

## Commercial Sector – Educational Session

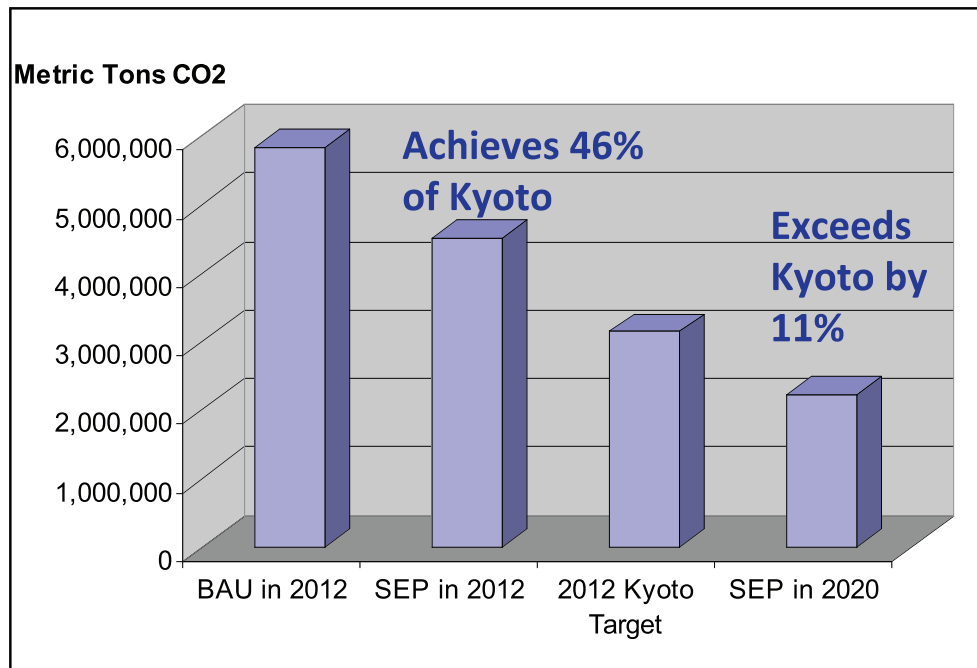
# Saving Money, Saving Energy

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BGBG 3<sup>rd</sup> Annual Conference  
April 26, 2010



# Sustainable Energy Plan

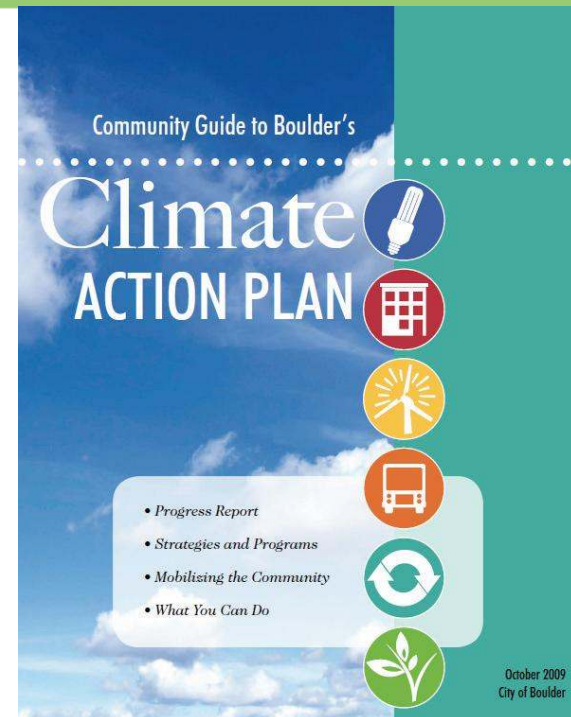


- Adopted by all of the communities of Boulder County (except Erie)
- Contains 20 Key Strategies: commercial, residential, and transportation
- Reduces emissions 40% below 2005 levels by 2020
- **Saves \$445 million annually starting in 2020**



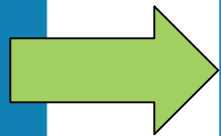
# City of Boulder's efforts to reduce greenhouse gases (GHGs) in the Commercial Building Sector

-  Challenge businesses to participate
-  Educate and assist businesses and contractors
-  Lead by example
  - Provide businesses with individualized support
  - Assist commercial property owners
  - Support Trade Alley Partnerships



# New CAP Targets

Reduce Use			
	Progress indicator (per year)	2010 Budget CAP funds (% of annual budget)	Greenhouse Gas Reduction (tons CO <sub>2</sub> e) in 2010
Residential	3,300 households	\$593,000 (37%)	132,000 (32% of goal)
Commercial	1,000 businesses	\$889,000 (55%)	137,000 (33% of goal)

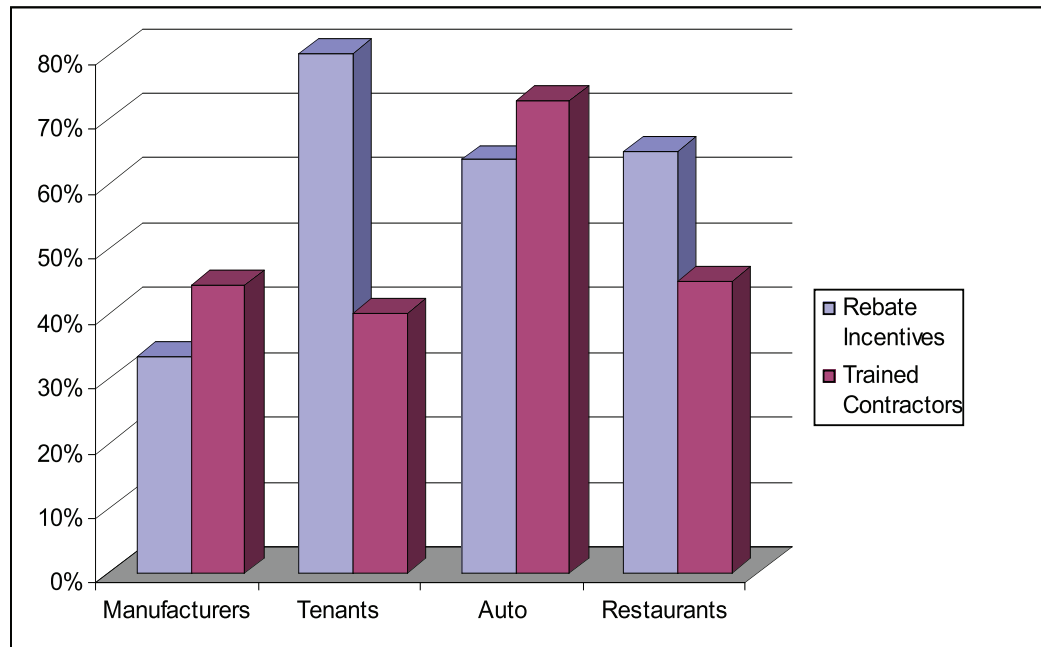


ClimateSmart

EnergySmart

# PACE Experience: Recent Survey

Rebates and Trained Contractors: Very Helpful • 100 businesses surveyed Dec. 2009



- Segmented key sectors and services

- Between 90-100% said rebate incentives and access to trained contractors “Helpful”

- Most said “very helpful”



## PACE Experience: Longmont

### EnergySmart

PACE provided implementation assistance to businesses in downtown Main Street participating in the EnergySmart, Matching Grant program in 2009 and 2010.

- \$60,000 available each year on limited time basis
- Up to \$5,000/business, audit required
- Since August 2009:
  - 30 audits
  - 17 businesses implementing projects



## PACE Experience: Longmont (continued)

### EnergySmart

By the numbers for the 17 businesses implementing projects:

- Estimated Project Costs: \$147,000
- Annual Utility Savings: \$27,000
- PRPA/Xcel Rebates: \$65,000
- Cost Less Rebates: \$83,000
- Matching Grant: \$37,000



# Business Programs

- PACE – recognition & certification for implementing sustainable business practices that lower impacts
- Energy assessment technical assistance
- 10 for Change – reducing energy use by 10%
- Climate Leaders – Boulder Chamber, success stories of business leaders





# EnergySmart @ Work



ClimateSmart



EnergySmart

## Access to information:

### Energy “Sweeps” –

- Partner with local businesses to share no-cost and low-cost energy efficiency strategies.
- Meet one-on-one with energy experts and offer free energy saving products, tips, and case studies.
- Evaluate if the business is a candidate for tune-ups, etc.
- Create awareness about other business networks.



## Access to services:

**Tune-ups** - pilot three types of tune-ups:

- HVAC
- refrigeration systems
- compressed air systems



## Access to services & financing:

### Assessments and equipment upgrades –

- Leverage utility rebates for energy assessments and efficiency upgrades.
- Businesses that complete an assessment will receive technical assistance.
- Ready to move forward with replacement:
  - Identify contractors
  - Confirm project specs meet program & qualify for incentives
  - Verify project completion, collect data and provide M & V



# ClimateSmart Loan Program

## EnergySmart is a ClimateSmart Loan

The commercial sector loan program is now accepting applications. Loan program awardees will automatically receive the maximum EnergySmart rebate available.

- Loan applications being accepted through July 12
- EnergySmart incentives will reduce financing amount
- \$3,000 to \$210,000 available financing
- Great for medium-size businesses
- Lots of eligible measures, some beyond utility offerings

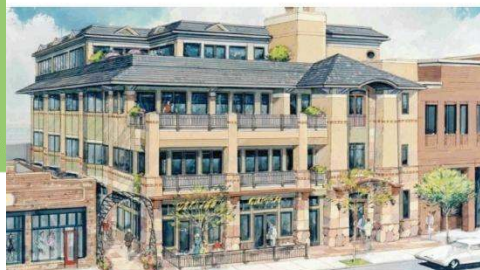


# Example Rebate Structure

Example:		Incentive Amount (up 70% of total project costs or up to)	
		Single Measure	Multiple Measures
Building Size (square feet)	≤ 5,000 sq. ft.	\$2,000	\$3,000
	≥5,000 - 25,000 sq. ft.	\$4,000	\$5,000
	> 25,000 sq. ft.	\$7,000	\$10,000



# 1011 Walnut Street | Boulder, CO



Powered by:  
**EnergySmart,  
ClimateSmart Loan Program (proposed)**

## Lighting Upgrade & Lighting Controls (Planned):

- Replace incandescent fixtures with CFL's
- Replace 2-foot 20W T12's, magnetic ballast with 17W T8's
- Replace 4-foot 32W T8's with 28W T8's
- Occupancy Sensors

Project Cost: .....	\$2,447
Xcel Energy Rebates: .....	\$1,239
Project Cost After Rebates:.....	\$1,208
Annual Energy Cost Savings (At current energy prices):...	\$1,781
Simple Payback (Including incentives, at current energy prices): .....	0.7 years
Lbs CO2 savings per year: .....	50,568



Learn more at:  
[www.energysmartatwork.com](http://www.energysmartatwork.com)

## RTU Upgrade (Planned):

- Replace 7 aging RTU's with 12 EER and 12.2 EER units (9.5-10.1 EER standard)

Project Cost (Incremental - Increased cost of efficient over standard equipment): .....	\$20,285
Xcel Energy Rebates: .....	\$3,599
Project Cost After Rebates:.....	\$16,686
Annual Energy Cost Savings (At current energy prices):...	\$3,781
Simple Payback (including incentives, and at current energy prices): .....	4.4 years
Lbs CO2 savings per year: .....	33,430

## Additional Cooling Load Reduction Measures:

- White, extra-durable "cool" roof with added insulation
- Rolling interior sunshades on windows

# Elevations Credit Union, Wilderness Peaks Support Center | Boulder, CO



Powered by:

## 10 for Change, EnergySmart

A good candidate for Xcel Energy Recommissioning (Up to 75% of study cost, up to \$25,000, plus \$400/kW or \$0.08/Kwh, whichever is higher, and \$7/dth, up to 60% of measure cost for implemented measures)

### Retrocommissioning (Completed 2005):

- All HVAC components checked for proper functioning

Project Cost: ..... \$15,000

Project Cost After Rebates:..... \$15,000

Annual Energy Cost Savings (At current energy prices):... \$7,139

Simple Payback

(Including incentives, at current energy prices): ..... 2.1 years

Lbs CO2 savings per year: ..... 165,106

### Lighting Upgrade and Controls (Planned):

- Replace PAR lobby lighting with CFL
- Install occupancy and daylight sensors

Project Cost: ..... \$11,580

Xcel Energy Rebate: ..... \$3,040

Project Cost After Rebates:..... \$8,540

Annual Energy Cost Savings (At current energy prices):... \$5,017

Simple Payback

(including incentives, and at current energy prices): ..... 1.7 years

Lbs CO2 savings per year: ..... 108,968



Learn more at:  
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# Budget Home Center | Longmont, CO



Powered by:  
**PACE EnergySmart  
Longmont Commercial Efficiency  
Matching Grant Program**

## Lighting Upgrade (Completed 2009):

- T12 to T8 upgrade
- Metal halide to high-bay T8 upgrade

Project Cost: .....	\$65,299
Longmont Commercial Efficiency Matching Grant Program: and Platte River Rebates .....	\$40,998
Project Cost After Rebates:.....	\$24,301
Annual Energy Cost Savings (At current energy prices):...	\$15,981
Simple Payback (Including incentives, at current energy prices): .....	1.5 years
Lbs CO2 savings per year: .....	506,316



Learn more at:  
[www.energysmartatwork.com](http://www.energysmartatwork.com)

# Longmont YMCA | Longmont, CO



Powered by:  
**PACE EnergySmart**  
**Longmont Commercial Efficiency**  
**Matching Grant Program**

## Lighting Retrofit (Completed 2009):

- **Metal halide to T8 upgrade**

Project Cost: .....	\$13,937
Platte River Power Authority LightenUP Rebates: .....	\$9,641
and Longmont Matching Grant	
Project Cost After Rebates:.....	\$4,297
Annual Energy Cost Savings (At current energy prices):...	\$2,283
Simple Payback	
(Including incentives, at current energy prices): .....	1.9 years
Lbs CO2 savings per year: .....	265,313



Learn more at:  
[www.energysmartatwork.com](http://www.energysmartatwork.com)

# Boulder Valley Unitarian Universalist Fellowship | Lafayette, CO



**Powered by:**  
**EnergySmart**  
**Xcel Energy Small Business Lighting Program**  
**Xcel Energy Engineering Study Assistance Program**

## Lighting Upgrade:

- Installed Occupancy Sensors
- Replaced incandescent bulbs with CFL's
- Replaced incandescent exit signs with LED exit signs
- Replaced T12 lighting with 32W T8's with electronic ballasts

Project Cost: ..... \$3,302  
Xcel Energy Rebates: ..... \$946  
Project Cost After Rebates:..... \$2,356  
Annual Energy Cost Savings (At current energy prices):... \$532  
Simple Payback  
(Including incentives, at current energy prices): ..... 4.4 years  
Lbs CO2 savings per year: ..... 12,411

## HVAC Assessment and Upgrade, Insulation and Air Sealing (Potential):

- Furnace tuneup
- Air distribution upgrade
- Insulation in attic, air sealing and weatherstripping

Project Cost (Incremental - Increased cost of efficient over standard equipment): ..... \$10,000  
Xcel Energy Custom Rebate (estimated): ..... \$142  
Project Cost After Rebates:..... \$9,858  
Annual Energy Cost Savings (At current energy prices):... \$2,985  
Simple Payback  
(including incentives, and at current energy prices): ..... 3.3 years  
Lbs CO2 savings per year: ..... 2,380



Learn more at:  
[www.energysmartatwork.com](http://www.energysmartatwork.com)

# Blue Mountain Arts | Boulder, CO



**Powered by:**  
**Xcel Energy Lighting Redesign Rebate**

## Lighting Redesign and Upgrade (Completed):

- T12 to T8 delamping
- T12 to T8 upgrade
- Metal halide to T8 upgrade
- Spectrally-enhanced low-wattage lamps
- Occupancy sensors
- LED exit signs

Project Cost: .....	\$144,605
Xcel Energy Rebate, Xcel Energy Lighting Redesign Rebate: .....	\$52,163
Project Cost After Rebates:.....	\$92,442
Annual Energy Cost Savings (At current energy prices):...	\$24,040
Simple Payback (Including incentives, at current energy prices): .....	3.8 years
Lbs CO2 savings per year: .....	333,477

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