

# **Voluntary Carbon Offsets**

July 31, 2008

**Colorado Public Utilities  
Commission**

Commissioners' Information  
Meeting

**Climate Change and Carbon  
Regulation**

# Overview

- **Why offsets?**
- **What is an offset?**
- **Offsets in context**
- **Colorado Carbon Fund**



# Cap and Trade + Offsets

- Capped sectors
- Allowance trades from capped reductions
- Offsets?
- Uncapped sectors
  - Economies (International)
- Cost-containment
- Immediate reductions

## Domestic policy

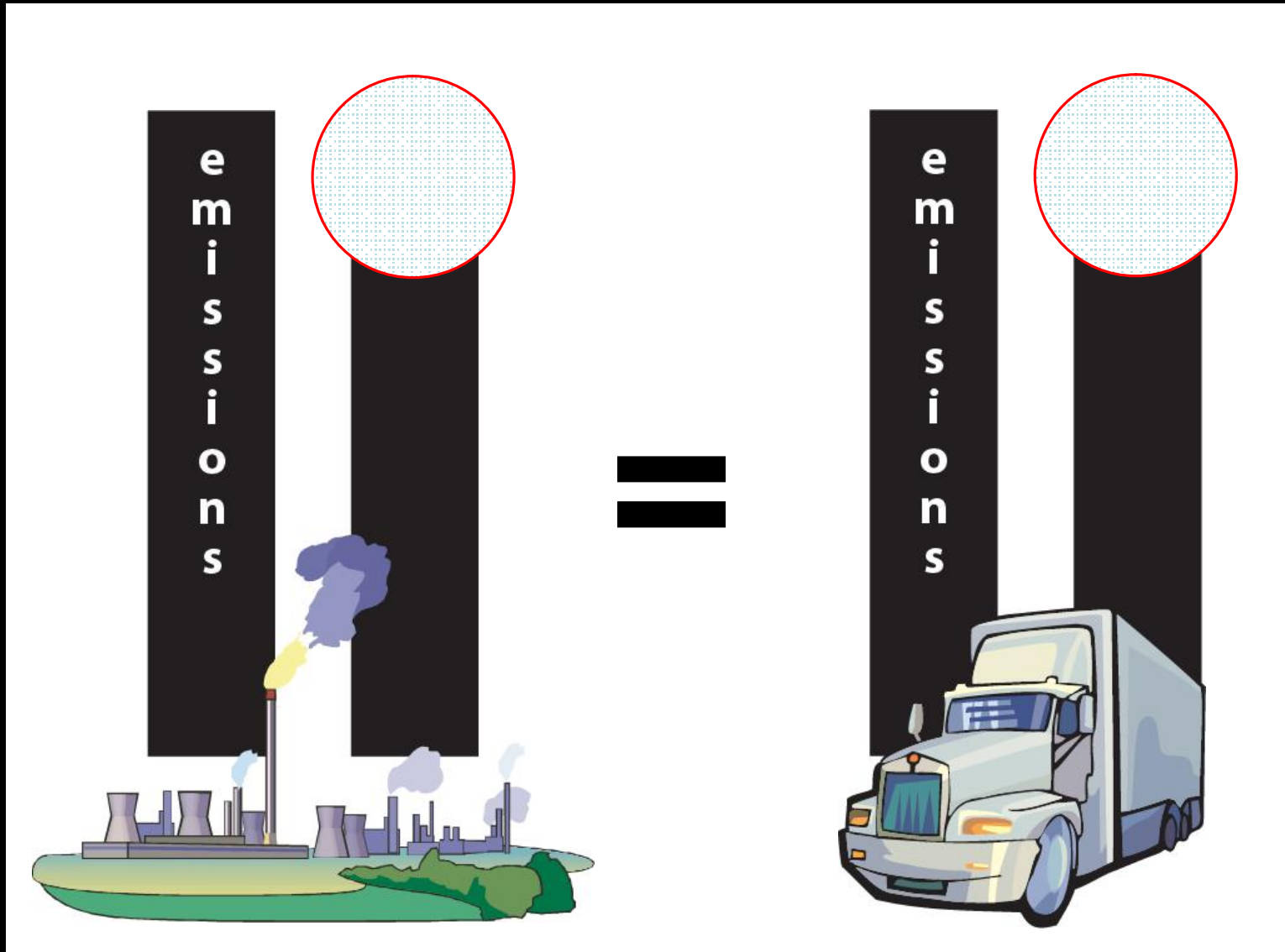
### First RGGI pre-compliance trade brokered

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**The first reported allowance trade involving a power company subject to compliance under the Regional Greenhouse Gas Initiative (RGGI) was brokered in a single trade yesterday at \$8.45 per short ton.**

New York-based Evolution Markets brokered the trade of 50,000 Regional Greenhouse Gas Allowances (RGAs) for physical settlement in December 2009 , said its spokesman Evan Ard.

# Offsets Defined

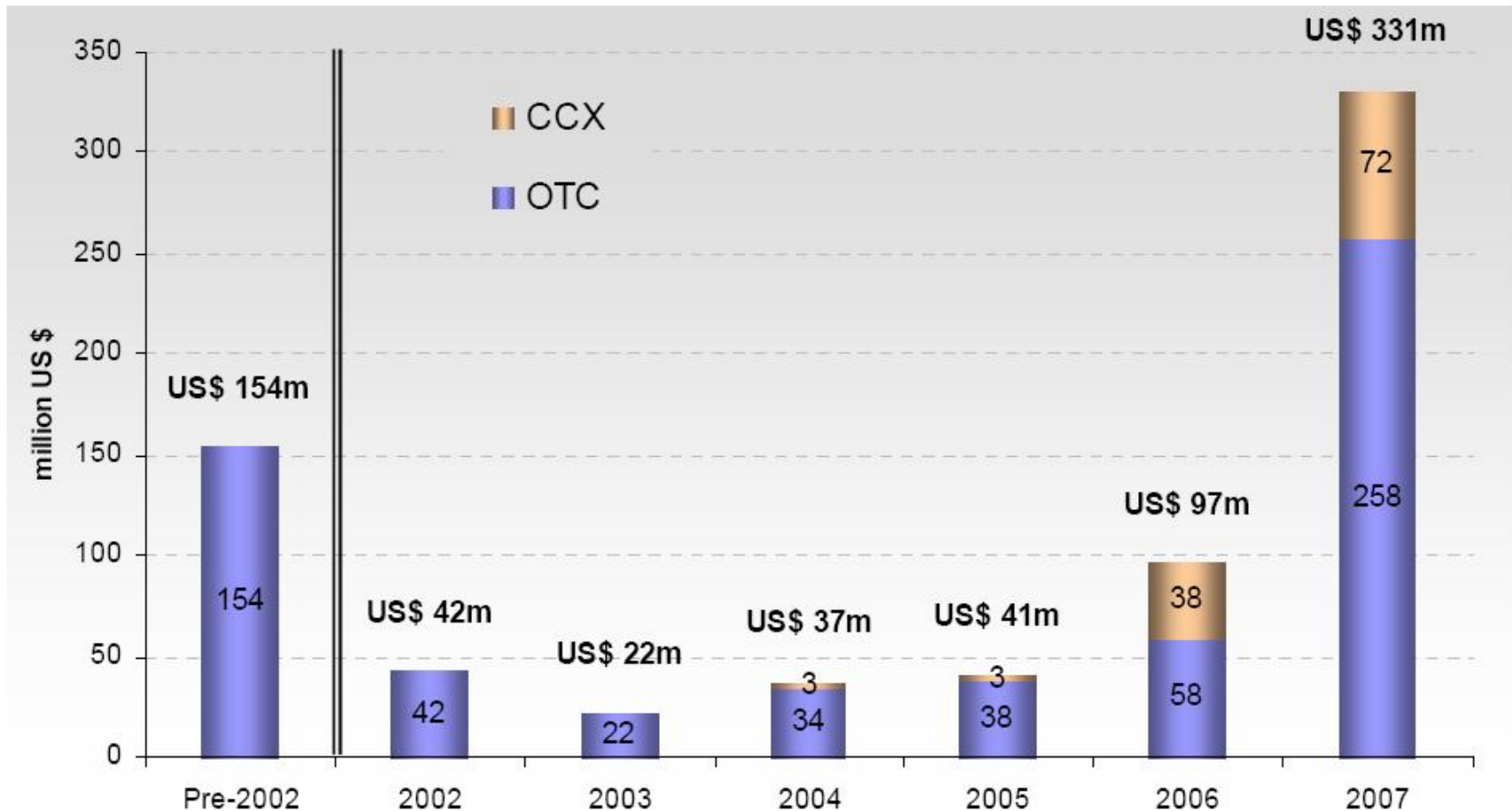


# Voluntary Offsets

- Universal access
- The third option
  - Reduce
  - Invest in energy efficiency
  - Offset
- Voluntary offset market will continue after cap and trade

# Voluntary Market

Transaction Values on the Voluntary Carbon Market <sup>2</sup>



Source: New Carbon Finance, Ecosystem Marketplace

# Key Criteria

- Additionality
- Realistic Baselines
- Accurate Quantification
- Clear Ownership
- Ongoing Monitoring
- Independent Verification
- Certification
- Registration





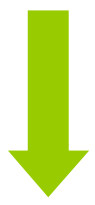
# Additionality

- Without our funding, the project would not be implemented.
- Realistic baseline, project goes beyond business-as-usual
- Environmentally beneficial

Required by regulation?



Yes



No



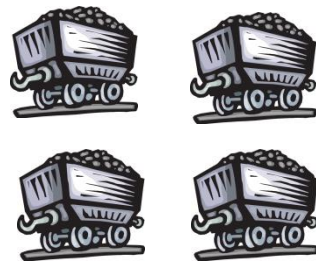
Commonly  
practiced  
process?



Yes



↓  
No



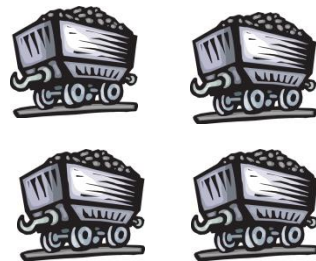
Faces financial,  
technical, or other  
implementation  
barriers?



**No**



**Yes**





# Baselines

- Necessary to quantify GHG reductions
- Represent the “What If” scenario
- Offsets are only as credible as their baselines



# Project Criteria

- Project Methodologies
  - CCAR, CCX, CDM, Gold Standard, RGGI, VCS
  - New or pre-existing?
  - Informs M&V Plan
- Contracting
  - Establish ownership
- Certification

# Tracking Performance

- Annual M&V
- Offset Delivery
- Registration



# Offset Project Types

- Remove
  - Sequestration
- Avoid
  - Direct
  - Indirect





# Sequestration

- Removal
- Land-based

## Offset Considerations

- Baseline establishment
- Permanence
- Additionality
- Leakage



# Direct

- Reducing emissions at their source

## Offset Considerations

- Generally easiest to quantify and monitor
- Clearest ownership



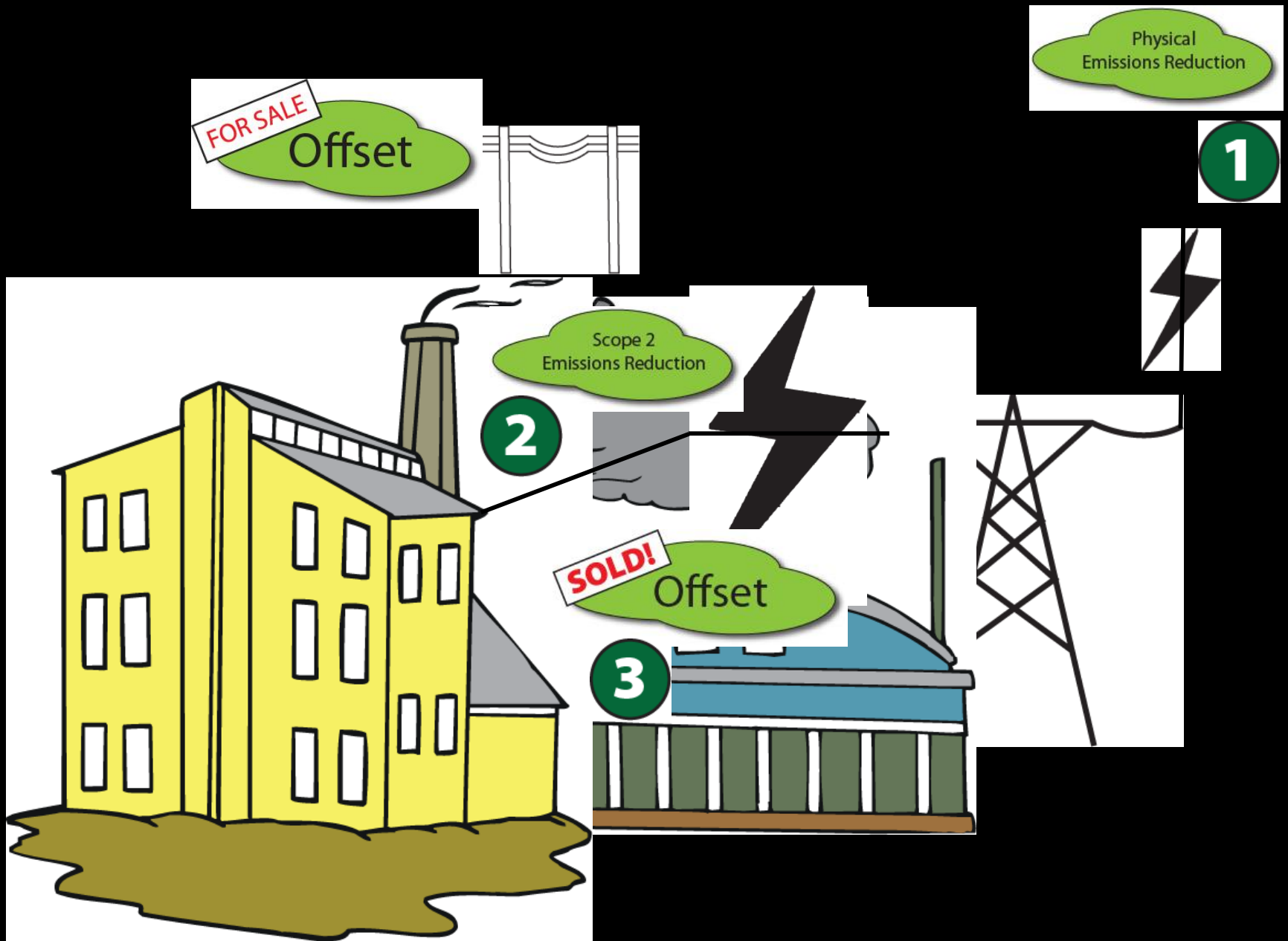
# Indirect

- Occur offsite

## Offset Considerations

- Ownership uncertainties
- Double counting
- Quantification

# Who Owns an Indirect Offset?



# Offsets and RECs

## Renewable Energy Project

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graph TD; A[Renewable Energy Project] --> B[Offset Criteria]; A --> C[Renewable Energy Credit Criteria]; B --> D[GHG Offset]; C --> E[Renewable Energy Credit]
```

### Offset Criteria

- 1 ton of CO<sub>2</sub>e
- Demonstrated Additionality
- CO<sub>2</sub> benefit explicitly included/quantified
- Demonstrated Ownership
- Registered and verified
- Ongoing Monitoring and Verification

### GHG Offset

### Renewable Energy Credit Criteria

- 1 MWh of renewable generation
- Sourced from a qualified renewable resource (e.g. no nuclear)
- GHG benefit may or may not be included (depending on legal definition-varies from state to state)
- Build Date After 1997
- Not Mandated by Law

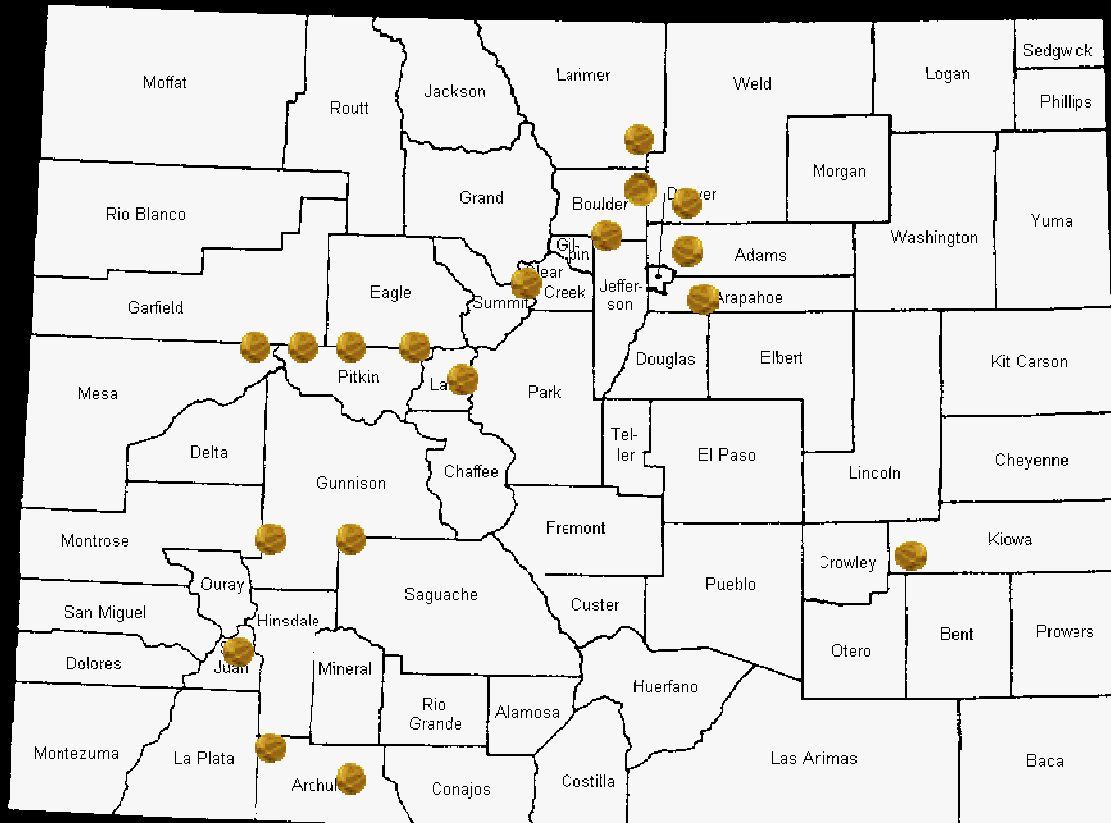
### Renewable Energy Credit

# Colorado Carbon Fund

This new voluntary carbon offset program is being established to advance the following objectives:

- Develop a funding source for community-based clean energy and climate mitigation projects in Colorado
- Provide high quality, credible offsets for individuals, businesses and government agencies interested in mitigating their carbon footprint
- Support Colorado's climate change mitigation objectives

# Colorado Communities with Local Energy or Climate Goals



Widespread support for local renewable energy and energy efficiency projects.

CCF partners:

**Aspen  
Boulder  
Denver  
Durango  
Fort Collins  
Steamboat  
Telluride  
Vail**



*Governor's*  
**Energy Office**

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[www.ColoradoCarbonFund.org](http://www.ColoradoCarbonFund.org)