



**Boulder City Council
Energy & Climate Study Session
May 22, 2012
www.Boulderenergyfuture.com**

Agenda



Part 1- Analysis of CAP programs to date

Part 2- CAP framework and new climate action commitment

Part 3- Commercial Energy Efficiency Strategy

Part 4- CAP tax options

Questions for Council:

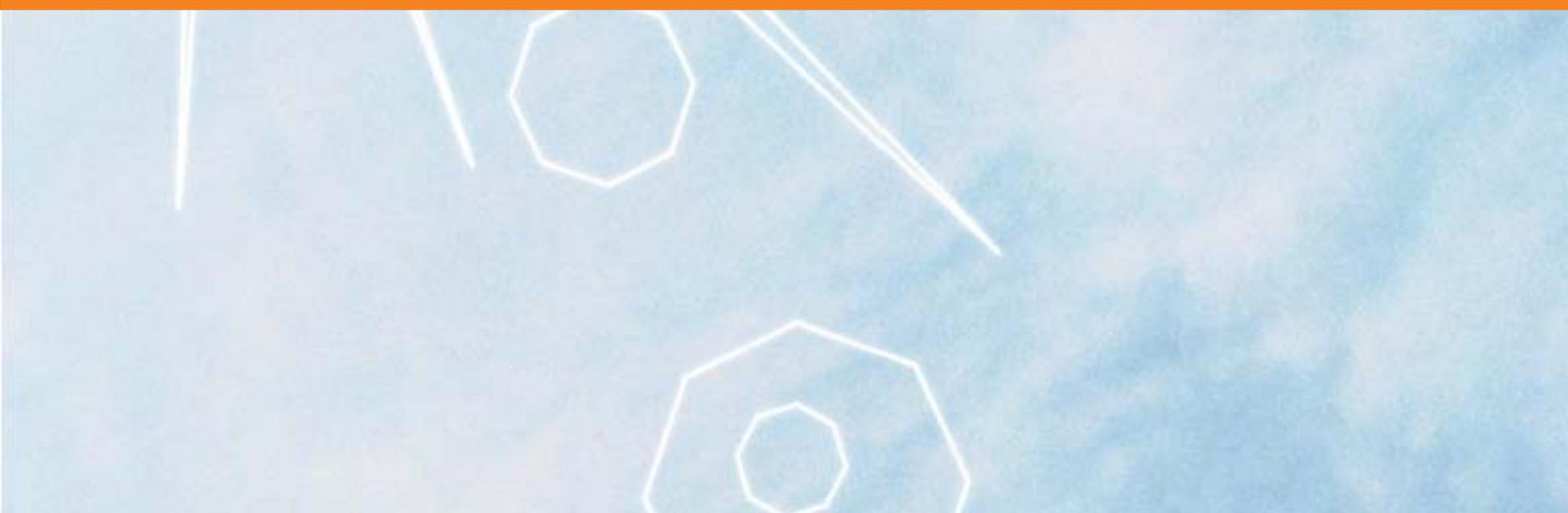


1. *Consultant analysis of CAP programs to date?*
3. *New climate action framework process & schedule, and next steps*
 - a. *Public outreach on new climate action commitment*
 - b. *Establish near-term goals, annual targets, & tracking systems that are integrated into city master plans?*
4. *Proposed three-phased commercial energy efficiency strategy?*
2. *Preferred CAP tax option?*



PART 1

Analysis of CAP programs to date





**ROCKY
MOUNTAIN
INSTITUTE®**

Climate Action Plan Review Presentation

**BOULDER CITY COUNCIL
STUDY SESSION**

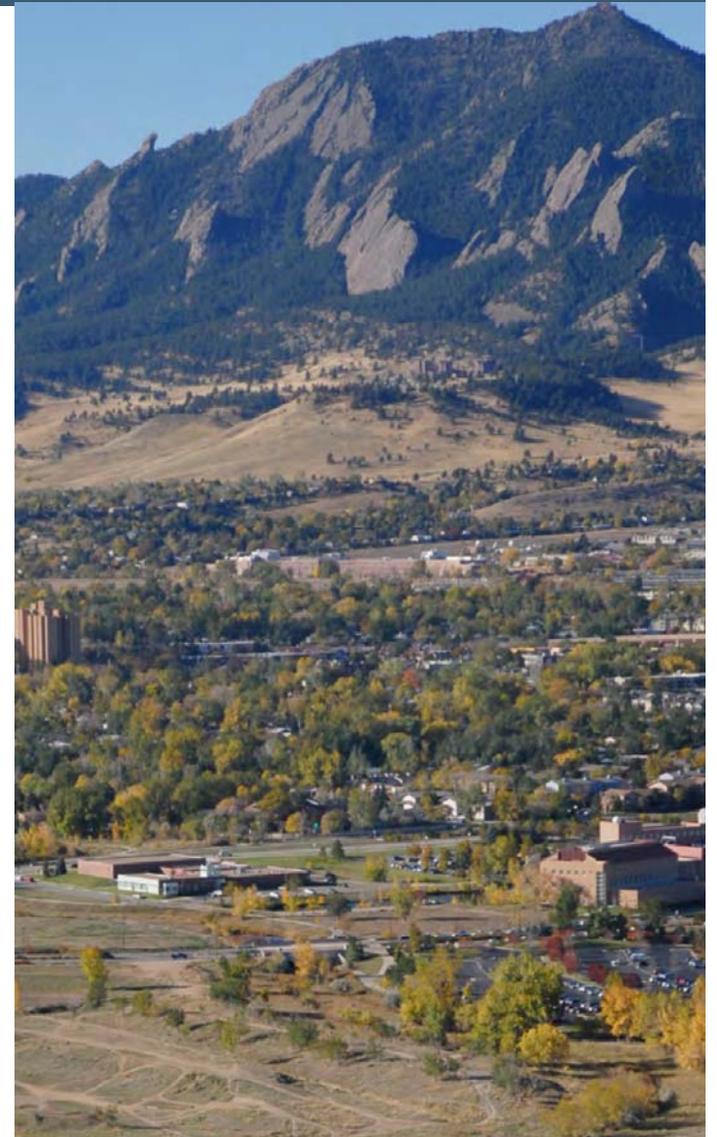
ROBERT 'HUTCH' HUTCHINSON

**ROCKY MOUNTAIN INSTITUTE
MAY 22nd 2012**

REVIEW OF CLIMATE ACTION PLAN EFFECTIVENESS - SCOPE

Backward Looking Review

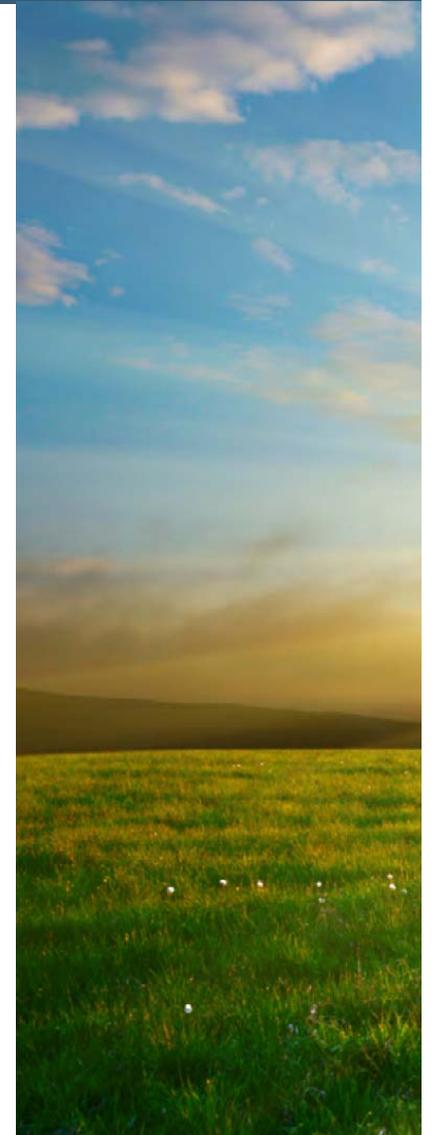
1. Compared programs to selected municipal and utility programs
2. Assessed cost effectiveness of CAP funded programs – current and lifetime
3. Provided preliminary input recommendations for program improvement



REVIEW OF CLIMATE ACTION PLAN EFFECTIVENESS - FINDINGS

Key Findings

- Reductions are significant, but not enough to reach 2012 goal
- Programs similar to selected benchmarks in cost-effectiveness, dependent on stage of development
- City of Boulder effectively leveraged CAP tax funding with additional grants
- Continuing CAP programs will drive significantly larger emissions reductions post startup



CAP PROGRAMS ASSESSED FOR LIFE CYCLE EMISSIONS REDUCTIONS

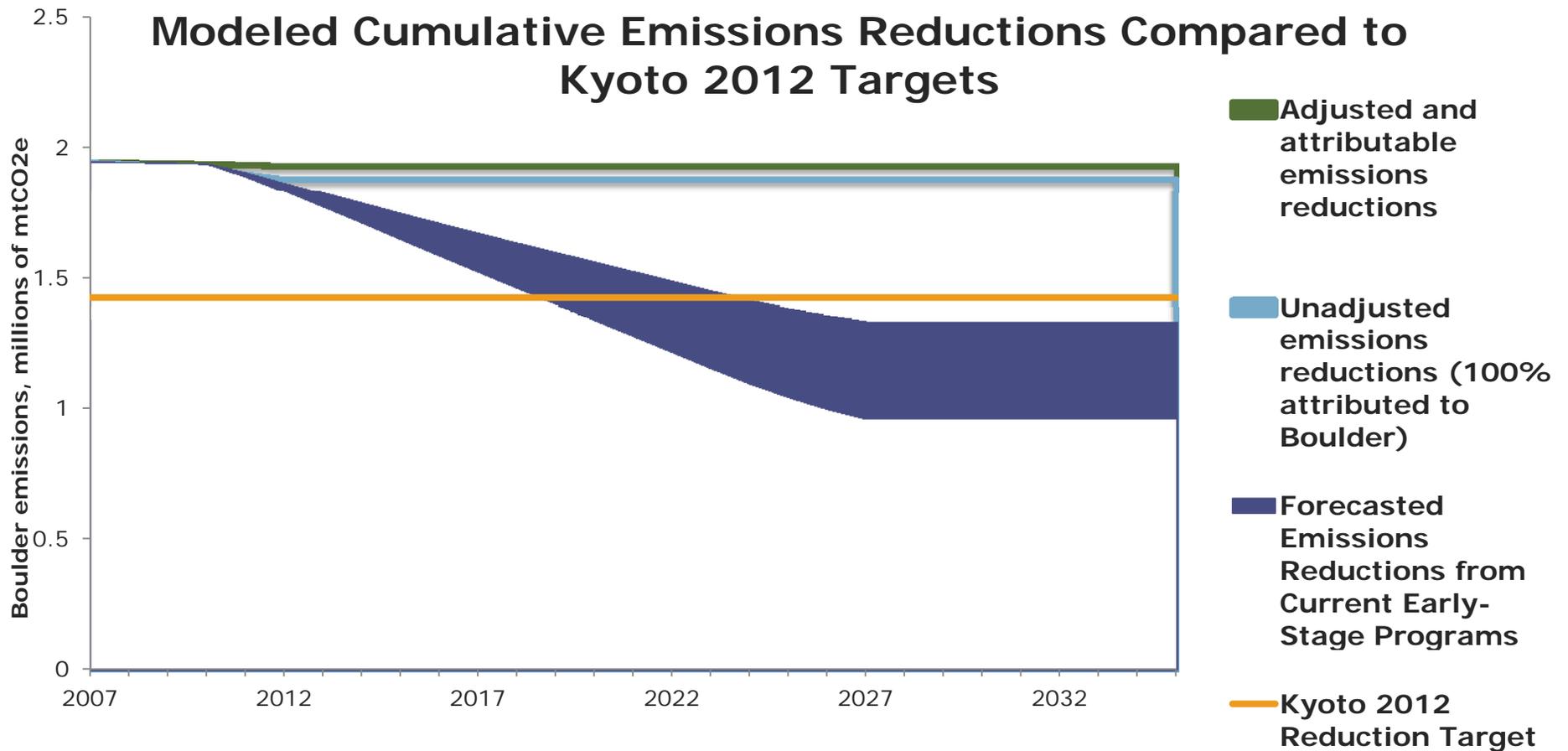
Most of Boulder's implemented emissions reductions are yet to come.

City staff leveraged external funds to increase impact of CAP funding, making a smaller share of emissions directly funded by CAP.



CONTINUING CAP PROGRAMS FOR 6 MORE YEARS YIELDS SAVINGS ON CURRENT EMISSIONS EXCEEDING KYOTO

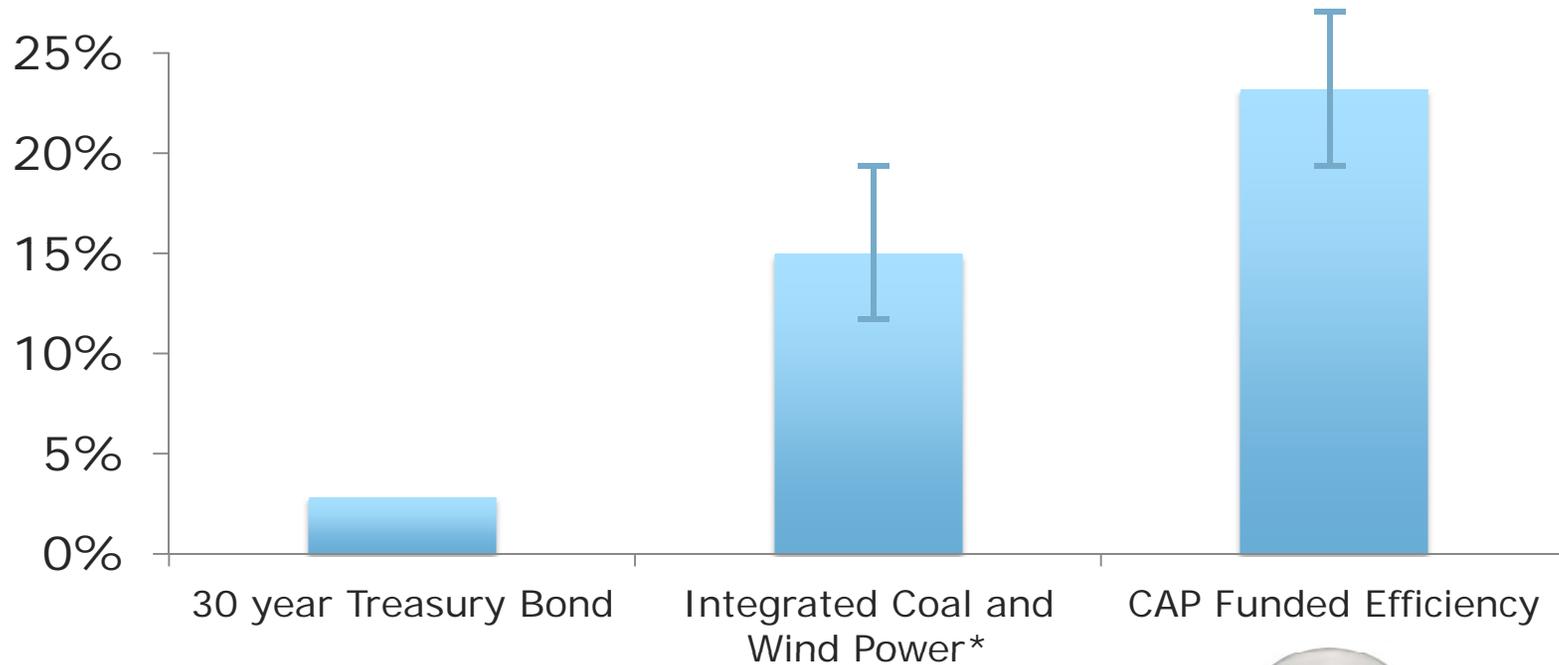
Boulder's programs have created savings (outsized impact due to leveraging of external funds) and are projected to grow if funding continues.



This does not account for growth in underlying emissions

CAP PROGRAMS ARE PROFITABLE FOR BOULDER RESIDENTS

Return on Investment



*Platts Research and Consulting, Boulder CO

ENERGYSMART/SMARTREGS ARE EFFECTIVE

EnergySmart and SmartRegs are:

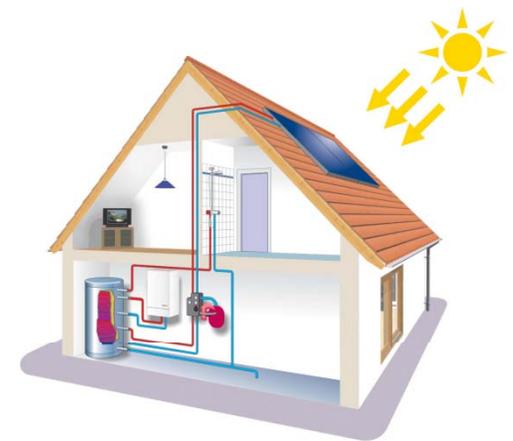
- Early-stage programs with expected increases in future savings totals
- Cost effective when compared to other CAP funded programs
- Comparable. despite immaturity, when compared to other municipal programs
- High leverage – Commercial and Residential EnergySmart were largely funded through grants attained by City staff.



RECOMMENDATION

1. Continue comprehensive demand-side programs (Residential and Commercial EnergySmart and SmartRegs)

- Total impact will increase as savings compound
- Program maturation should improve return on investment
- Continuity of programs will improve awareness and uptake by residents and businesses.



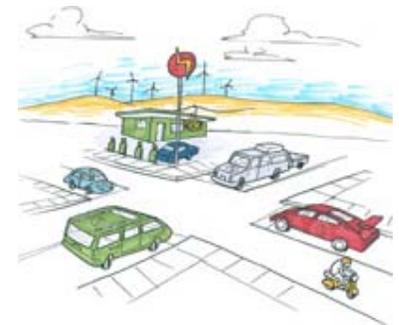
SUGGESTIONS

Additional Recommendations

1. Comprehensive programs should encourage residents and businesses to reach beyond simple and easy savings (to deeper retrofits, industrial electricity programs beyond the utility norm, and “superefficient” homes).
2. Encourage long-term energy thinking and planning for businesses and residents
3. Consider benefits of aggressive efficiency on supply provision and fuel mix

Data Collection Recommendation

1. Centralized CAP results database
2. Clear project quantification and results capture





**ROCKY
MOUNTAIN
INSTITUTE®**

Robert 'Hutch' Hutchinson

**Rocky Mountain Institute
hutch@rmi.org**

Also:

Roy Torbert
Ellen Franconi
Kendra Tupper
Mathias Bell

Questions for Council



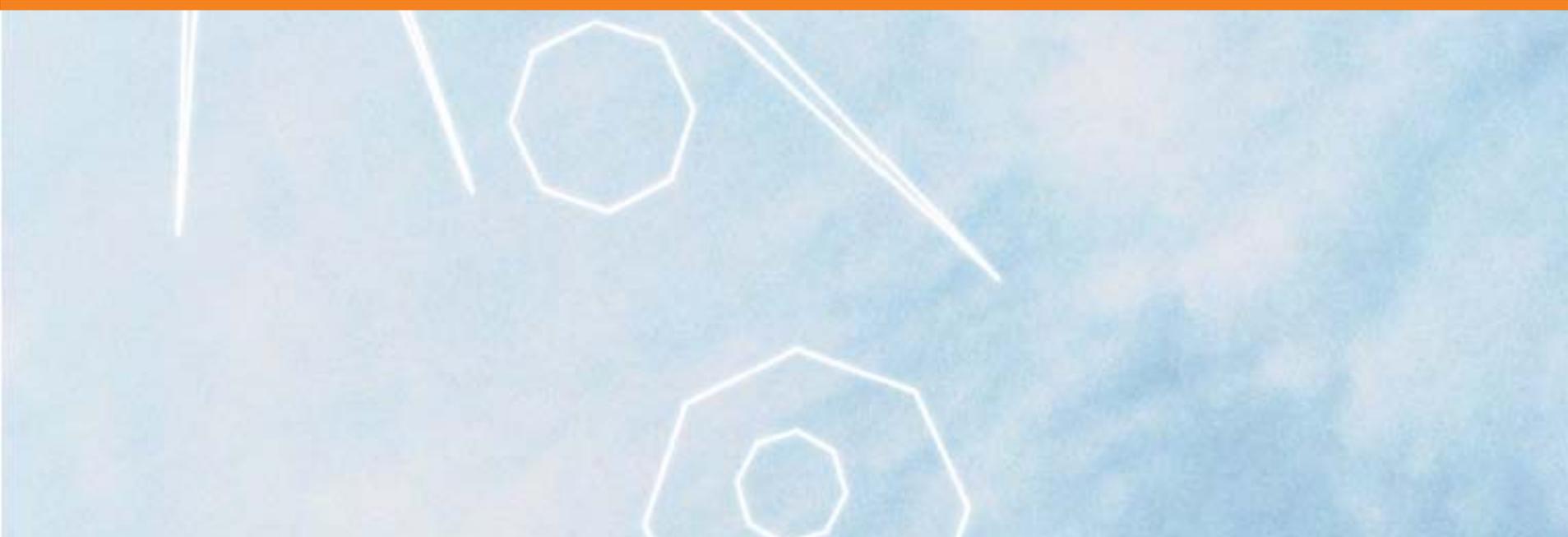
1. *Questions or feedback about the RMI analysis and key findings?*

Is it appropriate to use the findings as a basis for refining existing CAP programs and working with the community and consultants to develop the Phase 1 of the Energy Action Plan?



PART 2

Climate Action Framework, Goals and Targets



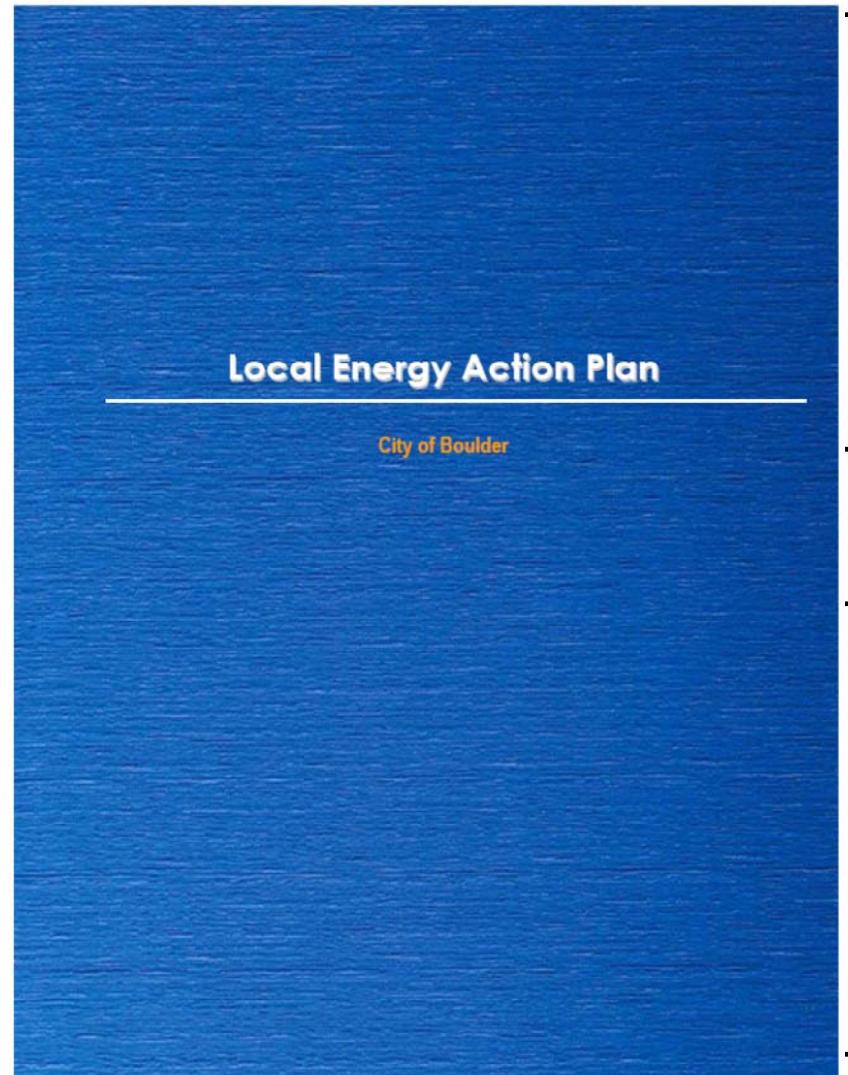
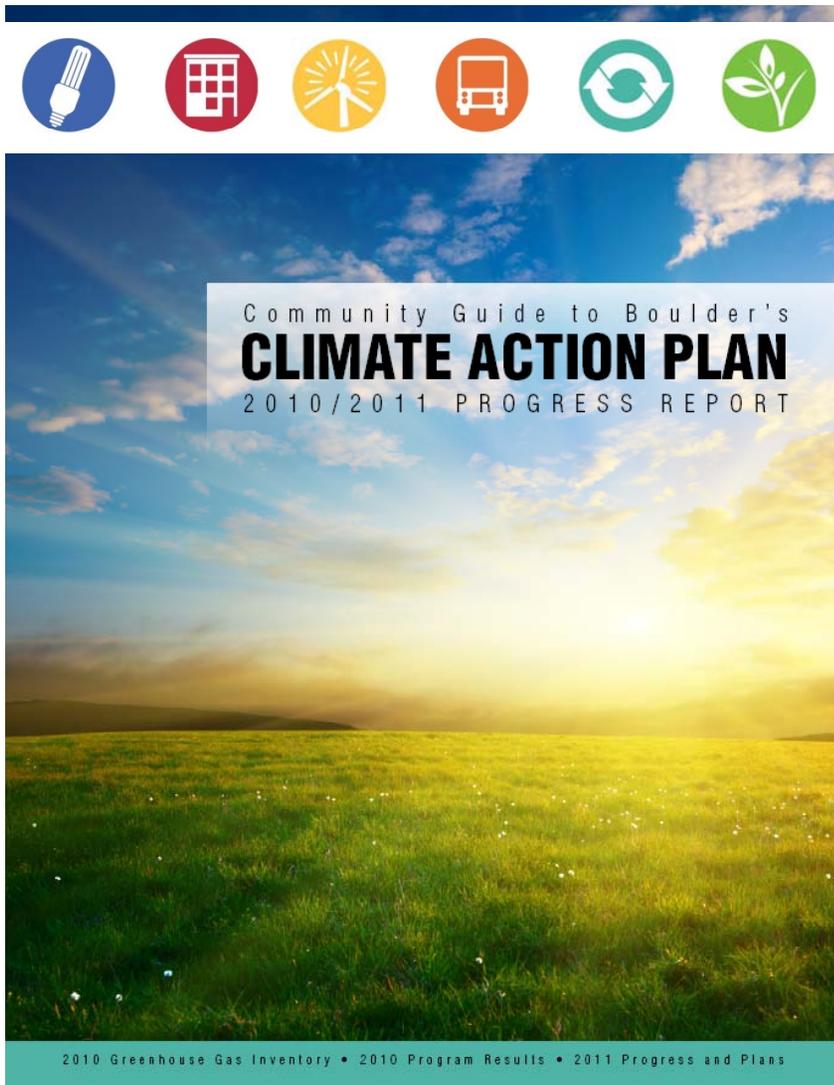
Part 2- Climate Action Framework



The “next generation” of climate action built on...

- A new climate action “commitment”
- A community effort centered on engagement
- A living and dynamic process
- Tracking and reporting progress
- 5-year goals with 1-year targets
- Integration into existing city master plans and new Energy Action Plan

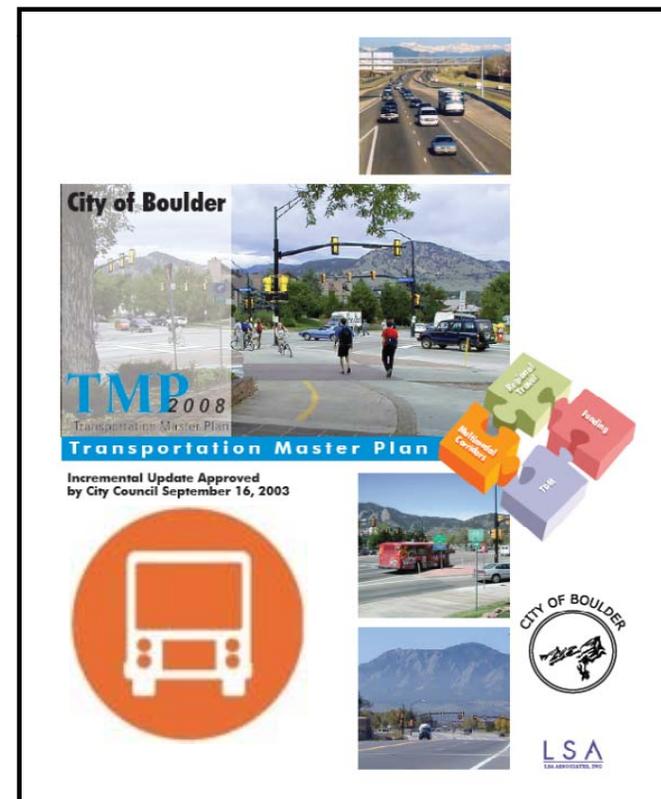
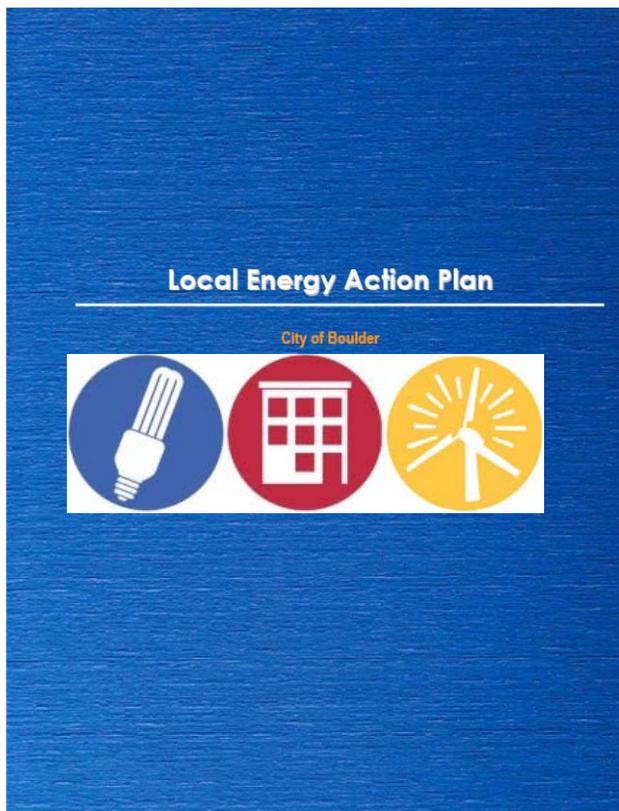
Part 2- Climate Action Framework



Part 2- Climate Action Framework



97% of community emissions



Part 2- Goals & Targets



5-year goals

- Electricity
- Natural Gas
- Transportation

Annual targets (examples)

- Number of participants
- Installed watts of PV
- electric vehicles/charging locations

Part 2- Tracking and Reporting



Tracking, Reporting & Measurement System



Part 2- New Climate Commitment



Beyond Kyoto... "What's Next"?

- The best available science indicates we must reach neutrality before 2050
- Addressing climate change is imperative
- A community-wide commitment

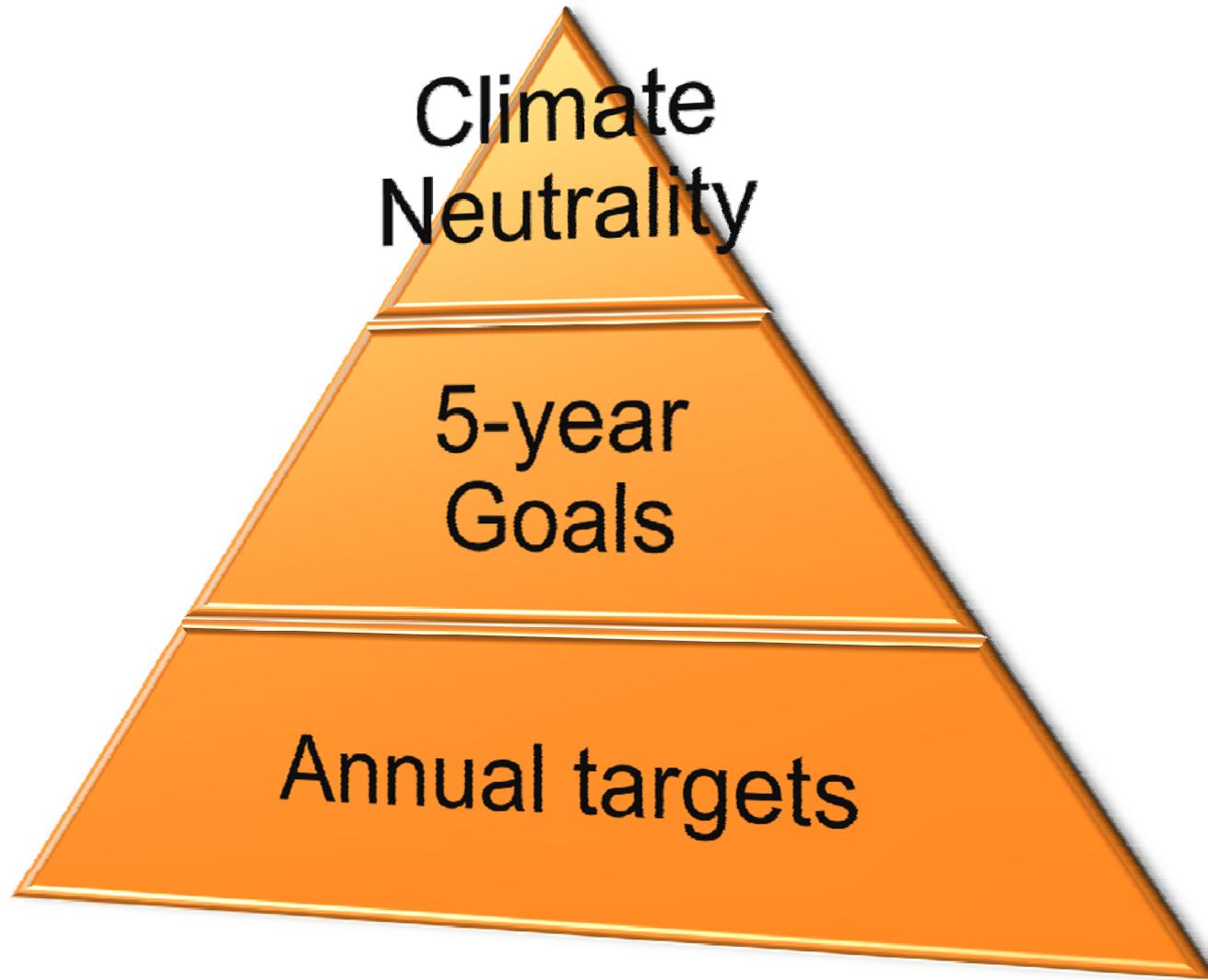
Part 2- New Climate Commitment



Considerations:

1. Is it built on the best available scientific data?
2. Does it inspire the community to action?
3. What is the specific timeframe for the goal?
4. How does it build on the Kyoto Protocol target?
5. Does it position Boulder as a sustainability leader?
6. What is the scope of emissions sources covered by the goal?

Part 2- New Climate Commitment



Part 2- Climate Action Framework



Next Steps

- June 13 Public Workshop
- Transportation Master Plan & TAB June 11
- Specific 5-year goals, annual targets
- Tracking & Reporting
- Phase 1 of Energy Action Plan

Question for Council



1. *Questions or feedback on the new climate action framework process & schedule, and the following next steps:*
 - a. *Public outreach on new Climate Action commitment (“Climate Neutral Boulder”)?*
 - b. *Establish near-term goals and annual targets linked to measures and tracking that are integrated into city master plans?*



PART 3

Commercial Energy Efficiency Strategy

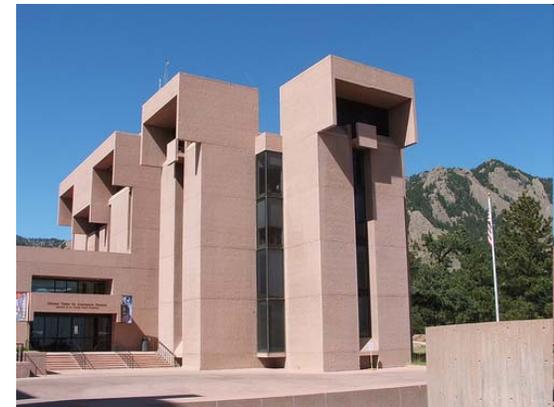
Part 3- Commercial Energy Efficiency Strategy



Purpose:

to make Boulder's businesses and existing commercial building stock more energy efficient.

Commercial/industrial sector is nearly 60% of community's GHG emissions.



Part 3- Commercial Energy Efficiency Strategy



10 FOR CHANGE

A new climate for business

- >100 member businesses
- >50% members track energy use
- >1.8M kWh avoided*
- 1,273 mtCO₂e GHG avoided

*Calculated from 57 member businesses' electricity bills

Part 3- Commercial Energy Efficiency Strategy



energySMART
Your Efficiency Solutions

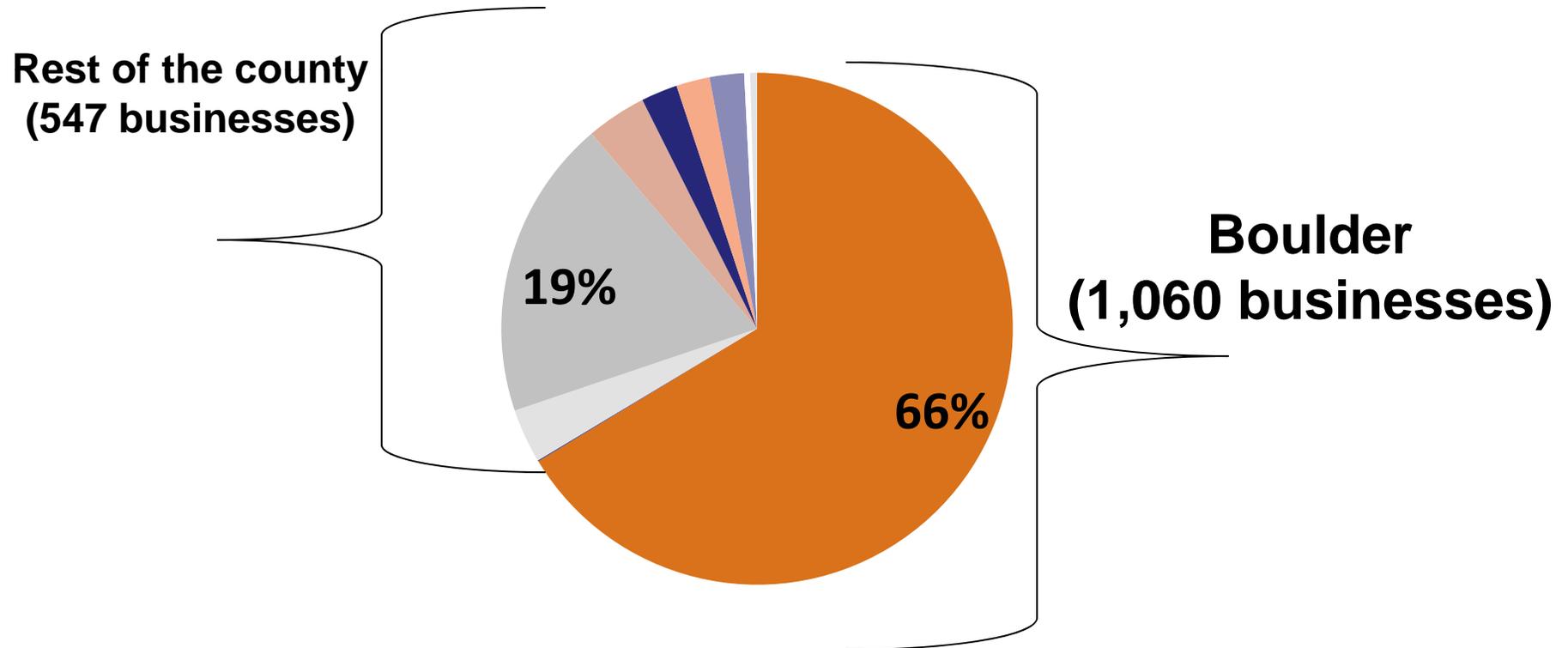
- 1,060 unique Boulder businesses
- >\$450,000
- \$2.1M in utility/private investment
- >5M kWh avoided*
- 3,600 mtCO₂e GHG avoided

*Estimated as deemed savings

Part 3- Commercial Energy Efficiency Strategy



Percent of unique businesses (1,607) participating in EnergySmart throughout Boulder County



Part 3- Commercial Energy Efficiency Strategy



Feedback:

- EAB meeting
 - March 22, strategy goals, guiding principles & objectives
 - May 10, three-phased approach strategy
- Commercial building industry stakeholders
 - One-on-one meetings
 - April 24, Focus Group

Part 3- Commercial Energy Efficiency Strategy



Experience and Research:

- Green building codes
- Voluntary programs
 - 10 For Change
 - EnergySmart
- Existing buildings
 - diverse types & uses
 - data gaps
 - no logical “trigger” or business process for compliance



Part 3- Commercial Energy Efficiency Strategy



Other communities' requirements for existing commercial building sector:

Seattle – 2010, benchmarking & disclosure



San Francisco – 2011, benchmarking, disclosure & periodic audits



New York – 2009, four laws addressing energy efficiency in the existing commercial building sector



Part 3- Commercial Energy Efficiency Strategy



Proposed Commercial Energy Efficiency Strategy:

Three-Phased Approach Recommendation

Phase 1 – Continue & Expand Voluntary Programs

Phase 2 – Require Benchmarking (energy rating) & Disclosure (reporting)

Phase 3 – Require Prescriptive Measures and/or Performance Standards

Part 3- Commercial Energy Efficiency Strategy



Next Steps:

- Continue to work on accessing energy use data
- Formalize a stakeholder process
- Update council in July
 - Draft a work plan for Phase 2
- Proposed options for Phase 2 - 1st quarter 2013

Part 3- Question for Council

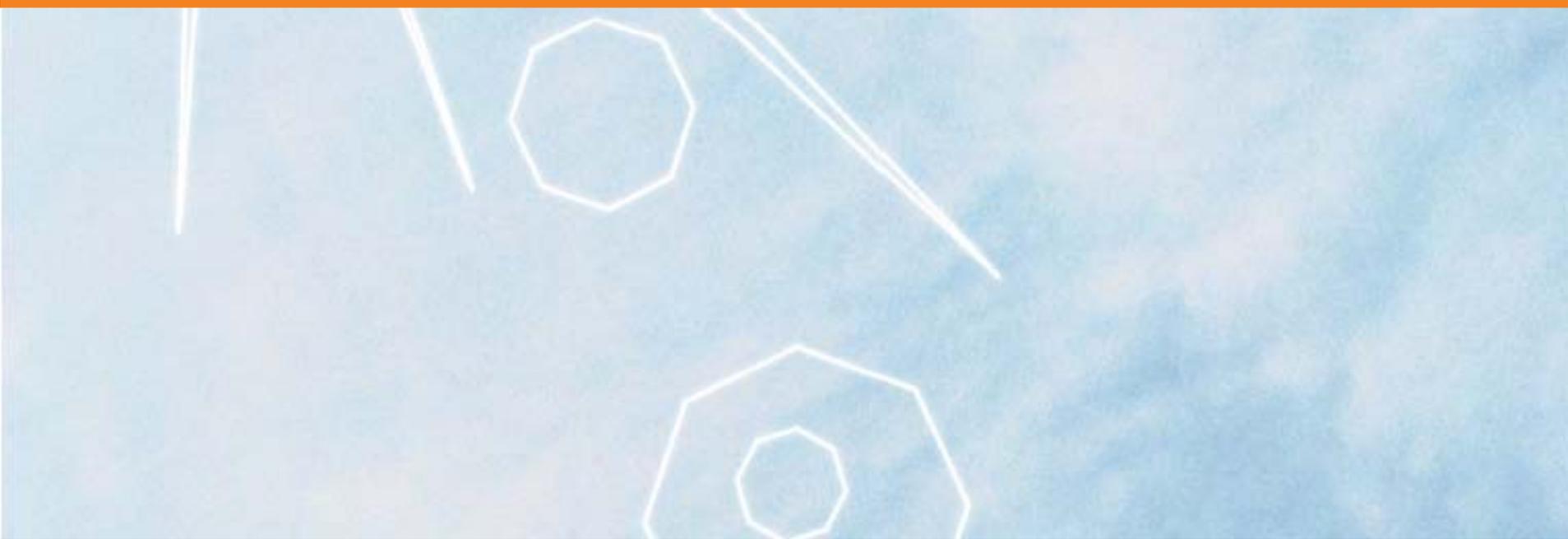


1. Does the Council agree with the staff recommendation for a phased approach that corresponds with the Energy Action Plan's phases?



PART 4

Tax Options



Part 4- CAP Tax Options



Background

- Tax originally passed by voters in 2006
- Funds energy efficiency programs/services
- Increased to maximum rates in 2009
- Sunsets March 31, 2013

Part 4- CAP Tax Options



Tax options for the ballot

1. Do not place tax on ballot
2. Extend the existing tax
3. a. Modify the tax rates
b. Change the purpose/ scope of tax
4. Utility Occupation Tax

Part 4- CAP Tax Options



1: Do not place tax on ballot

Pros:

- Limits items on ballot
- Allows more time for analysis

Cons:

- City funding for efficiency would discontinue
- Progress towards GHG goals would be slowed

Part 4- CAP Tax Options



2: Extend the existing tax

Pros:

- Simplest way of continuing services
- Collection mechanism already in place
- No TABOR language on ballot
- Allows for flexibility in how revenues are appropriated

Cons:

- Does not allow for changes to rates charged per sector

Part 4- CAP Tax Options



3a: Modify the tax rates

Pros:

- Ability to modify rates charged/sector
- Achievable level of analysis

Cons:

- Current collection mechanism modified to adjust for changes
- Ballot language would read as a new tax
- Minimum time for engagement and outreach

Part 4- CAP Tax Options



3b: Change the scope/purpose of tax

Pros:

- Allows for changes to scope and purpose of tax
- Could reveal more innovative approaches

Cons:

- Level of analysis could not be completed by deadlines
- Ballot language would read as a new tax

Part 4- CAP Tax Options



4: Replace CAP Tax with increase to Utility Occupation Tax

Pros:

- Revenue reliability

Cons:

- Tax burden by sector set by PUC
- On ballot two previous years
- Not based on consumption

Part 4- CAP Tax Options



Important Policy Issues

1. Coordination with municipalization
2. Potential county sustainability tax

Part 4- CAP Tax Options



Next Steps

- | | |
|-------------|-------------------------------------|
| June 5: | 1 st reading ordinance |
| June 10: | Consultant (Brendle) Report |
| June 13: | Public open house |
| June: | Community survey on tax options |
| July 24: | City Council Study Session |
| August 7 : | 2 nd reading |
| August 21: | 3 rd reading (if needed) |
| November 6: | General election |

Part 2- Questions for Council



- 1. Does Council have questions on the options related to the existing CAP tax and the November 2012 ballot?*
- 2. Should staff focus our analysis for council consideration in July on Option 2: Extending the current CAP tax?*