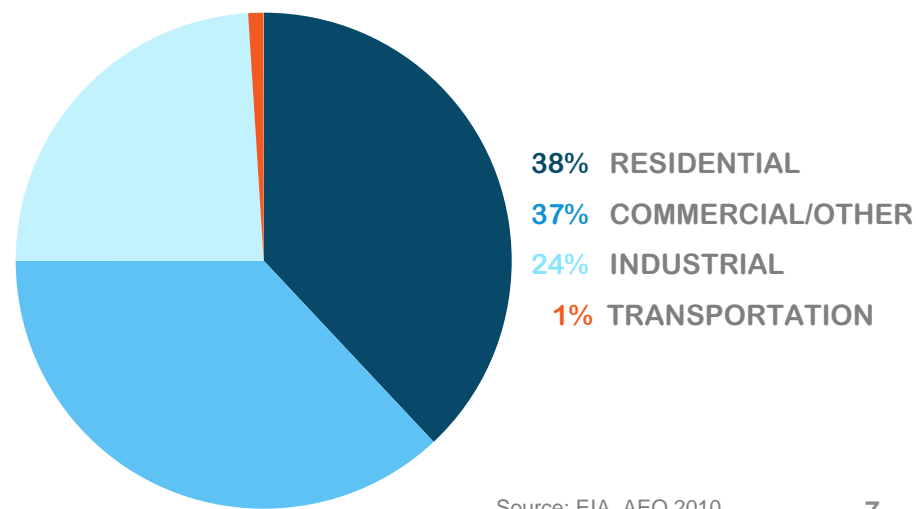


- Electricity is generated from a diverse portfolio of domestic fuels.
- The power sector has substantial spare capacity.
- Electricity prices are stable.
- The network of infrastructure already exists.

U.S. ELECTRICITY GENERATION BY FUEL, 2010



U.S. ELECTRICITY DEMAND BY SECTOR, 2010



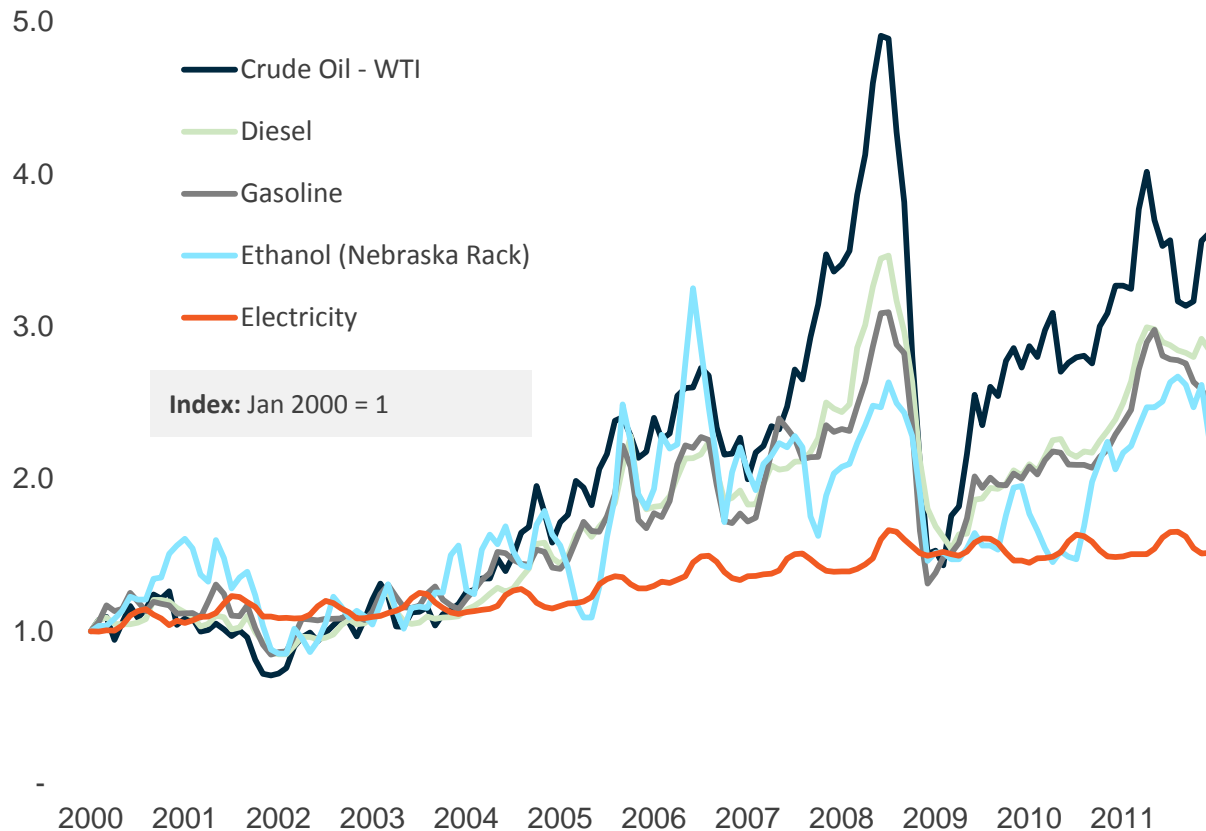
Source: EIA, AEO 2010

Electricity Prices are Stable Compared to Oil

The volatility of oil and other liquid fuels threatens U.S. and household economic security.



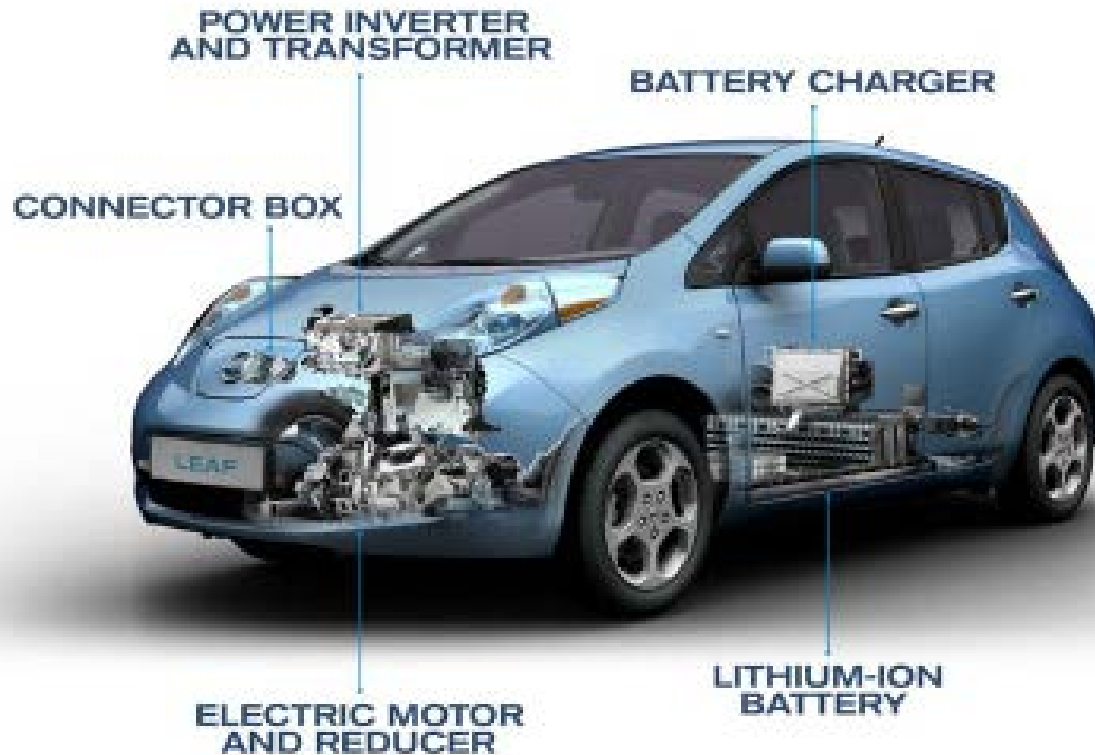
FUEL VOLATILITY INDEX (HISTORICAL)



- Oil price volatility is driven by events in the global oil market.
- In 2012, the average U.S. household spent a record \$2,912 on gasoline.
- Even with greater oil production, the U.S. cannot avoid price volatility.
- In comparison, electricity prices remain relatively flat and predictable.

The Electric Car: An Overview

With almost 1,000 less moving parts than a gasoline powered vehicle, electric cars are simplistic in design and affordable to operate.



- On average, an electric car has $\frac{1}{4}$ the operational costs of a gasoline powered vehicle.
- A battery pack replaces the internal combustion engine as the primary source of power.
- Electric cars can be charged by plugging into a standard outlet or using a charging station.

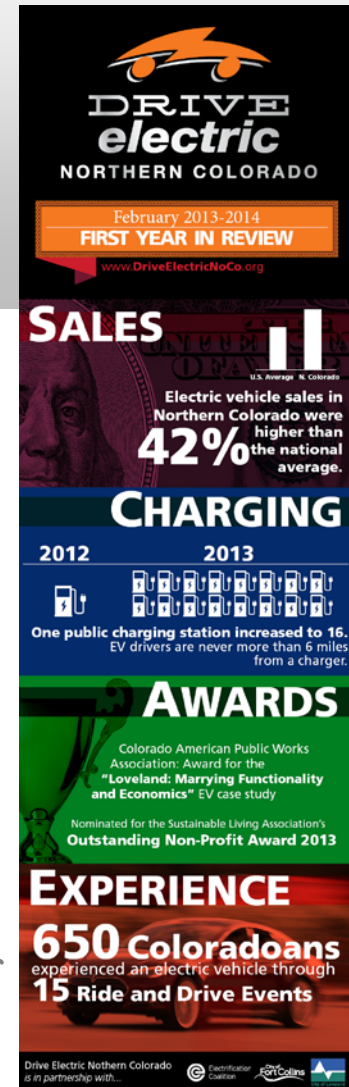
LEAF

Northern Colorado Today

Northern Colorado has made great progress to increase the number of PEVs on the road.

In its first year, Drive Electric Northern Colorado has:

- Contributed to the increase of electric vehicles sales in the region, which were 42% higher than the national average in 2013. In the fourth quarter last year, EV sales in Northern Colorado were even 71% more than the national average. This past October was the highest total to date sales.
- Hosted more than 40 Ride-and-Drive events to date.
- Worked with the cities of Fort Collins and Loveland to increase the number of electric vehicles in their municipal fleets. Starting with only five EVs in 2013, Fort Collins and Loveland now have a total of 11 EVs.
- Increased the number of publicly available charging stations from one to more than 20 stations and 4 quick charge stations, making drivers never more than six miles away from a station.



Are EVs Good Cars? Awards Through 2015

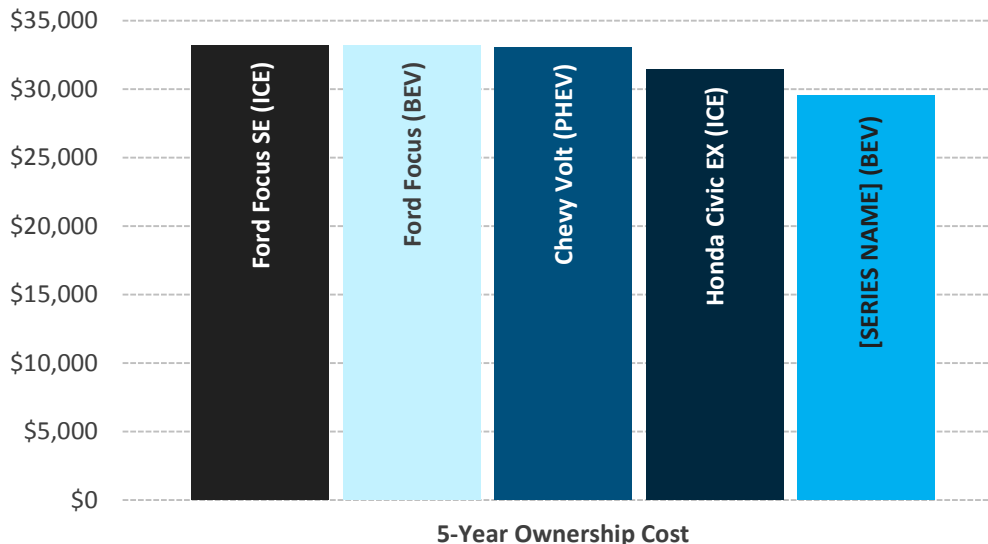


Chevy Volt	Nissan LEAF	BMW i3	Tesla Model S
2015 Kelley Blue Book “Best Buy Award”	2011-2013 IIHS Top Safety Pick	2014 UK “Car of the Year”	2013-2014 Consumer Reports best car ever tested; earned a score of 99 out of a possible 100 in the magazine's tests.
2014 U.S. News “Best Upscale Midsize Car for the Money”	2014 Kelley Blue Book “10 Best Green Cars”	2015 Green Car Journal “Green Car of the Year”	2013 Motor Trend Magazine “Car of the Year”
2014 IIHS Top Safety Pick	2011 “World Car of the Year”	2014 Kelley Blue Book “Top 10 Best Green Cars”	2013 Automobile Magazine “Automobile of the Year”
2013 Consumer Guide Automotives “Best Buy in its Class”	2014 Automotive Science Group “Cleanest Production Vehicle in the U.S.”	2014 New York International Auto Show “World Car of the Year”	2013 “World Green Car of the Year”
2011 Motor Trend Magazine “Car of the Year”	2011 Green Fleet “Electric Vehicle of the Year”	2014 “World Car Design of the Year”	2014 Consumer Reports “Best Overall Car”
2011 & 2012 Consumer Reports rated it first in “owner satisfaction”	2011 European “Car of the Year”	2015 Winner Ward’s “10 Best Engines”	2014 Telegraph “Eco Car of the Year”
2011 Edison Award “Gold in Personal Transportation”	2011-2012 Japan “Car of the Year”	2013 Next Green Car Awards “Best Supermini”	2014 Best Selling Car in Norway’s History

How Do Electric Cars Compare in Price?

Though the upfront cost of electric cars can be more than gasoline powered cars, their lower operating costs make up the difference over time.

TOTAL COST OF OWNERSHIP (INCLUDES FEDERAL TAX CREDIT)



Note: Based on 12,000 miles annually. Gasoline at \$3.50 per gallon and electricity at 11 cents per kWh. Includes costs for home refueling and repair and maintenance. No assumption is made regarding resale value, and purchase is assumed to be cash. Excludes insurance.

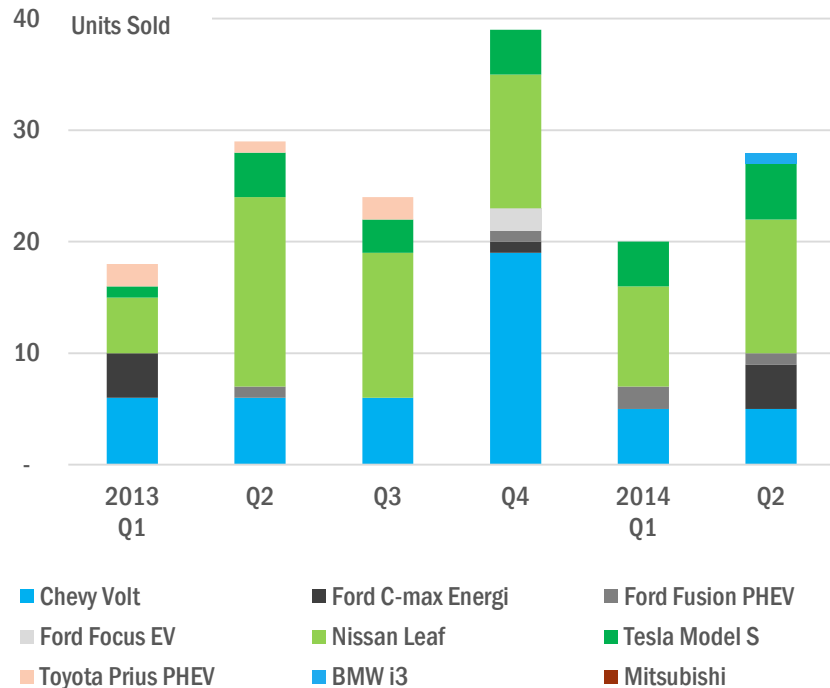
- The Total Cost of Ownership includes both purchase cost and operating costs.
- Over a five year period, electric vehicles cost the same as or less than an internal combustion engine vehicle for most consumers (with federal tax incentives).
- On a per mile basis, an electric car costs 3 cents to drive, whereas a gasoline powered vehicle costs 12 cents to drive.
- A BEV owner who drives 14,000 miles a year will save approximately \$1,256 in fuel costs.

The Northern Colorado Vehicle Market in Context

PEVs account for about 1 percent of light-duty sales in Northern Co. Yet, the experience of traditional hybrids (HEVs) offers reason for optimism.

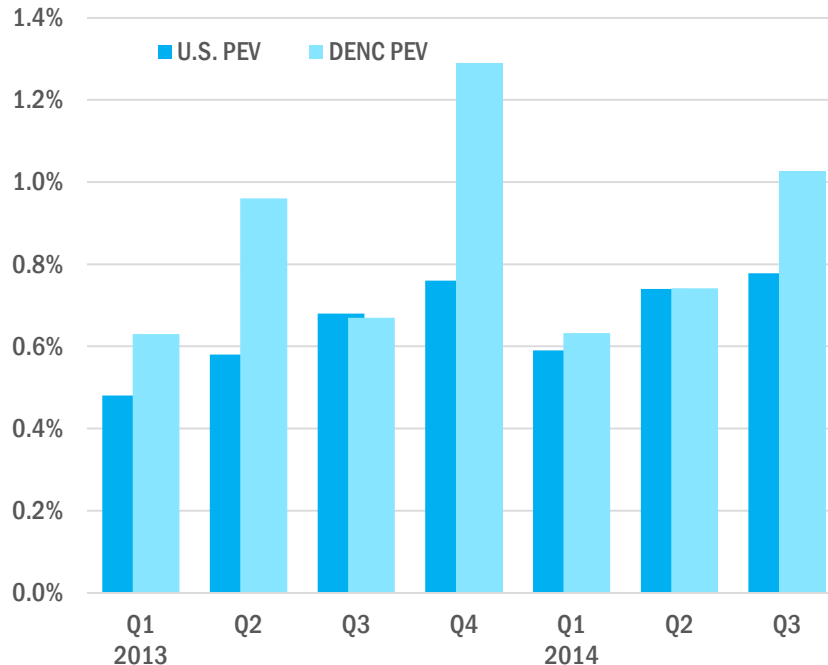
- Through Q3 2014, eight different PEV models had been purchased in Northern Colorado.

2013 NOCO PEV SALES BY OEM AND MODEL



- DENC has consistently performed above the national average. In 2013, EV sales in Northern Colorado were almost double the national average.

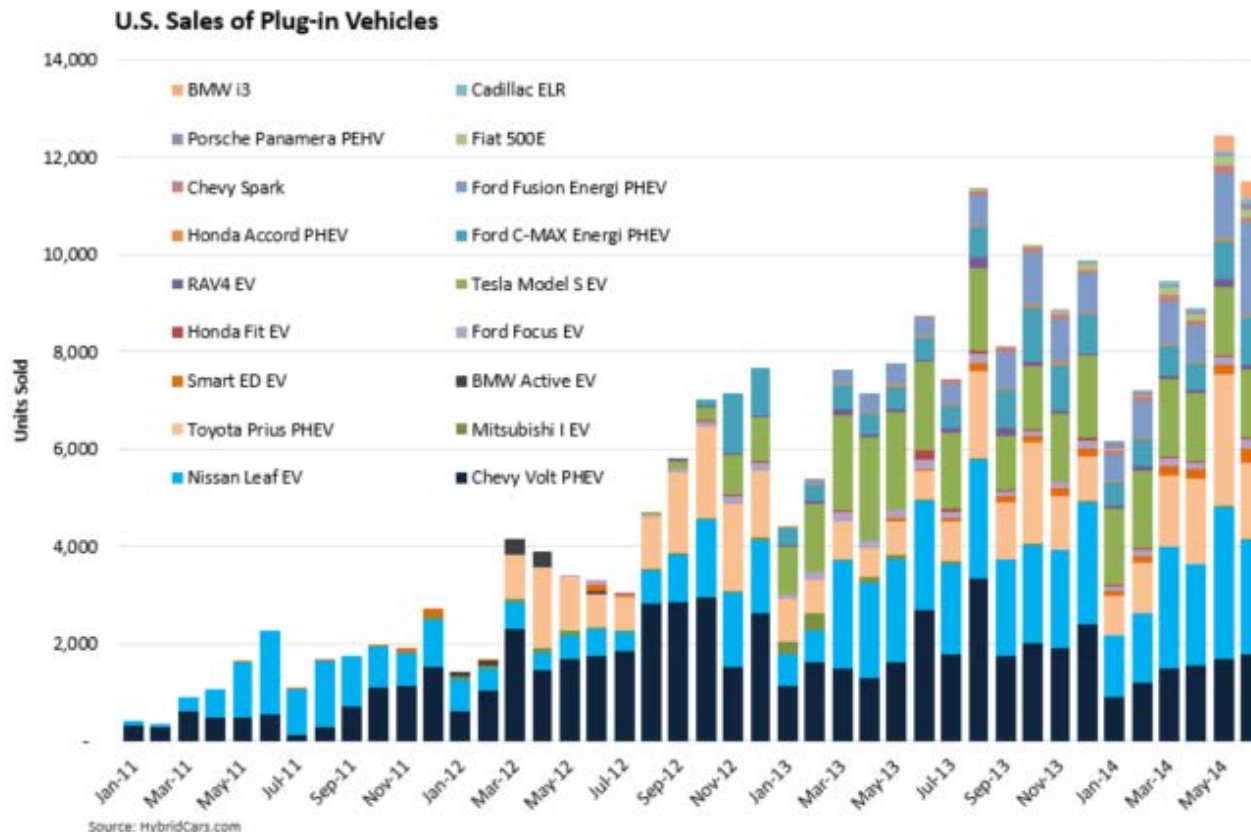
EV PENETRATION RATE (NATIONAL VS. DENC)



Electric Vehicles Models and Monthly Sales

Every major automaker has produced an electric vehicle and many plan to produce more models as well.

Monthly PEV Sales

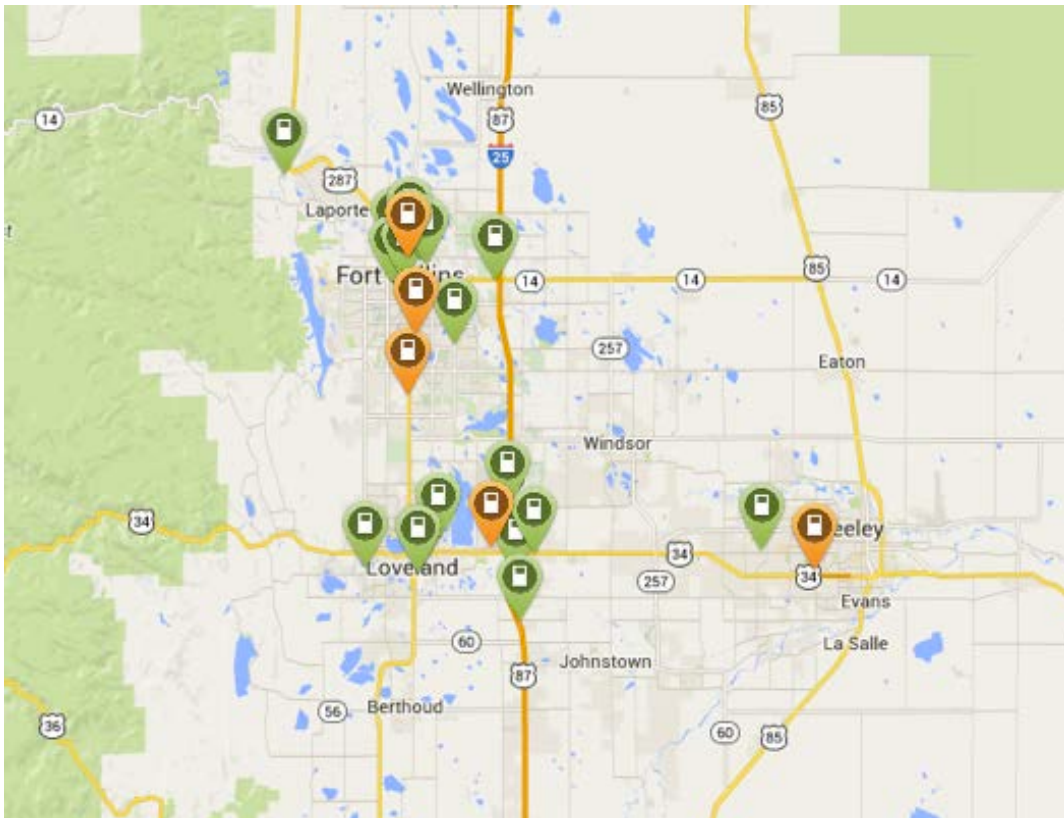


- There are currently 14 PEV models available from eight automotive manufacturers.
- In the first 6 months of 2013, the Tesla Model S captured 8.4% of the luxury vehicle market; the Nissan Leaf was 3.3% of the subcompact market.
- The electric vehicle market is seeing 200% year over year growth.

Northern Colorado PEV Infrastructure

DENC has increased public charging infrastructure throughout Northern Colorado making drivers never more than 6 miles from charging.

NORTHERN COLORADO PEV CHARGING INFRASTRUCTURE



- DENC has facilitated installation of numerous 240V public charging stations in Northern Colorado bringing the current network to more than 20.
- DENC has also facilitated installation of 4 DC fast chargers.
- An I-25 charging corridor is being discussed with Colorado Energy Office and the Regional Air Quality Council.
- Several of the areas largest employers have already committed to launching work place charging.

How Can Individuals Get Involved?

Learning about EVs with DENC is fun and engaging. You can get engaged in the following ways, and talk to DENC representatives for more.

A VARIETY OF WAYS TO GET INVOLVED:

- **Volunteer:** If you are interested in learning more about EVs, meeting EV owners, and helping out an active local organization, we would love to have you as part of the DENC team!
- **Attend a Ride and Drive:** Ride and Drives are great places to learn about EVs in a non-transactional setting. We put EV owners in the front seat of the car with you to give you an honest and accurate representation of an EV ownership experience.
- **Follow DENC Online:** You can subscribe to our newsletter for upcoming events, volunteer opportunities, and other great EV information. Also find us on Facebook and Twitter for up to date news and events!
- **Get your workplace involved:** An opportunity for executives in Northern Colorado companies to take the vehicles out for 3-5 business days as a chance to test out the technology.



How Can Companies Get Involved?

There are several ways to join the dozens of Northern Colorado companies and organizations in accelerating the adoption of Electric Vehicles.

A VARIETY OF WAYS TO GET INVOLVED:

- **Workplace Charging:** Over 150 companies across the U.S. have joined up in providing charging availability to employees.
- **Host an Employee Ride and Drive:** DENC takes care of the planning process from start to finish to bring an innovative program to your workplace where you and your co-workers can take educational test drives in EVs. We can also host Lunch and Learn presentations to couple with the Ride and Drive.
- **Fleet Vehicles:** EV fleets across the nation are saving companies thousands of dollars in fueling and maintenance costs, along with additional benefits including increased employee retention and joining other top companies across the U.S.
- **Drive Leadership:** An opportunity for executives in Northern Colorado companies to take the vehicles out for 3-5 business days as a chance to test out the technology.

Drive Leadership

An opportunity for leaders in Northern Colorado companies to take an extended test drive with an EV for 3 to 5 days.

WHY PARTICIPATE?

- **A Starting Point to Learn More:** Curious about EVs, but want to know more about the technology as a starting point?
- **Spread the Word:** Spread the word throughout your company or organization about EV opportunities.
- **Fleet Vehicles:** See if EVs would work well for your fleet, learn about the cost savings from fueling and maintenance.

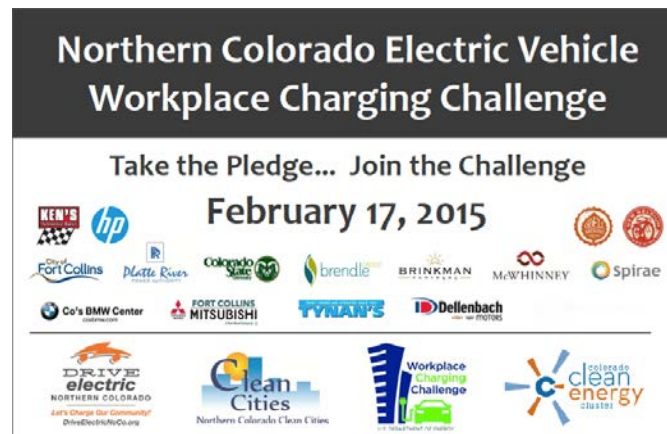


Workplace Charging Challenge

Join dozens of employers across the region, and over 150 companies across the U.S. in providing charging availability to employees.

WHY PARTICIPATE?

- **Employee benefit:** Offering workplace charging has been shown to increase employee retention and attract the best and the brightest applicants.
- **Networking:** Over 150 companies and organizations across the U.S. are participating in the challenge, giving your company the chance to network with hundreds of large companies.
- **Marketing:** Offering EV charging puts your company at the forefront of innovation.



Other Case Studies



Revolutionizing Transportation and Achieving Energy Security

[ABOUT](#) [PRIORITIES](#) [POLICY](#) [MEDIA](#)

[Mailing List](#) [Donate Now](#)

POLICY REPORTS AND ANALYSIS

The Electrification Coalition makes policy recommendations based on in-depth, objective analysis of the wide variety of complex issues surrounding energy security and electrification.

FILTER BY DOCUMENT

- ☐ Policy Report
- ☐ Analysis

FILTER BY DATE

- ☐ 2013
- ☐ 2012
- ☐ 2011
- ☐ 2010
- ☐ 2009

FILTER BY KEYWORD

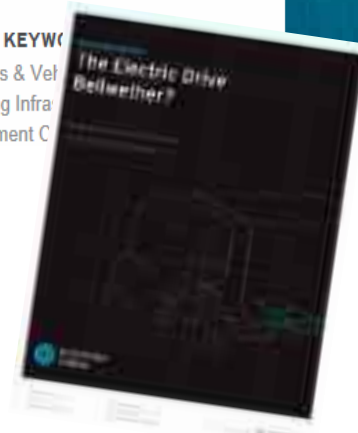
- ☐ Batteries & Vehicles
- ☐ Charging Infrastructure
- ☐ Deployment C

POLICY REPORT

NOVEMBER 16, 2009

Electrification Roadmap

This comprehensive report outlines a vision for a fully integrated electric vehicle network in the United States.



The Electrification Coalition

Revolutionizing Transportation and Achieving Energy Security

➤ Online

www.electrificationcoalition.org

www.driveelectricnoco.org

➤ Download the Roadmaps

www.electrificationcoalition.org/policy

➤ Contacts:

➤ Annie Freyschlag 970-987-3055

➤ 1111 19th Street, NW Suite 406

➤ Washington, DC 20036

➤ 202.461.2360







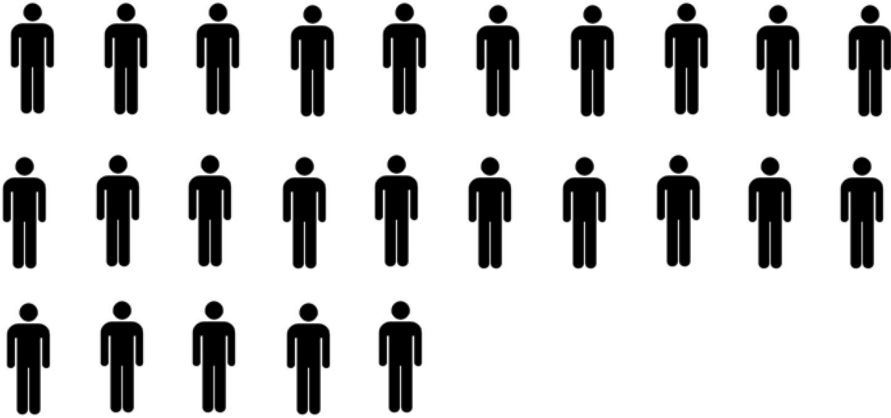
Recycling in Fort Collins

Caroline Mitchell
Environmental Services



Why Recycle?

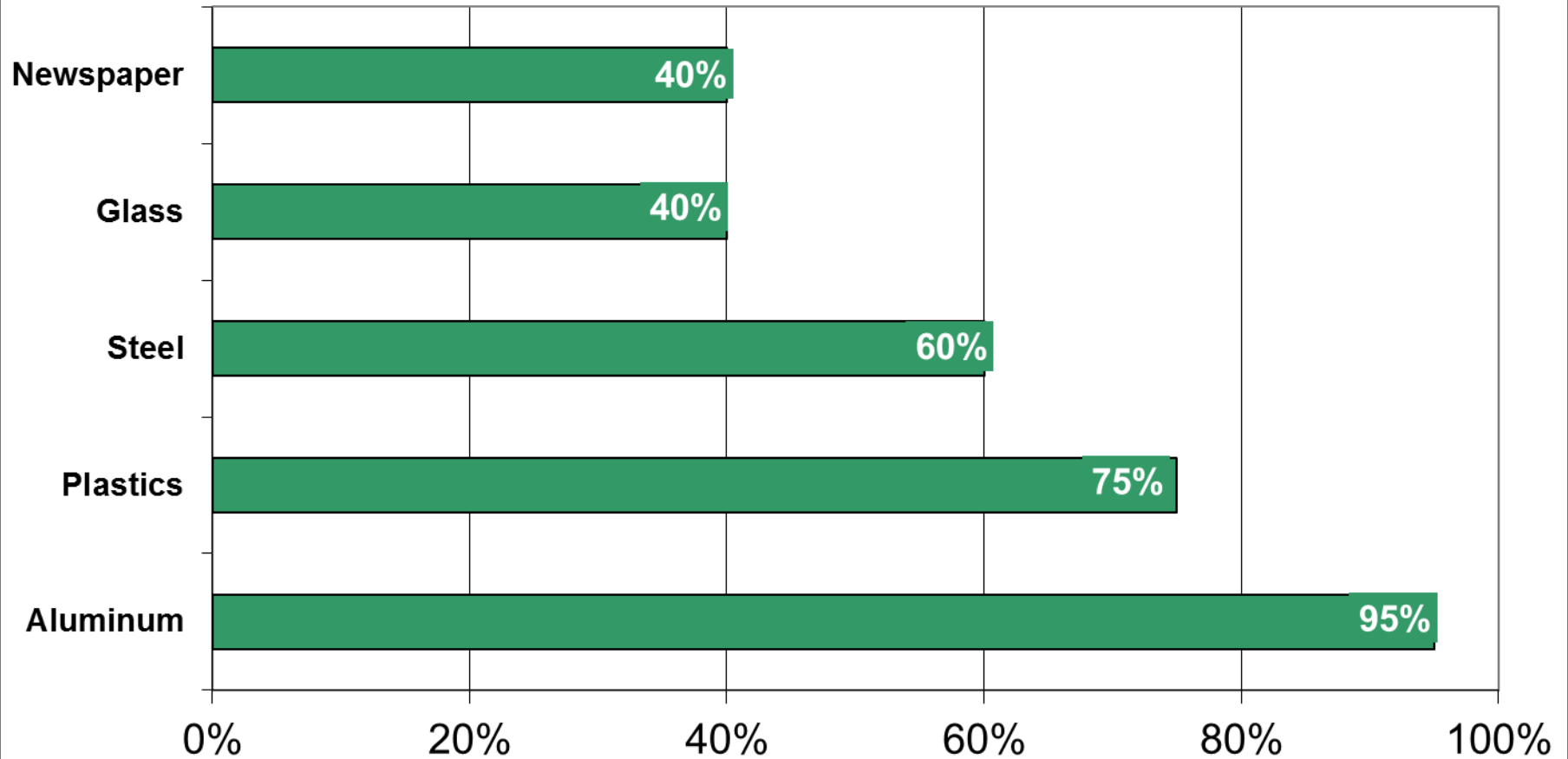
Economic Development

Process	Jobs created (per 10,000 tons per year)
Landfilling	 1
Recycling processing	 10
Recycling-based manufacturing	 25

Fort Collins Landfilled Commodity Analysis, 2013

Categories	%	Annual Tons	\$/ton	Annual Revenues Lost (\$)
1. Reuse	4	5,600	\$400	2,240,000
2. Textiles	6	8,300	\$80	664,000
3. Polymers	14	19,500	\$100	1,950,000
4. Metals	4	5,600	\$80	448,000
5. Glass	2	2,800	\$20	556,000
6. Paper	25	34,800	\$20	696,000
7. Putrescibles	14	19,500	\$7	136,500
8. Plant Debris	16	22,200	\$7	155,400
9. Wood	5	7,000	\$8	56,000
10. Soils	3	4,200	\$7	29,400
11. Ceramics	6	8,300	\$4	33,200
12. Chemicals	>1	1,400	\$1	1,400
	100	139,100		\$6,465,900

Percentage of Energy Saved by Recycling Compared with Raw Materials Usage



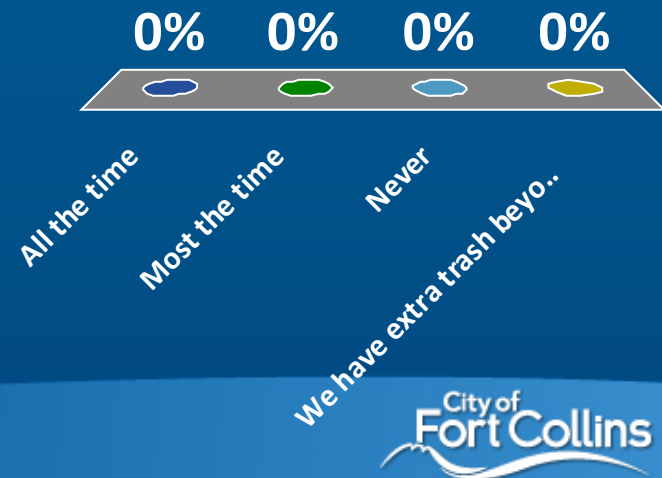
Save \$ and recycle

- Affects all single family homes that subscribe to trash service
- Recycling + trash service bundled
- Fee based on volume of trash can
- Must offer recycling cart (no ongoing fee)
- No base rates or surcharges
- Includes HOAs
- Update to this ordinance in progress 2015



My family's trash can is 2/3 full or less when it's serviced

- A. All the time
- B. Most the time
- C. Never
- D. We have extra trash beyond what fits in our cart



Pay-as-you-Throw Example:

(Includes recycling service)



One Unit
(32-gallon container)
= \$10



Second Unit
(64 gallon container)
= \$20

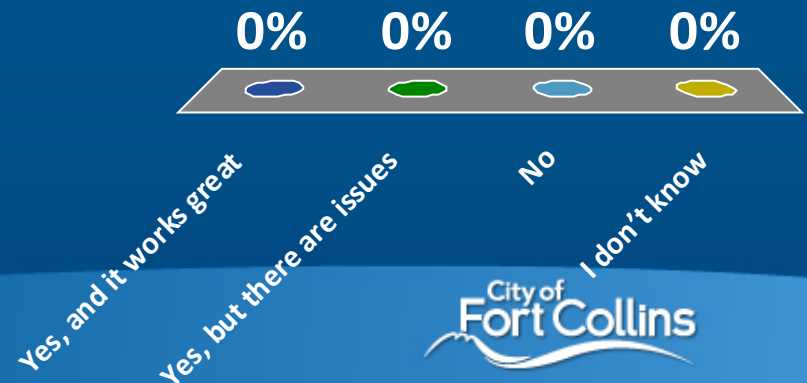


Third Unit
(96 gallon container)
= \$30

*****rates for illustration only; actual rates determined by hauler***

Does your workplace recycle?

- A. Yes, and it works great
- B. Yes, but there are issues
- C. No
- D. I don't know



Multi-Family & Commercial

- Not currently covered by PAYT ordinance
- WRAP
 - Rebates for new recycling or compost programs
 - On-site assessments
 - Educational assistance
 - Referral incentives



Which materials are illegal to landfill in Fort Collins (select all that apply)

- Electronics
- Cardboard
- Plastic bags
- Anything recyclable
- I don't know

Which materials are illegal to landfill in Fort Collins (select all that apply)

- A. Electronics
- B. Cardboard
- C. Plastic bags
- D. Anything recyclable
- E. I don't know

Electronics

Cardboard

Plastic bags

Anything recyclable

I don't know

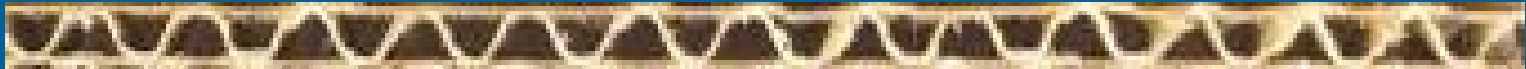
Cardboard Ordinance

- Bans the landfill disposal of cardboard
- Applies to all sectors
- Effective March 15, 2013
- One of primary goals: GHG reduction



What is Cardboard?

- Typically used in packaging and moving boxes
- Has a “wavy” layer – corrugation



What is NOT covered by ordinance?

- Waxed cardboard
- Food-coated or excessively dirty cardboard
- Paperboard, paper, and other recyclables
 - Such as cereal boxes, shoe boxes
 - Recyclable, just not covered under ordinance



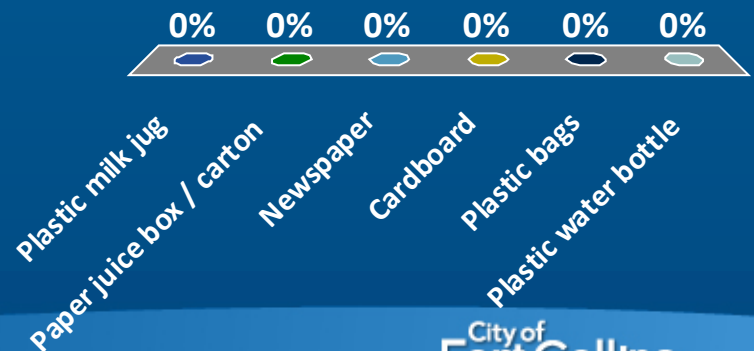
How to comply?

- Can recycle or reuse cardboard
- Can recycle cardboard by itself or mixed with other recyclables



Which of these items should NOT go in your curbside recycling bin?

- A. Plastic milk jug
- B. Paper juice box / carton
- C. Newspaper
- D. Cardboard
- E. Plastic bags
- F. Plastic water bottle





RECYCLE

METAL CANS & GLASS



PLASTIC BOTTLES, TUBS, JUGS & JARS



CONTAINERS & CARTONS



NO THANKS!



PAPER & CARDBOARD



Further guidelines details

- Shredded paper can be taken to recycle drop-off at Riverside and Prospect and recycled in “office paper” bin
- Plastic bags can be recycled at local grocery stores, Target, Walmart etc.



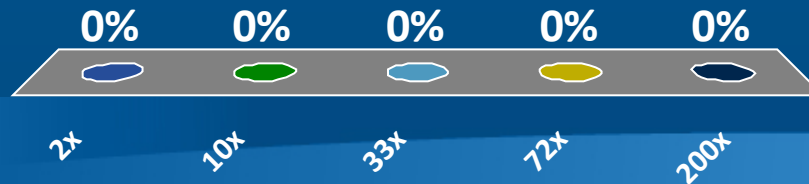
Composting

- Prevents greenhouse gas emissions
- Makes beneficial soil amendment
 - Use less water on landscape
 - Use less fertilizer



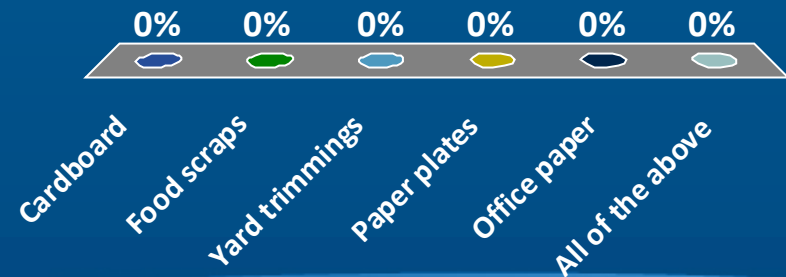
Over 20 years, methane is how much more potent at trapping heat than carbon dioxide?

- A. 2x
- B. 10x
- C. 33x
- D. 72x
- E. 200x



Which of the following generate methane if landfilled?

- A. Cardboard
- B. Food scraps
- C. Yard trimmings
- D. Paper plates
- E. Office paper
- F. All of the above



Learn more about composting

- May 6: The Art and Science of Composting
- fcgov.com/recycle
- Compost: yard trimmings, food scraps
- Can compost in back yard or have it collected to be composted elsewhere



Tips to remember

- 1) Recycle right – follow the guidelines
- 2) Order a smaller trash cart & a larger recycling cart
- 3) Start backyard composting or get curbside yard waste collection



Thank you!

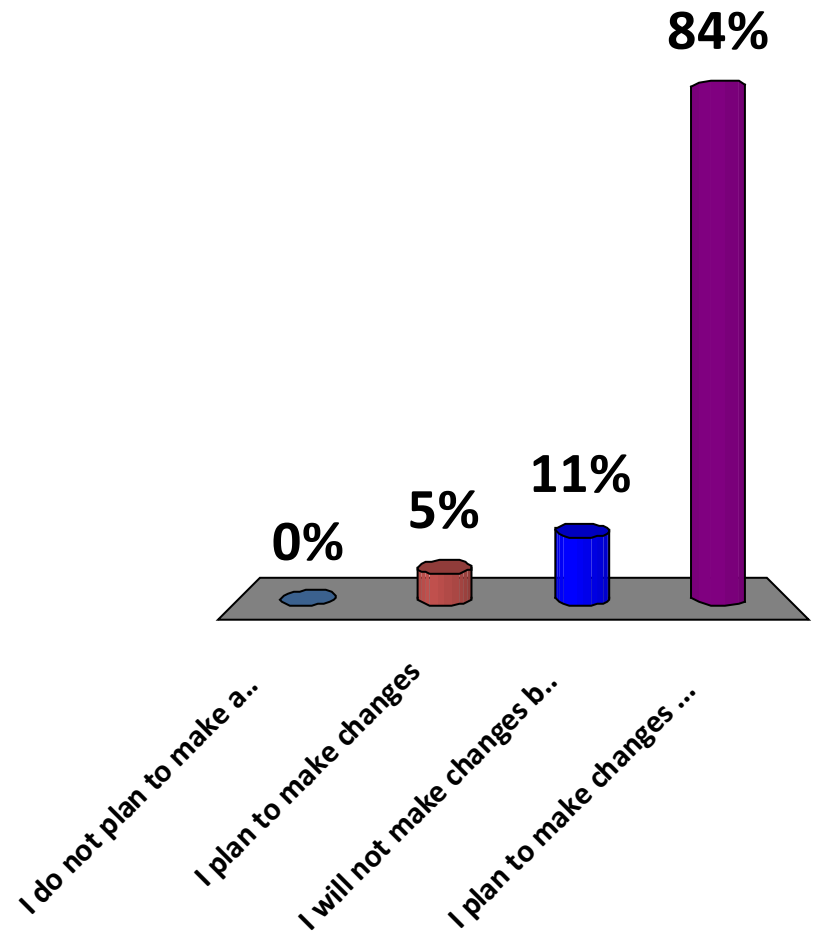


Caroline Mitchell
970-221-6288
cmitchell@fcgov.com

fcgov.com/recycle

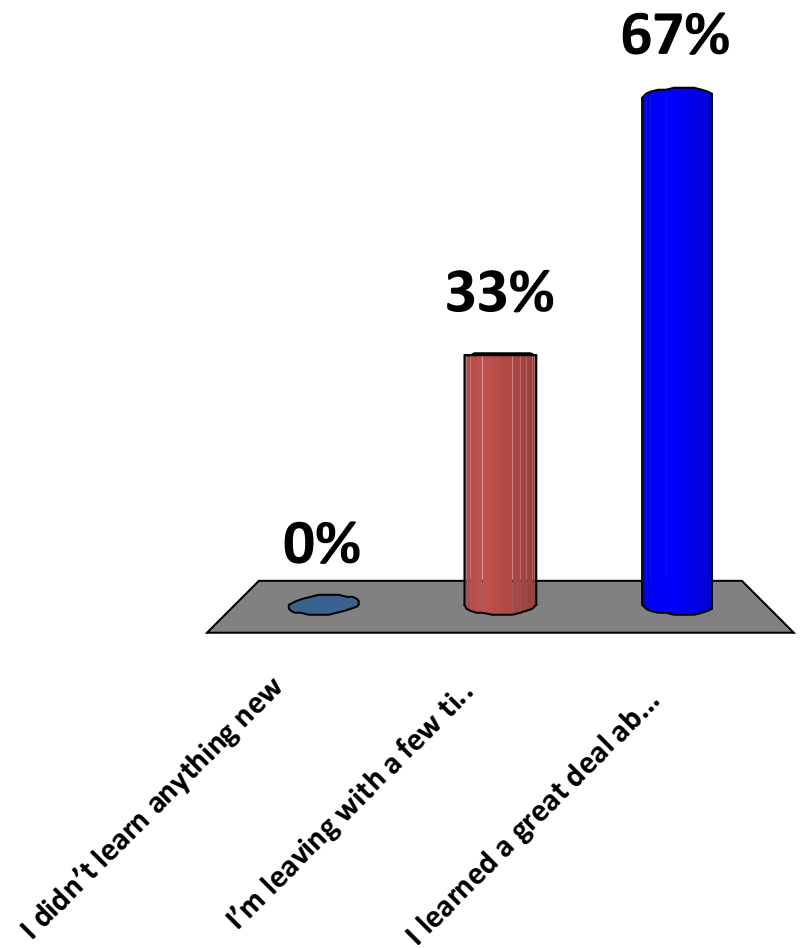
What is your intention to make changes or share information from the presentations?

- A. I do not plan to make any changes
- B. I plan to make changes
- C. I will not make changes but will share what I learned
- D. I plan to make changes and share what I learned



How much did you learn from the presentations?

- A. I didn't learn anything new
- B. I'm leaving with a few tips and tools
- C. I learned a great deal about the topic



PowerPoint slides available at
www.fcgov.com/rep

2015 REPS Programs

Climate Protection: Every Action Counts

March 4, Prairie Sage Rooms 1 & 2

\$5 Million and Change

March 11, Prairie Sage Rooms 1 & 2

Be Air Aware

March 25, Twinberry Auditorium

Go Solar

April 1, Twinberry Auditorium

Wildscaping: Beyond the Basics

April 8, Prairie Sage Rooms 1 & 2

A Cooler Future: Easy Like Water

April 15, Twinberry Auditorium

Unwatered Landscapes and Crevice Gardening

April 22, Twinberry Auditorium

The Art and Science of Composting

May 6, Prairie Sage Rooms 1 & 2

The Year in the Life of a Dry Garden

May 13, Twinberry Auditorium

Your Home Energy Roadmap

May 20, Prairie Sage Rooms 1 & 2

Upcoming Programs



\$5 Million and Change **March 11, Prairie Sage Rooms** **1 & 2**

The City is competing in a nationwide energy efficiency challenge. Learn how to reduce energy use and share your ideas on how the community could use the \$5 million prize.