

DATE: August 26, 2008

STAFF: Lucinda Smith

WORK SESSION ITEM

FORT COLLINS CITY COUNCIL

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SUBJECT FOR DISCUSSION

Fort Collins Climate Action Plan.

EXECUTIVE SUMMARY

In 1999, Fort Collins was among the first communities in the nation to adopt a community-wide greenhouse gas reduction goal and a plan to meet it. Good progress has been made over the past 8 years but Fort Collins was not on track to meet the 2010 goal. In 2007, a citizen task force was convened to develop an updated Plan and recommend a future direction. In May 2008, City Council set visionary new community-wide greenhouse gas goals for 2020 and 2050 that align with the State goals. Council also expressed interest in continuing short-term progress and stated the intent to reduce 2012 emissions to 2.466 million tons of carbon dioxide (comparable to the original 2010 goal). After a year of evaluating strategies and considering cost-effectiveness, the Climate Task Force completed its recommendations in June 2008, including 16 aggressive strategies to reduce emissions in all sectors. The short-term strategies would more than meet the 2012 intent. The Task Force also recommended qualitative long-term strategies for making progress towards the new 2020 goal. City staff subsequently evaluated the strategies, updated the assumptions and made adjustments, where necessary. The result is a list of strategies that were recommended by the Climate Task Force, carefully vetted by staff, and now proposed for inclusion in an updated Fort Collins Climate Action Plan. The purpose of this work session is to receive Council's comments about the strategies prior to the final round of public outreach; to clarify the relationship between the Climate Plan, energy policy and trash services study, and identify key Council decision points for implementing climate protection activities.

GENERAL DIRECTION SOUGHT AND SPECIFIC QUESTIONS TO BE ANSWERED

1. Does Council have comments and direction on development of the Climate Action Plan?
2. Does Council have comments or questions about the proposed next steps, including public outreach?

BACKGROUND

I. THE VISION

Resolution 2008-051, adopted by City Council in May 2008, establishes two greenhouse gas goals for the Fort Collins community and one near-term "intent" to reduce emissions. The two goals are identical to statewide goals set for Colorado.



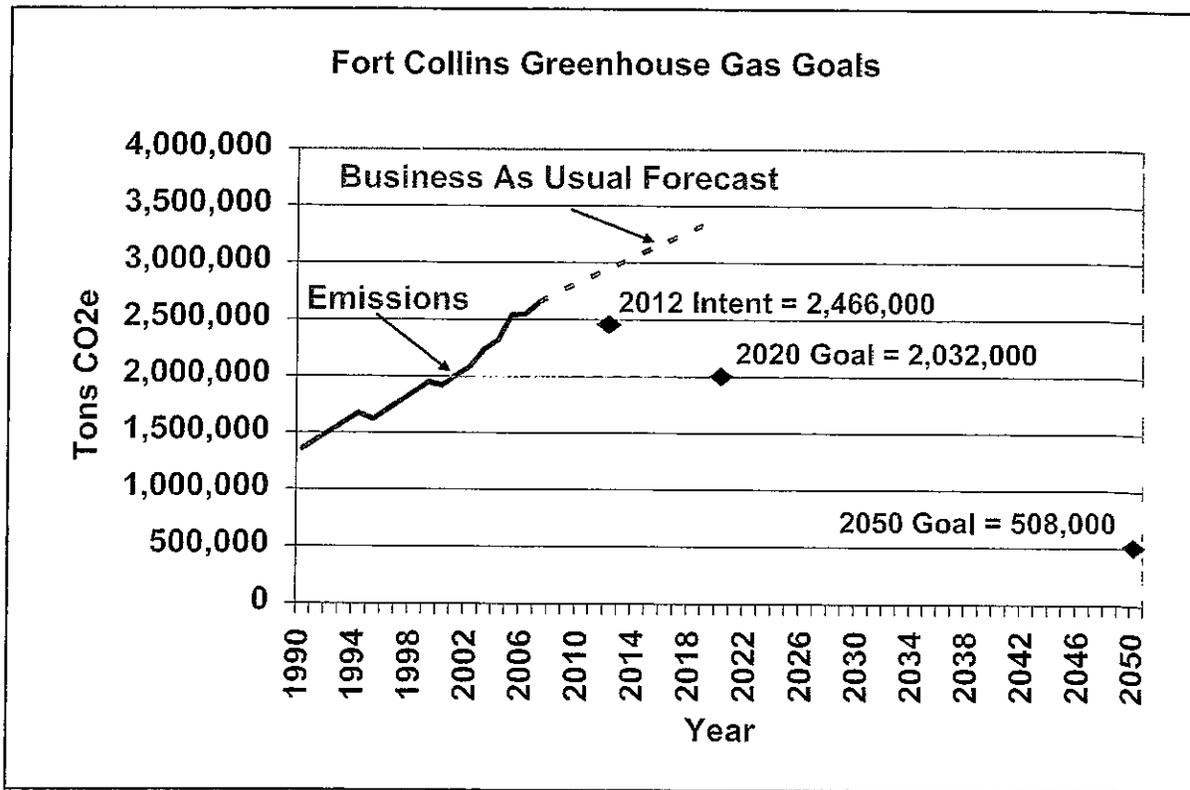
Goals

- Reduce community-wide greenhouse gas emissions 20% below 2005 levels by 2020.
- Reduce community-wide greenhouse gas emissions 80% below 2005 levels by 2050.

2012 Intent

- Reduce community-wide greenhouse gas emissions by the end of 2012 to a level not to exceed 2,466,000 tons CO₂e.

Figure 1. Fort Collins Greenhouse Gas Emissions and Reduction Goals



II. PROPOSED EMISSIONS REDUCTION STRATEGIES

The Fort Collins Climate Task Force (CTF) worked for over a year to develop a list of strategies to reduce community-wide emissions. In the process it considered relevant technical, economic, political, and social factors, and looked for strategies that would promote economic vitality and prioritize investments in the Fort Collins community. The Climate Task Force submitted its recommendations to the City Manager and Utilities Executive Director in June 2008. The report is posted at fcgov.com/ctf and was submitted to City Council on August 14, 2008.

City staff, who would be responsible for implementing the strategies, then reviewed them to update assumptions if needed, or, in a few cases, offer modified recommendations. See Attachment 1 for a summary of the staff review of the CTF recommendations.

The list of strategies presented in Table 1 for inclusion in the updated Climate Action Plan that Council will consider later this year largely reflects the recommendations of the CTF, with a few modifications discussed in Attachment 1. This list of strategies overlaps in many cases with strategies under consideration in the Trash Services Study and the concepts of the new carbon-focused Electric Energy Policy under consideration. Table 1 summarizes the strategies, followed by brief written descriptions.

Table 1. Proposed Short-term Climate Protection Strategies

	2012 Reduction	Voluntary or Regulatory	Cost to City	Cost to Customers	Supports Local Economy	Supports other City priorities
Existing & Pending	77,000					
Community Leadership						
Expand Climate Wise	93,000 - 114,000	Voluntary	1 New FTE; \$30,000/year	Net savings average \$2/ton for partners	X	BFO - Economic Health
Government Organizations Establish GHG Goals	4,000 - 22,000	Voluntary	Variable	Net savings		High-Performing Gov, Lead by Example
Community-wide Climate Challenge	28,000	Voluntary	Pilot- \$30,000/yr; existing staff	Net savings	X	
Local Carbon Offset Program	0 - 6,000	Voluntary	Admin	Cost ~ \$20/ton carbon purchased	X	
RECYCLING						
Push to meet 50% Waste diversion goal	226,000	Mixed	Estimated \$500,000/yr if all elements implemented	Variable	X	50% Waste Diversion Goal
ENERGY EFFICIENCY						
Increase Energy Efficiency Programs Above Existing Policy Level	9,000 - 29,000	Voluntary	Rate payer-funded	Net savings	X	Energy Policy
Residential Electric Rate Structure	9,000 - 18,000	Regulatory	Rate payer-funded	Not yet determined		Energy Policy
Advanced Metering Infrastructure	1,000	Regulatory	Rate payer-funded	High capital cost; net savings	X	Energy Policy
Improve Existing Homes	1,000	Voluntary	Rate payer-funded	Moderate costs, high savings	X	Energy Policy
Natural Gas Energy Conservation	5,000 - 15,000	Regulatory	Admin	~1.5% increase on gas bills	X	Other Finance Objectives
RENEWABLE ENERGY						
15% Renewable Energy by 2012	92,000 (55,000 from RECs; 37,000 from delivered energy)	Regulatory	Rate payer-funded	Relatively High		Energy Policy
TRANSPORTATION						
Reduce Vehicle Miles of Travel	2,000 - 12,000	Voluntary	Increased Capital and operation funding	Net Savings	X	City Plan, Transp Master Plan
Modern Roundabouts	1,000	Voluntary	Roundabouts often less expensive than traditional intersections	Net Savings		2001 City ordinance
Total						
TOTAL (after double-counting removed)	473,000 - 540,000					

Brief Descriptions of Short-Term Strategies

- **Expand Climate Wise Program**

Climate Wise is a successful program that supports local businesses and organizations in reducing and tracking their greenhouse gas emissions while saving money. This measure adds new personnel and resources to the program, enabling more partners to join and providing more assistance to partners, further increasing emissions reductions.

- **Local Government Organizations Set Greenhouse Gas Goals**

Recognizing the importance of leading by example, the measure calls for Colorado State University, the City of Fort Collins and Larimer County to join Poudre School District by setting goals to reduce greenhouse gas emissions from internal operations and achieve progress on the goal.

- **Community Climate Challenge**

Develop a local "Community Climate Challenge" for the residential sector, focusing on an educational campaign to promote actions with a goal of reducing 1% of per capita GHG emissions by 2012. A key component would be youth-focused programs (in-school programs, scouts, youth groups, church groups, services groups, etc.)

- **Local Carbon Offset Program**

Partner with the Governor's Energy office to participate in the Colorado Carbon Fund that will sell carbon offsets. Use the "reinvestment" dollars that will be returned to Fort Collins for additional carbon-reduction projects. Market the program heavily and urge citizens and businesses to purchase offsets to reduce their carbon footprint.

- **Push Towards 50% Waste Diversion Goal**

A number of strategies have been identified from the *Draft Strategic Plan for 50% Waste Diversion* that are especially effective at reducing greenhouse gas emissions. These strategies include a residential yard waste drop-off site, the option to recycle yard waste through trash haulers, and an ultimate ban on yard waste from curbside trash collection. It also recommends amending Fort Collins "Pay As You Throw" ordinance to include commercial customers, and implementing construction and demolition reduction strategies. Many of these strategies are also being considered under the Trash Services Study.

- **Increase Energy Efficiency Programs Above Existing Levels**

Current Fort Collins Utilities efficiency programs reduce 0.6% of total electricity use. This measure proposes to increase energy efficiency and consumption reduction above the existing Energy Policy objectives by increasing conservation programs to achieve a 1% reduction of total electricity load. One percent load reduction is an industry best practice, and it results in a net savings to program participants. Increasing energy efficiency is integral to the Electric Energy Policy update currently under consideration.

- **Alternative Residential Electricity Rate Structures to Promote Conservation**

In 2007, 48% of community-wide greenhouse gas emissions came from electricity use, making it the largest source of local greenhouse gas emissions. This strategy proposes to revise the residential electricity rate to promote conservation and potentially raise revenue to implement more conservation programs, with provisions to be developed for low-income households and all-electric homes. This recommendation works in concert with three other residential conservation strategies that are designed to promote energy conservation in homes and save homeowners money. The rate structure will be implemented in collaboration with the Automated Metering Infrastructure strategy.

- **Advanced Metering Infrastructure (Smart Meters)**

Advanced Metering Infrastructure (AMI) includes "smart" meters and an infrastructure for two-way communication. This strategy assumes that the meters would provide detailed electricity use information back to customers in real time, allowing customers to track consumption and manage bills by reducing usage and shifting electric loads. AMI systems can also pinpoint outages and transmit billing data to the utility, reducing costs for reading meters. AMI, smart meters, and innovative rate structures are part of an advanced electric grid system. This measure proposes to install advanced smart meters in all homes by mid decade and is integral to the Electric Energy Policy update currently under consideration.

- **Improve Existing Homes**

Improving existing homes through a range of programs and services targets the electricity and natural gas usage of our largely built out community. The range of programs and services will include support for simple residential energy audits, on-line energy audit services, comprehensive home upgrades through Home Performance with ENERGY STAR and utility incentives. The success of this strategy will depend upon increasing the capabilities of a skilled workforce to provide home improvement services.

- **Natural Gas Energy Conservation**

Natural gas use comprises 19% of Fort Collins greenhouse gas emissions. This measure would seek to replace Xcel's Occupation Tax with a Franchise Fee Agreement. Under this agreement, the City would charge Xcel 3% of annual revenue for gas sales. Xcel would pass this increase (~ 1.5% increase) on to customers and return the revenue to the City. The City could use this additional revenue to fund climate protection programs. Most local governments in Colorado have a 3% franchise fee for natural gas including Longmont and Loveland.

- **15% Renewable Energy by 2012 using RECS and delivered energy**

The City of Fort Collins' existing policy goal is to achieve 15% renewable energy for all electricity use by 2017. This measure would accelerate the goal to achieve 15% renewable energy by 2012. The Climate Task Force recommends achieving this increase by purchasing 60% of the (xMW) additional energy in Renewable Energy Credits (RECs) and 40% in delivered wind energy, in alignment with PRPA's 2020 goal. The proposed Electric Energy

Policy uses a substantially different approach to determine renewable energy goals, based on the 2020 carbon emission goal.

- **Reduce Vehicle Miles of Travel (VMT)**

This measure recommends four key strategies to reduce Fort Collins VMT by just under 2% by 2012. The four areas are Walking and Bicycling Improvements, Transportation Demand Management-Type Programs with Employer Focus, School Transport Management Programs, and Transit Service Improvements.

- **Modern Roundabouts for New or Major Redeveloped Intersections**

Roundabouts are an alternative to the standard traffic signal that provide a safer, more efficient, economically advantageous and environmentally friendly way to move traffic along the roadway system. This strategy recommends that the City build five roundabouts at new or significantly redeveloped intersection by the end of 2013. Consideration of roundabouts is already required under a 2001 City ordinance.

List of Longer-Term Strategies

Fort Collins' 2020 goal allows the opportunity to embrace strategies that have a long-term benefit yet take more time to develop and implement. Several strategies that merit further investigation from the list developed by the Climate Task Force are listed below. These strategies have not been analyzed for carbon benefit, costs, or savings.

Table 2. Summary of Long-Term Strategies

<p>Transportation</p> <ul style="list-style-type: none"> • Seek adequate funding to implement transportation plans, with funding for transit as a priority to achieve best practices. • Develop partnerships to reduce vehicle travel. • Parking management.
<p>Land Use</p> <ul style="list-style-type: none"> • Implement Land Use Code changes that support greenhouse gas emissions reductions. • Promote and pursue infill and refill development. • Explore LEED for neighborhoods. • Promote Transit-Oriented Development. • Consider requirements for new developments to have less travel demand than comparable existing developments.

<p>Green Building</p> <ul style="list-style-type: none"> • Time of sale energy conservation ordinance. • Require green building as a prerequisite for public financing. • Explore Net Zero Ready homes. • Explore LEED for neighborhoods.
<p>Energy</p> <ul style="list-style-type: none"> • Expand awareness of the existing Net Metering Program. • Promote plug-in hybrids and vehicle-to-grid applications. • Promote SmartGrid technology.
<p>Urban Forestry</p> <ul style="list-style-type: none"> • Promote tree planting.
<p>Community Engagement</p> <ul style="list-style-type: none"> • City of Fort Collins Government Leadership • Education (see Community Climate Challenge) • Innovation and collaboration: consider Fort Collins GHG Incubator
<p>Support State and Federal climate protection actions.</p>

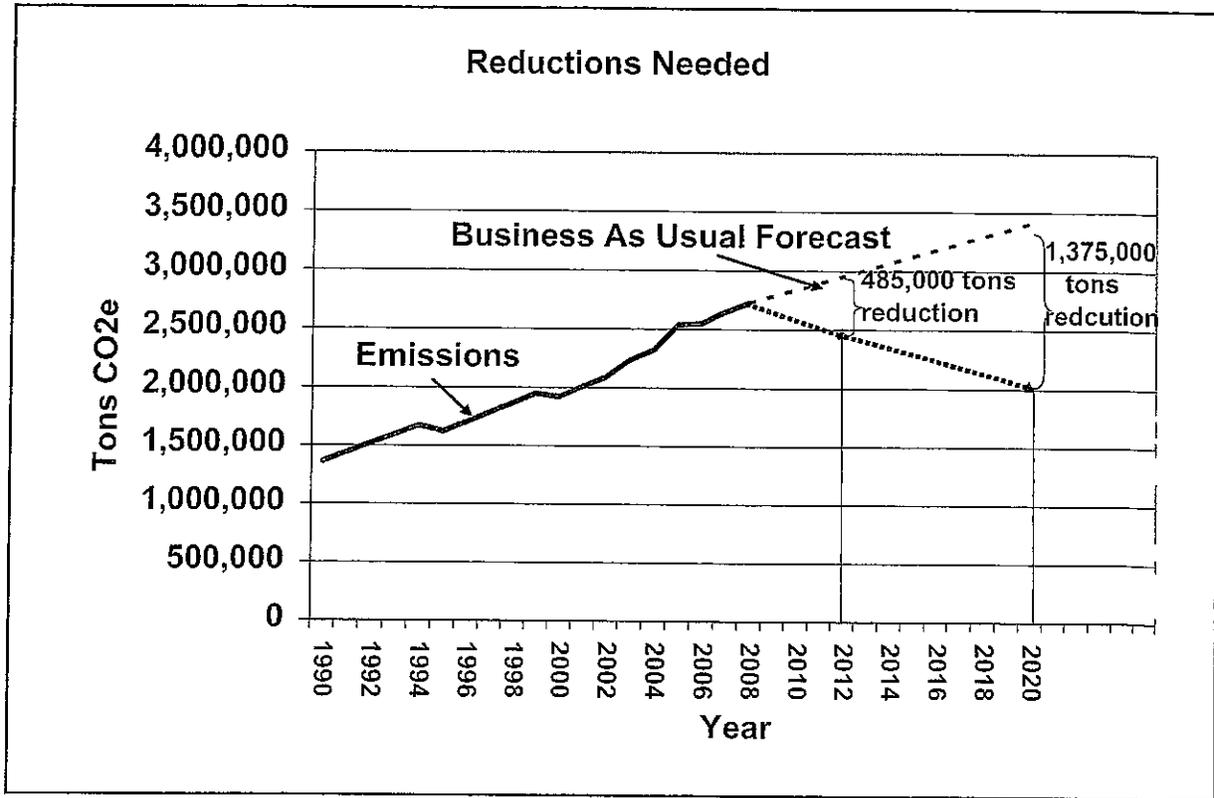
III. ROADMAP FOR ACHIEVING THE 2012 REDUCTION INTENT

Resolution 2008-051 states the Council’s intent to “reduce community-wide emissions by the end of 2012 to a level not to exceed 2.466 million tons.” If Fort Collins emissions were to grow at the “business as usual” rate from 2007 to 2012, emissions would reach 2,951,000 tons in 2012. At that growth rate, 485,000 tons of CO2e emissions would need to be reduced by 2012 in order to meet the intent, as illustrated in Table 3 and Figure 2 below.

Table 3. Estimated emission reductions to meet the 2012 intent and the 2020 goal.

Year	Forecast Business As Usual (Tons CO2e)	Goal	Reductions Needed (Tons Co2e)
2012	2,951,000	2,466,000	485,000
2020	3,407,000	2,032,000	1,375,000

Figure 2. Emissions Reductions Needed



While the list of strategies proposed here is not a complete list of strategies needed to achieve the 2020 community-wide greenhouse gas reduction goal, it does get Fort Collins well on the road towards that goal. Many of these strategies are aggressive and will require big decisions about City budget priorities and trade-offs between community costs and benefits. The decision about whether to purchase additional RECs to meet the 2012 intent is one example. There are also uncertainties associated with carbon markets and planning at this time. However, the list of strategies proposed here is sound and contains strategies that will move Fort Collins towards its carbon reduction goals.

Resolution 2008-051 calls for annual reporting and a comprehensive biennial review of climate protection efforts, prior to upcoming budget cycles. This review process will allow the Climate Action Plan to evolve in light of changing carbon markets, technology, citizen awareness of climate issues and City budget issues.

IV. RELATIONSHIP OF CLIMATE ACTION PLAN TO ENERGY POLICY AND TRASH SERVICES STUDY

The climate protection strategies presented here cover the areas of energy efficiency, renewable energy, waste diversion and reduction, transportation and fuels efficiency, and water conservation. During the Fall 2008, City Council will consider significant policy questions in the Energy Policy, the Trash Services Study and the Climate Action Plan. Attachment 2 illustrates the common CO₂ link between these initiatives.

V. KEY COUNCIL DECISION POINTS FOR IMPLEMENTATION OF THE CLIMATE ACTION PLAN

Later this year, Council will consider a resolution to adopt a Climate Action Plan for Fort Collins. This Plan will build upon existing successes and will contain a menu of strategies Council can chose. It will outline the timing necessary to implement the strategies in order to achieve the 2012 intent. However, subsequent staff work will be necessary to further develop the strategies for Council action and implementation.

Below is a summary of anticipated Council decision points regarding implementation of climate strategies. Attachment 3 contains a table linking the Council actions identified below to the proposed climate strategies.

- **Fall 2008**
 - Consider 2009 budget exception requests to support Climate Wise.
 - Consider whether to pursue a franchise fee agreement with Xcel for natural gas.
 - Consider adoption of a new Electric Energy Policy.
 - Consider adoption of the Climate Plan.
 - Consider adoption of the 2008 Bicycle Plan.
 - Possible decisions regarding Trash Services Study and Recycling policies/ordinances.

- **2009**
 - Consider additional electric rate increases to fund implementation of the Electric Energy Policy.
 - Consider adoption of a Transit Strategic Plan.
 - Consider implementation of any new waste reduction initiatives come out of Trash Services Study, such as commercial recycling, curbside yard waste, or changes to haulers' licensing requirements.

- **Fall 2009 (2010/2011 budget requests)**
 - Capital and operations funding for transportation
 - Capital and operations requests for municipal carbon reduction projects
 - Budget requests for any new solid waste reduction initiatives that were adopted as a result of 2008 Trash Services Study, including budget request for additional 1 FTE.

VI. PUBLIC OUTREACH FOR CLIMATE ACTION PLAN

Following Council feedback on the development of a Climate Action Plan at the August 26 work session, staff will conduct additional public outreach during September. This will be in addition to the two public open houses and numerous meetings with Council advisory boards that occurred while the CTF recommendations were developed. Outreach plans include:

General Public

- Notification about draft Climate Action Plan, Open House, and Web comment opportunity e-mailed to all who attended past open houses and other known interested parties.
- Web opportunity for public comment .
- Rocky Mountain Sustainable Living Fair – September 20 and 21.
- Joint Public Open House for Climate Plan and Energy Policy - late September.

Interest Groups

- Chamber Legislative Affairs
- Trash Haulers via Trash Services Study outreach
- Electricity Key Accounts via Energy Policy Update
- Board of Realtors
- Any others by request

Council Boards and Commissions

- Air Quality Board
- Economic Advisory Commission
- Electric Board
- Natural Resources Advisory Board
- Transportation Board

VII. NEXT STEPS

Following Council feedback from the August 26 work session, staff will compile a draft Climate Action Plan following the outline suggested in Attachment 4. The plan will provide a menu of options, a suggested timeline for implementation, and associated cost and benefit estimates. It will also outline the steps and responsibilities for completing the annual progress report and biennial review assessing progress on the goals and recommending actions for consideration in the upcoming budget cycle. This process of periodic progress reviews will allow Council the flexibility to select strategies for implementation in light of evolving budget and City policy priorities.

Public comment will be gathered on the draft Climate Action Plan in September. Public feedback will be documented and considered before staff finalizes its recommendations to Council on the Climate Action Plan. Council will have a work session on October 28, 2008 to discuss the draft Climate Action Plan. Council action to consider the Climate Action Plan is currently scheduled for December 2, 2008.

The next steps are summarized below.

Early September	Staff prepares a draft Climate Action Plan
September-mid-October	Public and board outreach
Week of September 29	Joint Climate/Energy policy open house
October 28, 2008	Council work session to discuss draft Climate Action Plan
December 2, 2008	Council consider a resolution adopting the Climate Policy Plan
Winter 2008 and on	Development and implementation of strategies

ATTACHMENTS

1. Summary of staff review of CTF recommendations.
2. Diagram Illustrating CO2 link among current environmental policy initiatives.
3. Table identifying Proposed Climate Strategies and Council decision points.
4. Proposed Climate Action Plan Outline.
5. Powerpoint presentation.
6. Resolution 2008-051 Establishing City Greenhouse Gas Reduction Goals.
7. Work Session Summaries from January 9, 2007, February 26, 2008, March 25, 2008 and Response to Questions Related to Greenhouse Gas Reductions and Goals, dated April 11, 2008.

Staff Review of CTF Recommendations

Following completion of the CTF recommendations, City staff carefully assessed the recommendations for feasibility, budget, and relationship to existing policies and programs, etc. City staff support the CTF recommendations in large part. The staff responses are summarized below. The changes recommend here are incorporated in the climate strategies being proposed for the Climate Action Plan.

Expanded Climate Wise

A review of Climate Wise growth projections suggests Climate Wise can grow to 200 partners by 2010, and achieve 93,000 - 114,000 additional tons CO₂e avoided, above the business as usual scenario. Cost estimates can be reduced from 2 new FTE to one new FTE with the addition of help from existing Utilities resources. Capital cost estimates are reduced from \$100,000/year to \$30,000/year.

Government Organizations Establish GHG Goals

The City of Fort Collins is considering a goal to reduce emissions 20% below 2005, by 2020. CSU has signed the *American College and University Presidents Climate Commitment*, committing to become carbon neutral in the future and they are working on a carbon neutral plan. Larimer County's Green Team is making changes to reduce emissions from their organization. A lower range of CO₂ benefit is included because there could be significant overlap between this measure and the Climate Wise measure.

Community Climate Challenge

Staff supports this concept and recommends a 1% per capita reduction goal, or 28,000 tons in 2012. There would be significant overlap, estimated at 90%, with other measures. The City (Fort Collins Utilities and other departments) can begin pilot implementation in mid 2009.

Local Carbon Offset Program

The City will be partnering with the Governor' Energy Office on the Colorado Carbon Fund which provides a local re-investment component. CTF estimated participation rates of 5% of households going carbon neutral may be too high; 0.5% would be a better estimate. CTF cost estimates of \$39/ton for offset purchases is probably too high; \$20/ton is more in-line with anticipated Colorado Carbon Fund offset price.

Push To Meet 50% Waste Diversion Goal

Staff in the Solid Waste Reduction Program (NRD) is confident that numerous opportunities exist to accomplish greater recycling, source reduction and composting, and that the community supports these approaches. The analysis conducted in 2006 produced carefully modeled information about waste tonnages, program participation rates, and implementation costs. Staff still believes the estimates for greenhouse gas (GHG) reductions and costs for solid waste measures in the CTF recommendations are fairly accurate.

With many new ideas about waste reduction being discussed as part of the current Trash Services Study, staff anticipates that Council will provide direction this Fall on which strategies to pursue. Given the level of interest that has been expressed by the community, and the potential for the

City Council to adopt new measures for recycling and waste diversion, it would be appropriate to develop a 2009 budget proposal that would include another 1 FTE in Natural Resources.

Natural Gas Energy Conservation

The CTF recommended exploring a rate increase from Xcel for the resident sector. Further investigation indicates rate changes would have to apply uniformly to all rate classes. The CTF suggested seeking 3% usage reduction. Staff suggests 1% usage reduction, in-line with the recommendations of the Colorado Climate Action Panel. Staff does not recommend pursuing a voter-approved "Gas Company Occupation Tax" change at this time. The other option is to replace the Occupation Tax with a franchise fee agreement with Xcel Energy. Most other local governments in Colorado have a 3% franchise fee agreement for natural gas. This would increase City revenue by at least \$600,000/year above the existing \$445,000/year Occupation Tax. Revenue from the franchise fee could be used to fund energy efficiency programs.

Reduce Vehicle Miles of Travel

All of the strategies recommended by CTF to reduce vehicle miles of travel (walking and bicycling, employer-based travel reduction programs, school transportation management, and increased transit) are being implemented at some level now and enjoy strong community support. Upcoming updates to the Bicycle Plan and the Transit Strategic Plan should help reduce VMT. The CTF capital cost estimate for bicycle infrastructure is low relative to the VMT benefit estimated. In general, increased funding for capital and operations above current levels would be needed to achieve the CTF recommended programs.

Roundabouts

The CTF recommended completion of 5 new roundabouts by 2013. A City 2001 ordinance requires that roundabouts be considered for any arterial or arterial collectors slated for improvements. Staff anticipates possible construction of 4 (possibly 5) new roundabout in the next few years, including the Ziegler and Horsetooth roundabout that has just been completed.

Incentives for Low Emission Vehicles

Staff does not recommend pursuing this strategy now. Gasoline prices have risen from \$2.80/gallon to ~\$4/gallon since the CTF developed this recommendation. High gas prices currently provide adequate incentive for consumers to seek higher fuel efficiency vehicles. If fuel prices drop, this strategy should be reconsidered.

Electric Energy-Related Strategies

The Fort Collins Utilities hired RW Beck to conduct an analysis of the electricity-related CTF recommendations. Many of these recommendations overlap with strategies that may be needed to implement a revised Energy Policy that Council will consider soon.

In summary, the initial review supports the concepts suggested by CTF. Overall program costs may be greater than estimated by the CTF. 2012 carbon reductions may be somewhat smaller but 2020 carbon reductions may be significantly greater than estimated by the CTF. Many of the strategies require a ramp-up period that extends beyond 2012.

Increase Energy Efficiency Above Existing Levels

This measure represents continued expansion of energy efficiency programs to best practices level. Implementation costs expected to be higher than estimated by CTF.

Alternative Residential Rate Structure

Rate structures can be an effective tool for GHG reductions. CTF savings estimates may be on the high side compared to what has been observed elsewhere in the industry. This should be considered in combination with advanced metering due to other potential rate reduction strategies

Low Cost Home Energy Assessments (incorporate with “Improve Existing Homes”)

This program is a delivery mechanism for targeting existing residential building energy use. This program should be combined with planned Utility efforts to “Improve Existing Homes” through the Home Performance by Energy Star program and others under the *Utility for the 21st Century* project. CTF benefit estimates are likely high due to limited availability of home raters.

Smart Meter Program

Smart Grid technology integrating AMI (Advanced Metering Infrastructure) can be an effective tool for GHG reductions, and bring a wide range of benefits to Utilities and customers. The CTF measure describes only one aspect of smart metering - an in-home display of energy use/cost. To provide full benefit of forthcoming Smart Grid technology, AMI should be installed. Additionally, to maximize benefits, water meters should be included.

Time of Sale Energy Conservation Ordinance

This measure is a delivery mechanism for targeting existing residential and commercial building energy use. Utilities recommends this program be incorporated into the Home Performance by Energy Star program from the *Utility for the 21st Century* project for the near term. The regulatory aspect of this program should be added to the long-term strategies for future consideration.

15% Renewable Energy by 2011 (changed to “15% Renewable Energy by 2012”)

Renewable energy is valid tool for reaching overall GHG reduction goal. The goal is feasible with a mixed purchase of RECs and energy. The measure does not account for uncertainty related to carbon regulation and potential increase in costs of RECs.

Incentives for Individual Renewable Energy Projects

This is not a Utilities-recommended program for reaching GHG goals. This program has a high cost and competes with the Local Carbon Offset Program. Utilities has begun to offer grant-funded incentives for installation of local PV that reduces reliance on rate-payer funds.

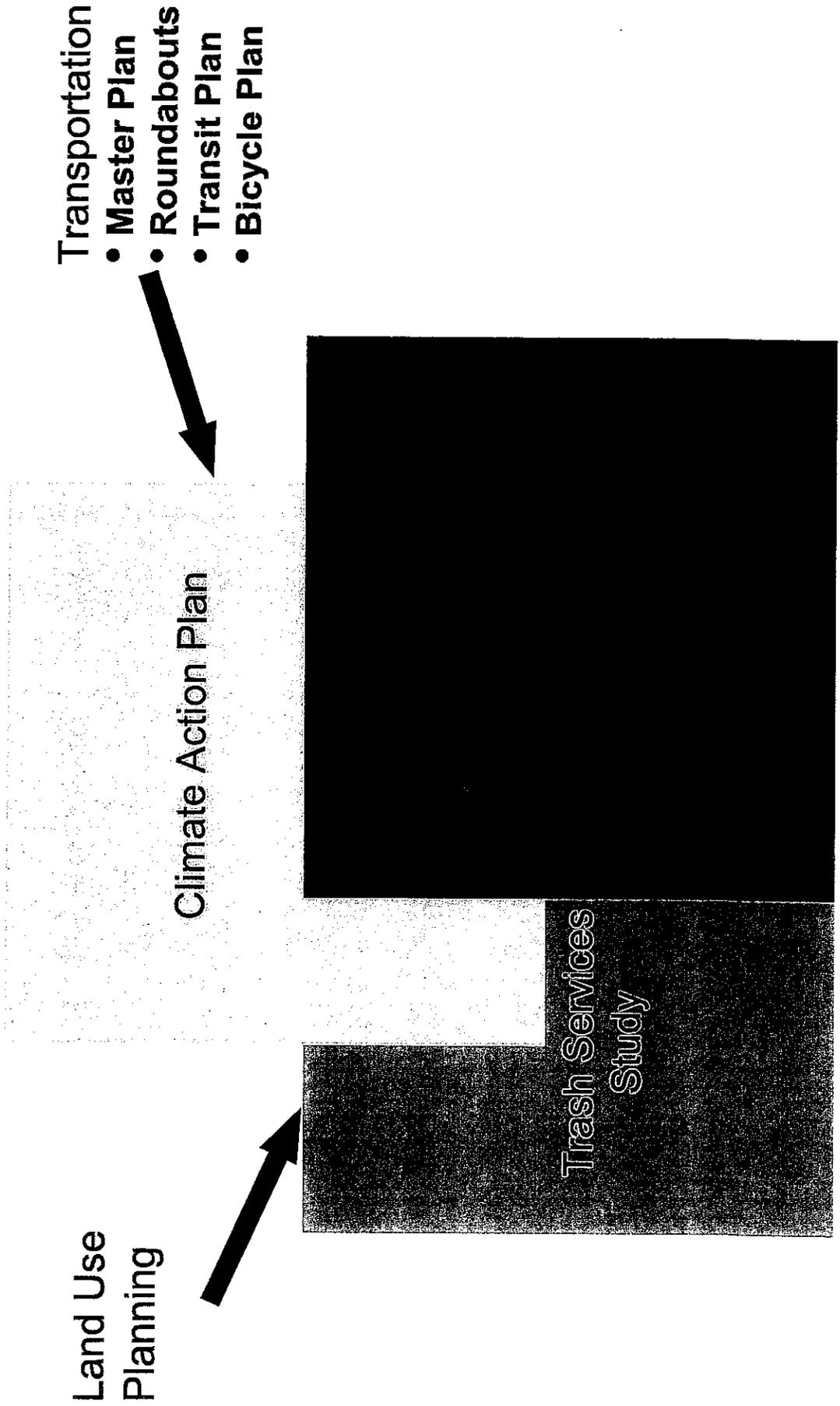
The staff assessment of the greenhouse gas benefit of the strategies is 10-22% lower than the benefits estimated by the CTF. The staff estimated GHG reductions, including “Existing” measures, ranges from 473,000 – 540,000 tons CO₂e in 2012, while the CTF report estimated 604,000 tons CO₂e avoided in 2012.

2008 Policy Planning Relationships

Environmental Policies

CO₂ – the Common Thread

Attachment 2



PROPOSED CLIMATE STRATEGIES AND COUNCIL DECISION POINTS

Attachment 3

Existing	2012 Reduction	2008 Anticipated Council Actions	2009 Anticipated Council Actions	2010/2011 Budget Decisions	Voluntary or Regulatory	Cost to City	Cost to Customers	Supports Local Economy	Supports other City priorities
Community Leadership	77,000								
Expand Climate Wise	93,000 - 114,000	2009 Budget Exceptions Request			Voluntary	1 New FTE; \$30,000/year	Net savings avg. \$2/ton for partners	X	BFO - Economic Health
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Community-wide Climate Challenge	28,000				Voluntary	Pilot- \$30,000/yr, existing staff	Variable costs or savings		
Local Carbon Offset Program	0 - 6,000				Voluntary	Admin	Cost ~ \$20/ton carbon purchased	X	
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Push to meet 50% Waste diversion goal	226,000	Decision regarding recycling policies/ordinances? Adopt Energy Policy	Decision regarding recycling policies/ordinances		Mixed	Estimated \$500,000/yr if all elements implemented	Variable	X	50% Waste Diversion Goal
ENERGY EFFICIENCY									
Incr. Energy Efficiency Programs Above Existing Policy Level	9,000 - 29,000				Voluntary	Rate payer-funded	Net savings	X	Energy Policy
Residential Electric Rate Structure	9,000 - 18,000	Additional electric rate increases to fund implementation of the Electric Energy Policy			Regulatory	Rate payer-funded	Not yet determined		Energy Policy
Advanced Metering Infrastructure	1,000				Regulatory	Rate payer-funded	High capital cost; net savings	X	Energy Policy
Improve Existing Homes	1,000	Consider whether to pursue a franchise fee agreement with Xcel			Voluntary	Rate payer-funded	Moderate Costs; high savings	X	Energy Policy
Natural Gas Energy Conservation	5,000 - 15,000				Regulatory	Admin	~1.5% increase on gas bills	X	Other Finance Objectives
Time-of-Sale Energy Conservation Ordinance	0				Ultimately regulatory	Admin	High initially; net savings long-term	X	Green Building
RENEWABLE ENERGY									
15% Renewable Energy by 2012	92,000 (65,000 from RECs, 37,000 from delivered energy)	Adopt Energy Policy			Regulatory	Rate payer-funded	Relatively High		Energy Policy
TRANSPORTATION									
Reduce Vehicle Miles of Travel	2,000 - 12,000	Adopt 2008 Bicycle Plan	Adopt Transit Strategic Plan	Capital and operations funding	Voluntary	Increased Capital and operation funding Roundabouts often less expensive than traditional intersections	Net Savings	X	City Plan, Transp Master Plan
Modern Roundabouts	1,000				Voluntary		Net Savings		2001 City ord.
TOTAL (after double-counting removed)	473,000 - 540,000	Adopt Climate Action Plan							

Proposed Climate Action Plan Outline (August 2008)

Executive Summary

Introduction

- Need For Climate Protection
- Benefits of Climate Protection
- Role of Local Governments
- Opportunities

Fort Collins' Evolving Commitment to Greenhouse Gas Reduction

- Original Fort Collins Greenhouse Gas Goal
- Success to Date
- New Greenhouse Gas Goals
- Plan Development Process (CTF and staff input)

Fort Collins' Greenhouse Gas Inventory and Projections

Climate Protection

Reduction Measures

Existing Measures

Short-Term Measures

- Measure Name
- Estimated CO2 Savings in 2012
- Estimated CO2 savings in 2020
- Supporting City Polices
- Measure Description
- Lead Implementing Department
- Recommended Approach for Implementation
- Recommended Timeframe for Completion
- Estimated Implementation Cost to the City
- Estimated Annual Operating Cost
- Potential Funding Source(s)
- Cost Savings
- Other Benefits
- Other Success Stories

Long-Term Measures

- Measure Name
- Supporting City Polices
- Measure Description
- Lead Implementing Department(s)
- Recommended Approach for Implementation

Milestones, Monitoring and Reporting

- Milestones and Progress Towards 2020 Goal
- Annual Report Process
- Biennial Review Process

Conclusion

Appendices - City Council Resolutions

Fort Collins Climate Action Plan Development

Fort Collins City Council Work Session
August 26, 2008

City of
Fort Collins

1

Questions for Council

1. Does Council have comments and direction on development of the Climate Action Plan?
2. Does Council have comments or questions about the proposed next steps, including public outreach?

City of
Fort Collins

2

The Issue

Widespread consensus exists that human emissions of greenhouse gases are impacting the Earth's climate systems, causing the potential for unprecedented large-scale adverse health, social, and ecological effects.

Fort Collins could realize tremendous ancillary economic, environmental, and social benefits by undertaking responsible steps to combat climate change.

City of
Fort Collins

3

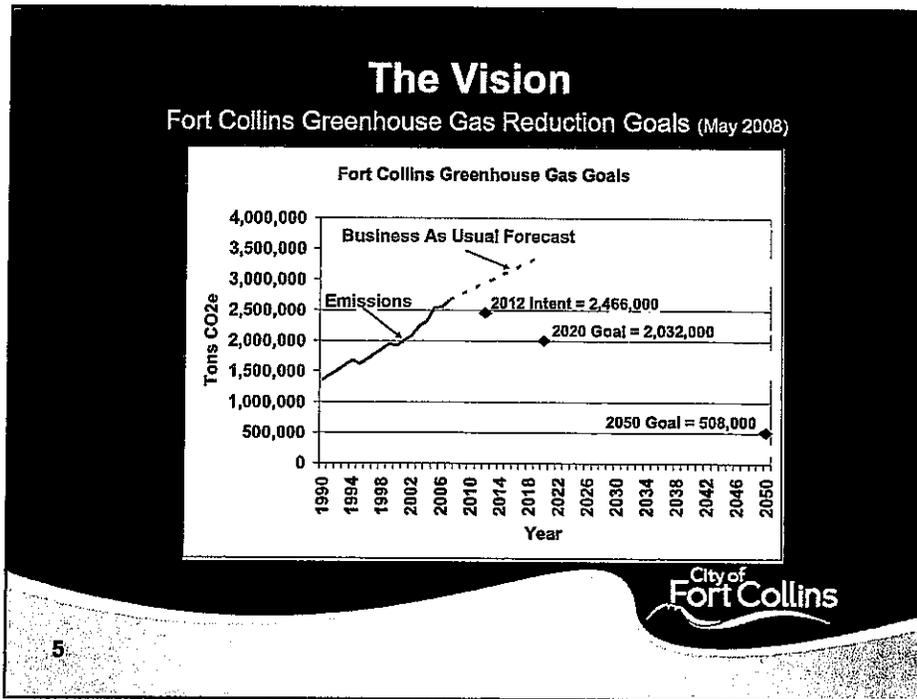
The Vision

Fort Collins Greenhouse Gas Reduction Goals (May 2008)

- 20% reduction below 2005 levels, by 2020
- 80% reduction below 2005 levels, by 2050
- "intent to reduce current community-wide emissions by the end of 2012 to a level not to exceed 2.466 million tons."

City of
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4



- ### Climate Task Force
- Tasked to recommend an updated short-term plan and direction for future climate protection
 - Worked for over a year to develop strategies
 - Considered relevant technical, economic, political and social factors
 - Considered economic vitality
 - Sought public input
- City of Fort Collins
- 6

Climate Task Force

- Recommendations submitted to City in June
- Contains 16 short-term and several long-term strategies

**Fort Collins
Climate Task Force
Recommendations**

June 2008



City of
Fort Collins

7

Staff Assessment

- Reviewed CTF recommendations
- Value hard work of the CTF
- Support many of the recommendations
- Updated assumptions if needed
- Offered modified recommendations in a few cases

City of
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8

Proposed Climate Strategies

	Current Estimated Tons CO2 Reduced in 2012
Existing	77,000
COMMUNITY LEADERSHIP	
Expand Climate Wise	93,000 - 114,000
Government Orgs Establish GHG Goals	4,000 - 22,000
Community-wide Climate Challenge	28,000
Local Carbon Offset Program	0 - 6,000
RECYCLING	
Push to Meet 50% Waste Diversion Goal	226,000
ENERGY EFFICIENCY	
Increase Energy Efficiency Programs Above Existing Policy Level	9,000 - 29,000
Residential Electric Rate Structure	9,000 - 18,000
Advanced Metering Infrastructure	1,000
Improve Existing Homes	1,000
Natural Gas Energy Conservation	5,000 - 15,000
RENEWABLE ENERGY	
15% Renewable Energy by 2012	92,000
TRANSPORTATION	
Reduce Vehicle Miles of Travel	2,000 - 12,000
Modern Roundabouts	1,000
TOTAL (after double-counting removed)	473,000 - 540,000



9

Expand Climate Wise (93,000 – 114,000 Tons CO2e)

- Grow to 200 partners (~ 100 now)
- Achieve additional ~ 100,000 tons CO2 avoided
- Request 1 FTE plus limited extra program \$






10

Push to Meet 50% Waste Diversion Goal

(226,000 Tons CO₂e)

- Recycling fee in commercial rates
- Expanded residential programs (larger recycling containers, expanded PAYT, single-stream)
- Construction and Demolition strategies
- Privately funded recycling drop-offs
- Yard Waste Strategies
- Increased Education



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Increase Natural Gas Efficiency

(5,000 – 15,000 Tons CO₂e)

Reduce natural gas use 1% by increasing rates and funding incentive programs by replacing "Occupation Tax" with franchise fee

- Annual Occupation Tax = \$445,000
- Most local govts have 3% franchise fee agreement
- 3% of Fort Collins gas sales revenue ~ \$100,000+

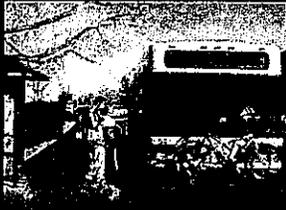
City of
Fort Collins

12

Reduce Vehicle Miles of Travel
(2,000 – 12,000 Tons CO₂e)

Achieve 2% reduction in VMT by 2012 through expanded

- Walking and Bicycling programs
- Employer-based programs
- School transportation Management
- Increase Transit



City of Fort Collins

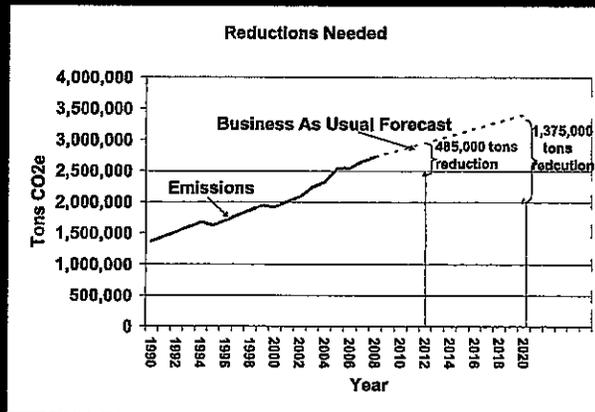
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Insert Utilities presentation

City of Fort Collins

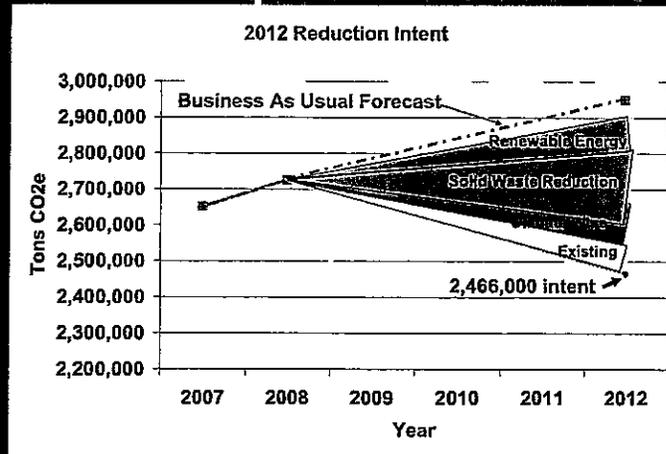
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2012 Milestone

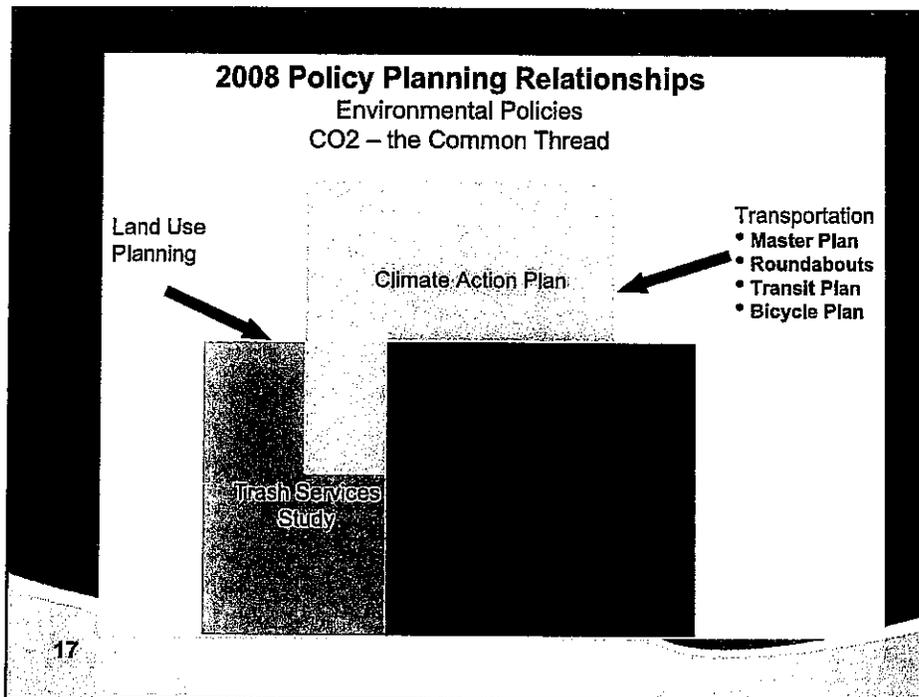


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Roadmap for 2012 Milestone



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Key Council Decision Points

Fall 2008

- 2009 budget exception requests for energy/Climate Wise staff
- Pursue natural gas franchise fee agreement with Xcel?
- Adopt Electric Energy Policy
- Adopt Climate Plan
- Adopt 2008 Bicycle Plan
- Possible decisions on Trash Services Study and Recycling policies

2009

- Electric rate increase to fund efficiency / renewables
- Adopt Transit Strategic Plan
- Waste Reduction policies?

Fall 2009 (2010/2011 budget requests)

- Capital and operations funding for transportation
- Capital requests for municipal carbon reduction projects

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Next Steps

September	Compile draft Climate Action Plan
September/Oct	Public and board outreach
October 28, 2008	Council work session on Climate Plan
December 2, 2008	Council adoption of Climate Plan via Resolution
Late 2008 and on	Development and implementation of strategies

City of
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Public Outreach Plans

General Public

- Web comment
- Joint Open House for Climate Plan/Energy Policy - late Sept.
- Rocky Mt. Sustainable Living Fair – Sept 20 and 21

Interest Groups

- Chamber Legislative Affairs
- Trash Haulers via Trash Services Study outreach
- Electricity Key Accounts via Energy Policy Update
- Any others by request

5 Council Boards and Commissions

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Questions for Council

1. Does Council have comments and direction on development of the Climate Action Plan?
2. Does Council have comments or questions about the proposed next steps, including public outreach?

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Local Govs Set GHG Goals

Encourages local gov. orgs to reduce carbon footprint

- City to adopt community-wide goal, 2% reduction/yr
- CSU has carbon neutral goal
- Larimer County working on carbon reduction programs
- PSD working on carbon reduction goal in their Sustainability Plan

Colorado State
University

Larimer County – PSD logos

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Community Climate Challenge

Set 1% per capita reduction goal

- Focus on residential sector, youth
- Initiate pilot in 2009

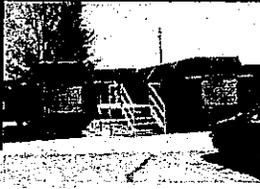



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Push to Meet 50% Waste Diversion Goal

Strategy	Tons CO ₂ e	Trash Services Study?
Recycling fee in commercial rates	> 100,000	
Residential (Single stream, larger containers, enhanced PAYT)	50,000 -100,000	X
C&D strategies	50,000 -100,000	
Small business recycling co-ops	< 10,000	
Private-funded recycling drop-offs	< 10,000	
Yard Waste strategies	< 10,000	X
Education	< 10,000	X
TOTAL	226,000	



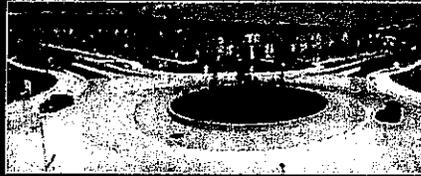

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Roundabouts

Build 4 to 5 roundabouts by 2012

- Roundabouts provide a safer, more efficient, economically advantageous, and environmentally friendly way to move traffic along the roadway system.



City of
Fort Collins

**RESOLUTION 2008-051
OF THE COUNCIL OF THE CITY OF FORT COLLINS
ESTABLISHING CITY GREENHOUSE GAS REDUCTION GOALS**

WHEREAS, there is widespread consensus that human emissions of greenhouse gases are impacting the earth's climate system, causing the potential for unprecedented large-scale adverse health, social, economic and ecological effects; and

WHEREAS, climate disruption is likely to cause, and may already be causing, damage to the environmental and economic health of Colorado communities, risks associated with reduced snow pack that could affect both water supply and tourism, and secondary impacts such as changes in agriculture economics; and

WHEREAS, local governments can greatly influence their communities' greenhouse gas emissions by exercising key powers over land use, transportation, building construction, waste management, and, in many cases, energy and water supplies and management; and

WHEREAS, there currently is no comprehensive federal regulations of greenhouse gas emissions and the United States is itself the largest per capita emitter of greenhouse gas emissions; and

WHEREAS, it is appropriate for local governments to take responsibility for emissions occurring within their jurisdictions since local community actions can speed the development of technology-based solutions and more rapidly promote market transformation that will help drive reductions in global emission levels; and

WHEREAS, the Fort Collins community could realize tremendous ancillary economic, environmental, and social benefits by undertaking responsible steps to combat climate change; and

WHEREAS, by the adoption of Resolution 1999-137, the City Council established a policy that the City shall proactively identify and implement actions to reduce greenhouse gas emissions within the City by at least 30% below predicted 2010 levels by 2010 while achieving cost-effectiveness in each program; and

WHEREAS, the City has demonstrated its leadership on the issue of climate protection through the implementation of Climate Wise, the Electric Energy Supply Policy, recycling initiatives and other programs to reduce emissions, and should continue to lead by example so as to encourage other communities across the region, state, and globe to share in the solution to the problem of greenhouse gas emissions; and

WHEREAS, despite this progress, Fort Collins is not on track to meet the greenhouse gas emissions goal established by Resolution 1999-137 to reduce carbon dioxide emissions to an inventory level of 2.466 million tons in the year 2010; and

WHEREAS, the Fort Collins community offers a unique combination of innovation and technical expertise that can be utilized to develop long-term sustainable solutions and facilitate all sectors and organizations in Fort Collins in taking action to reduce emissions; and

WHEREAS, scientists have identified a need to reduce the global emission of greenhouse gases by 80% by the year 2050, at the latest, in order to avert the worst impacts of global warming; and

WHEREAS, the 2007 recommendations of the Colorado Climate Project convened by the Rocky Mountain Climate Organization to reduce the state's contribution and vulnerability to climate change include reducing statewide emissions in the vicinity of 20% below 2005 levels by 2020 and 80% below 2005 levels by 2050; and

WHEREAS, the 2007 Colorado Climate Action Plan establishes these same goals; and

WHEREAS, the City Council is intent upon continuing its efforts to achieve meaningful reductions in local greenhouse gas emissions; and

WHEREAS, aligning local greenhouse gas goals with state goals will minimize confusion on the part of the public and facilitate statewide collaboration in reducing the damage caused and risks created by greenhouse gas emissions; and

WHEREAS, the Fort Collins Climate Task Force has recommended that Council include in this Resolution an additional goal to the effect that the Fort Collins community reduce its current greenhouse gas emissions so that, by the end of 2012, such emissions do not exceed 2.466 million tons.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF FORT COLLINS as follows:

Section 1. That the Council hereby establishes the goals of reducing Fort Collins' community-wide greenhouse gas emissions 20% below 2005 levels by 2020 and 80% below 2005 levels by 2050.

Section 2. That, pending attainment of such goals, the Council hereby expresses its intent to reduce current community-wide greenhouse gas emissions by the end of 2012 to a level not to exceed 2.466 million tons.

Section 3. That the City government must lead by example in this area by minimizing greenhouse gas emissions in its own operations through the establishment of policies and directions that will lead the community to a sustainable future, and, most importantly, by inspiring community involvement in the effort to reduce greenhouse gas emissions.

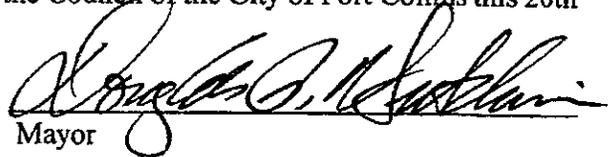
Section 4. That the City Manager is hereby directed to prepare for Council consideration an updated plan to reduce greenhouse gas emissions within the Fort Collins community that identifies interim milestones needed to put Fort Collins on a trajectory to meet the 2020 goal, including the milestone for the year 2012 referenced in Section 2 above.

Section 5. That such updated plan shall include a list of strategies demonstrating how interim milestones can be met and that these strategies should: consider relevant technical, economic, political, and social factors; promote economic vitality and prioritize investments in the Fort Collins community; address all emissions sectors; and promote involvement by all segments of the community (local businesses, governments, utilities, schools, universities, non-profit organizations, homeowners, and other individuals).

Section 6. That the City Manager is further hereby directed to: (a) prepare an annual report tracking progress toward attainment of the goals established herein, including a community-wide greenhouse gas emissions inventory and a list of quantified emission reductions actions for the preceding calendar year; and (b) biennially, at least six months in advance of the City's biennial budget preparation, prepare a report evaluating progress on greenhouse gas reduction relative to established interim milestones and recommending actions for consideration in the upcoming budget cycle.

Section 7. That the Council hereby recognizes that new data, scientific findings, mitigation technologies, and quantification methodologies may emerge over time and that future Councils may choose to update the community greenhouse gas goal to take in account evolving science, technology or other opportunities.

Passed and adopted at a regular meeting of the Council of the City of Fort Collins this 20th day of May A.D. 2008.


Mayor

ATTEST:


City Clerk / Chief Deputy



Natural Resources Department
 200 West Mountain Ave., Suite A
 PO Box 580
 Fort Collins, CO 80522

970.221.6600
 970.224.6177 - fax
 fcgov.com

MEMORANDUM

TO: Mayor Hutchinson and Members of City Council

THROUGH: Darin Atteberry, City Manager *DA*
 Diane Jones, Deputy City Manager *DJ*

FROM: Lucinda Smith, Sr. Environmental Planner

CC: Marty Heffernan, CPRE Director
 John Stokes, NRD Director

DATE: April 11, 2008

SUBJECT: Response to Questions Related to Greenhouse Gas Reductions and Goals

The information below is provided in response to three Council questions that have arisen recently as Council considers progress on a local greenhouse gas goal.

I. Provide a synopsis of what has been achieved from the time the goal was established to present

In 1999, Fort Collins City Council adopted the Fort Collins Local Action Plan to Reduce Greenhouse Gas Emissions and set a goal to reduce citywide greenhouse gas emissions 30 percent below predicted 2010 levels, by 2010. Resolution 99-137 also called for formation of an Energy Management Team to facilitate implementation of the plan, prepare biennial reports to evaluate the City's progress on greenhouse gas reduction efforts and recommend future climate protection actions.

The first biennial report was completed in April 2001. It showed that Fort Collins' residents, businesses and the City government together avoided an estimated 190,000 tons of carbon dioxide equivalent (CO₂e) in the year 2000 alone, or 10% of emissions. The second biennial report covered the years 2001 and 2002 and estimated that nearly 237,000 tons of CO₂e were avoided in Fort Collins in 2001, based on all measures that could be quantified in that year. Quantifiable climate protection activities reduced citywide emissions by 10% in the year 2001.

The third biennial report quantified greenhouse gas emissions and reductions for 2003 and 2004. It estimated that over 241,000 tons of CO₂e were avoided in Fort Collins in 2004. The majority of 2004 reductions (64%) came from businesses and organizations through participation in Climate Wise, recycling, purchasing wind power, energy conservation, and trip reduction.

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Individual citizens were responsible for 22% of the reductions by recycling, purchasing wind power, and participating in Fort Collins Utility rebate programs. The City government achieved 14% of the citywide reductions through efficiencies in the electricity distribution system, methane flaring at the wastewater treatment plant and the purchase of wind energy. Quantifiable climate protection activities reduced citywide emissions by 9% in 2004. These reports are posted at <http://fcgov.com/climateprotection/policy.php>

The Climate Status Report for 2005 and 2006 is nearly complete. Preliminary estimates indicate that over 247,000 tons of CO₂e were avoided in 2006. Staff anticipates completing this report by the end of April 2008.

Some of the key climate protection implementation highlights from 2000 through 2006 are listed below.

Conversion of traffic signals to energy efficient light-emitting diodes

This action was ranked the highest priority for implementation. The conversion of red and green signals to LEDs saves over \$110,000/year in electricity and maintenance costs, with an initial capital cost of \$370,000, for a ~ 3.4 year payback.

Climate Wise Business Outreach

The Fort Collins Climate Wise voluntary business outreach program was initiated in 2000 and has been growing ever since. As of 2006, Climate Wise partners collectively avoided over 62,000 tons CO₂e in that year alone, and reported over \$2 million in cost savings since 2001. The program has now grown to over 70 partners and the greenhouse gas reduction and cost savings are increasing as well.

Wind Energy Program

Fort Collins Utilities has offered renewable energy to customers through the Wind Program since 1998. The program has grown steadily since that time and by 2006, there were over 1400 residential and over 80 commercial subscribers, avoiding over 19,000 tons CO₂e in 2006 alone.

2004 Update to Residential Building Code

The 2004 energy code update for Fort Collins residential buildings requires energy efficiency improvements (R-18 walls, low-e windows, more effective furnaces, duct work, right-sized AC systems). These upgrades will save homeowners \$90 - \$150/yr/home in utility costs and will avoid 1.2 - 1.5 tons CO₂e/home/year.

Addition of a centralized recycling drop-off site

The Rivendell site opened March 2002. By 2004, Rivendell was receiving approximately 1,400 tons material each year, and the usage is growing. In 2004, Rivendell recycling resulted in approximately 1,800 tons CO₂e avoided and provides added convenience to citizens for recycling.

Electric Energy Supply Policy

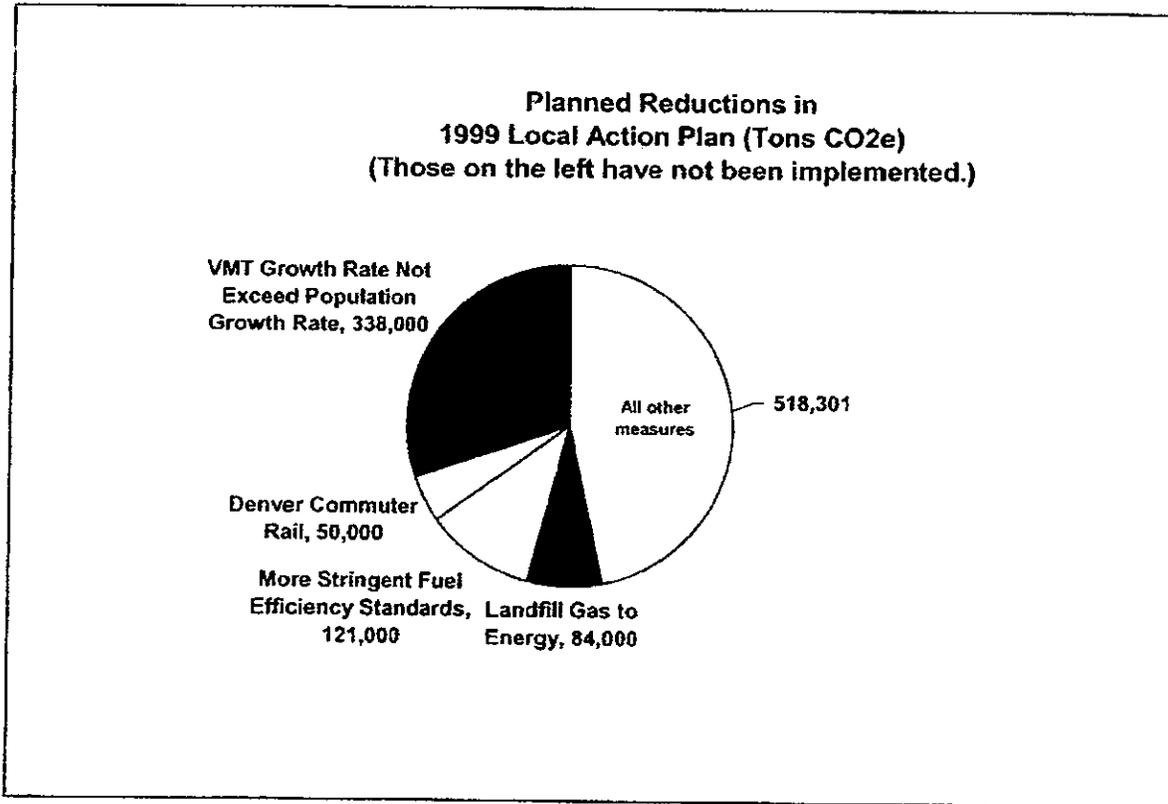
In addition to measures include in the 1999 Local Action Plan, the passage of the Electric Energy Supply Policy in 2003 has led to significant greenhouse gas reductions. The targets of the supply policy are:

- Reduce per capita electric consumption 10% from 2002 levels by 2012
- Reduce per capita demand peak 15%
- 15% renewable energy by 2017

A 1% fee on utility bills funds the energy efficiency and green power programs. Collectively, programs the demand side management programs, including refrigerator recycling, have reduced over 20,000tons CO₂e in 2006.

II. Reasons Why Fort Collins is Not On Tack to Meet the 2010 Goal

A primary reason Fort Collins is not on track to meet the 2010 goal is that the 1999 Local Action Plan to Reduce Greenhouse Gas Emissions included a few large strategies that were not implemented. Three large strategies were not directly within local control (Denver Commuter Rail, More Stringent Vehicle Fuel Efficiency Standards, and Landfill Methane Capture), and one strategy was not met (VMT Growth Rate Not Exceed Population Growth Rate). Together, these four strategies represented over 50% of the total reduction strategies contained in the original Local Action Plan.



The consequence of including strategies not in local control in the first climate action plan underscores the reason the current Climate Task Force is focusing on strategies that are within local control.

While each biennial climate status report identified progress on the goal and identified strategies for future implementation in the next budget cycle, no projection of the new or revised strategies out to 2010 was done and some of the identified strategies were only partially implemented or were not implemented. Consequently, Fort Collins drifted off track to meet the 2010 goal, despite successful implementation of a number of measures.

Lessons Learned

- Focus on strategies within local control
- Increase Council and public review of periodic reporting

III. Interim Reporting and Milestones Under a New Goal

At a meeting on March 31, the Climate Task Force (CTF) has recommended annual reporting on a new greenhouse gas goal and the establishment of biennial milestones that are synchronized with the biennial budget cycle. The CTF recommends that these milestone years should include a comprehensive assessment of progress and review at a City Council work session.

It is important to know that the emissions inventory and reduction quantification methodologies and data availability may continue to change with time, requiring updates to the numbers. It is also likely that future emissions reductions will not occur linearly each year. There may be some years with larger reductions and other years with smaller reductions. A schedule for milestones will be developed and proposed as the greenhouse gas planning process moves forward that attempts to reflect these points and provide for serious discussion about contingencies if the need arises.



Natural Resources Department
200 West Mountain Ave., Suite A
PO Box 580
Fort Collins, CO 80522
970.221.6600
970.224.6177 - fax
fcgov.com

MEMORANDUM

TO: Mayor Hutchinson and City Councilmembers

THRU: Darin Atteberry, City Manager *DA*
Diane Jones, Deputy City Manager *DJ*

FROM: Lucinda Smith, Sr. Environmental Planner *LRS*

CC: Brian Janonis, Utilities General Manager
Marty Heffernan, CPRE Director
John Stokes, NRD Director

DATE: March 31, 2008

SUBJECT: March 25, 2008 Work Session Summary – Greenhouse Gas Goals

On March 25, 2008, City Council held a work session to discuss the greenhouse gas goals for Fort Collins. All Councilmembers were present. At the start of the agenda item, Brian Janonis and Brian Moeck provided comments to Council about Renewable Energy Credits and answered questions. Council requested two follow-up items:

- A two-pager that defines "Renewable Energy Credits", what we have and are expected to purchase, why we would invest in more RECs instead of creating more of our own product, what do our policies say vs. the perception of what boards would like to see done in the future, etc. Include a list of acronyms and the associated descriptions.
- A "road map" related to the Smart Grid.

John Stokes and Lucinda Smith then made the staff presentation on greenhouse gas goals. Kevin Cross, representing the Fort Collins Sustainability Group was invited to the table.

In summary, all Council members supported consideration of a resolution adopting the state greenhouse gas goal to reduce emissions 20% below 2005 levels by 2020 and 80% below 2005 levels by 2050. Two members also wanted an interim goal established to achieve the existing 2010 goal threshold of 2,466,000 tons greenhouse gas emissions by the end of 2011. Council stressed the importance of continuing existing actions, taking additional actions soon and establishing a robust process for annual reporting, public review and course correction. There was some interest in establishing a public review board.

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Council members indicated support for the following chronological process:

- Council resolution to adopt goal
- Climate Task Force (CTF) complete recommendations to the City Manager
- Staff develop recommendations on updated climate action plan, taking into consideration CTF recommendations
- Council work session
- Public outreach
- Council action to adopt climate action plan. *(Note: Specific recommendations in the plan would require subsequent Council implementation steps.)*

Council also asked for the following information to accompany the resolution on greenhouse gas goals:

- 2007 Fort Collins greenhouse gas emissions inventory
- Side by side comparison of all the slides to provide an organized, complete graphical depiction of the goals

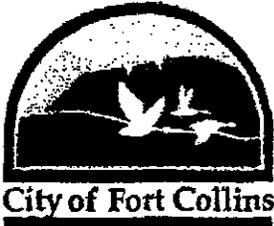
Requests were made that the Resolution to adopt the goal include statements about:

- Importance of climate change issue locally and globally
- Importance for Fort Collins to do its share
- List of co-benefits from climate protection strategies
- The need for the climate plan to articulate interim milestones and establish an annual reporting and review process
- A caveat for updating the goal, in light of evolving science, technology or other opportunities
- Encouragement of all organizations in Fort Collins to do their share

Some Council members raised concerns that little had been done to reduce or track emissions since the goal was set in 1999. A brief summary of progress is provided in Attachment 1.

Next Steps

Staff will prepare a resolution to adopt the state greenhouse gas goals and supporting materials for consideration at a future City Council meeting as soon as possible.



Natural Resources Department
200 West Mountain Ave., Suite A
PO Box 580
Fort Collins, CO 80522
970.221.6600
970.224.6177 - fax
fcgov.com

MEMORANDUM

TO: Mayor Hutchinson and City Councilmembers

THRU: Darin Atteberry, City Manager *DA*
Diane Jones, Deputy City Manager *DJ*
grr

FROM: Lucinda Smith, Sr. Environmental Planner

CC: Marty Heffernan, CPRE Director
John Stokes, NRD Director

DATE: February 29, 2008

SUBJECT: February 26, 2008 Work Session Summary – Climate Task Force

On February 26, 2008, City Council held a work session to discuss the Climate Task Force work to date. All Councilmembers were present except Councilman Brown. In addition to John Stokes and Lucinda Smith, several staff were present in the audience as well as a number of Climate Task Force members, in case questions arose.

In summary, Councilmembers present indicated support for Fort Collins working to reduce greenhouse gas emissions. They did not discuss many details of the Short-term Provisional Package, but raised questions about the appropriateness of the existing 2010 greenhouse gas goal. They recognized the challenge of achieving a 2010 goal that was accentuated by the cost estimates of the Short-Term Provisional Package. They encouraged an approach that reflects longer-term thinking yet be appropriately aggressive in the short-term. They asked about the relationship of Fort Collins' existing goal (to reduce emissions 30% below predicted 2010 levels, by 2010) to the state's 2020 goal (to reduce emissions 20% below 2005 levels by 2020).

Councilmembers individually suggested that the task force consider economic opportunities and impacts to Fort Collins, whole energy-systems thinking, green building, regional coordination, the importance of community engagement, the importance of periodic progress reporting, and ensuring synchronization with other City planning efforts currently underway.

Next Steps

On March 3, 2008, the City Leadership Team will discuss the process by which the City's greenhouse gas goal will be revised to consider a longer planning horizon. The results of this discussion will be communicated to the Climate Task Force so the next steps can be planned accordingly.

Table 1. Preliminary 2006 Fort Collins Greenhouse Gas Reductions (3/31/08)

Citywide Quantifiable Measures	Tons CO2 reduced in 2006
Climate Wise for businesses	62,000
General Total	62,000
1997 City Energy Code	9,900
Demand Side Mgmt Programs	20,000
Wind Renewabel Energy	19,000
Rate-based Renewable Energy	12,000
Energy Total	60,900
VAN GO in Fort Collins	300
Transportation Total	300
Business Recycling	79,000
Residential Recycling	39,500
Larimer County Wood Waste Diversion	
Solid Waste Total	118,500
CO ₂ Sequestration by trees	26,200
Vegetation Total	26,200
Citywide Water conservation	11
Water Total	0

DRAFT

DRAFT

DRAFT

Municipal Quantifiable Measures	Tons CO2 reduced in 2006
FC Electricity Distribution	24,300
City Wind Energy	1,100
Replace Traffic Signals with LEDs	1,400
Lighting Upgrades - City Buildings: 90-01	100
Chillers	100
Energy Total	27,000
Alternative Fuels - City Fleet vehicles	700
Hybrid Vehicles - City Fleet vehicles	10
Transportation Total	700
Methane Flaring and Heat Recovery	4,200
City gov recycling	600
Solid Waste Total	4,900
SIRE Electronic Document Archive	18
Purchasing Total	18

DRAFT

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Wind Energy Program

Fort Collins Utilities has offered renewable energy to customers through the Wind Program since 1998. The program has grown steadily since that time and by 2006, there were over 1400 residential and over 80 commercial subscribers, avoiding over 19,000 tons CO₂e in 2006 alone.

2004 Update to Residential Building Code

The 2004 energy code update for Fort Collins residential buildings requires energy efficiency improvements (R-18 walls, low-e windows, more effective furnaces, duct work, right-sized AC systems). These upgrades will save homeowners \$90 - \$150/yr/home in utility costs and will avoid 1.2 – 1.5 tons CO₂e/home/year.

Addition of a centralized recycling drop-off site

The Rivendell site opened March 2002. By 2004, Rivendell was receiving approximately 1,400 tons material each year, and the usage is growing. In 2004, Rivendell recycling resulted in approximately 1,800 tons CO₂e avoided and provides added convenience to citizens for recycling.

Electric Energy Supply Policy

In addition to measures include in the Local Action Plan, the passage of the Electric Energy Supply Policy in 2003 has led to significant greenhouse gas reductions. The targets of the supply policy are:

- Reduce per capita electric consumption 10% from 2002 levels by 2012
- Reduce per capita demand peak 15%
- 15% renewable energy by 2017

A 1% fee on utility bills funds the energy efficiency and green power programs. Collectively, programs the demand side management programs, including refrigerator recycling, have reduced over 20,000tons CO₂e in 2006.

Summary of Fort Collins' Greenhouse Gas Reduction Progress (March 2008)

In 1999, Fort Collins City Council adopted the Fort Collins Local Action Plan to Reduce Greenhouse Gas Emissions and set a goal to reduce citywide greenhouse gas emissions 30 percent below predicted 2010 levels, by 2010. Resolution 99-137 also called for formation of an Energy Management Team to facilitate implementation of the plan, prepare biennial reports to evaluate the City's progress on greenhouse gas reduction efforts and recommend future climate protection actions.

The first biennial report was completed in April 2001. It showed that Fort Collins' residents, businesses and the City government together avoided an estimated 190,000 tons of carbon dioxide equivalent (CO₂e) in the year 2000 alone, or 10% of emissions. The second biennial report covered the years 2001 and 2002 and estimated that nearly 237,000 tons of CO₂e were avoided in Fort Collins in 2001, based on all measures that could be quantified in that year. Quantifiable climate protection activities reduced citywide emissions by 10% in the year 2001.

The third biennial report quantified greenhouse gas emissions and reductions for 2003 and 2004. It estimated that over 241,000 tons of CO₂e were avoided in Fort Collins in 2004. The majority of 2004 reductions (64%) came from businesses and organizations through participation in Climate Wise, recycling, purchasing wind power, energy conservation, and trip reduction. Individual citizens were responsible for 22% of the reductions by recycling, purchasing wind power, and participating in Fort Collins Utility rebate programs. The City government achieved 14% of the citywide reductions through efficiencies in the electricity distribution system, methane flaring at the wastewater treatment plant and the purchase of wind energy. Quantifiable climate protection activities reduced citywide emissions by 9% in 2004. These reports are posted at <http://fcgov.com/climateprotection/policy.php>

The Climate Status Report for 2005 and 2006 is nearly complete. Preliminary estimates indicate that over 247,000 tons of CO₂e were avoided in 2006. Table 1 on the back provides the draft quantification of 2006 emissions reductions.

Climate protection Implementation highlights from 2000 through present include:

Conversion of traffic signals to energy efficient light-emitting diodes

This action was ranked the highest priority for implementation. The conversion of red and green signals to LEDs saves over \$110,000/year in electricity and maintenance costs, with an initial capital cost of \$370,000, for a ~ 3.4 year payback.

Climate Wise Business Outreach

The Fort Collins Climate Wise voluntary business outreach program was initiated in 2000 and has been growing ever since. As of 2006, Climate Wise partners collectively avoided over 62,000 tons CO₂e in that year alone, and reported over \$2 million in cost savings since 2001. The program has now grown to over 70 partners and the greenhouse gas reduction and cost savings are increasing as well.



Community Planning and Environmental Services
Natural Resources Department

MEMORANDUM

TO: Mayor and City Councilmembers

THROUGH: Darin Atteberry, City Manager
Gregory Bryne, CPES Director
Ken Mannon, Operations Services Director

FROM: Lucinda Smith, Sr. Environmental Planner

DATE: January 10, 2007

SUBJECT: Summary of January 9, 2007 Climate Work Session Item

Council provided feedback on two questions at the January 9, 2007 Council work session item on the climate plan/task force.

1. Does the City Council wish to bring the resolution originally proposed by the Fort Collins Sustainability Group for formal consideration at a future Council meeting?

All seven members of Council indicated support for a resolution at Council, with the modifications suggested below.

2. Does the Council have any other questions or suggestions regarding adoption of the resolution or Fort Collins' progress on greenhouse gas reduction?

Council concurred with the following modifications to the original resolution proposed by the FCGS:

In the "Whereas" statements, include a statement that Mayor Hutchinson was appointed as one of ten project directors of a statewide Colorado Climate Project sponsored by the Rocky Mountain Climate Organization. The purpose of the project is to bring Coloradoans together to reduce the state's contribution and vulnerability to a changed climate.

In the "NOW THEREFORE BE IT RESOLVED..." section clarify:

"that the City Manager shall appoint and convene a task force consisting of members selected from citizens, the City's boards and commissions, and staff to elicit public input and develop an updated plan that will describe steps our community could take to meet the greenhouse gas emissions target established by Resolution 99-137."

Clarify that the task force be allowed and encouraged to determine the methods they think would be most appropriate for gathering information linked to their work.

Clarify that the work of the task force will be coordinated with the appropriate City boards and commissions such as the Air Quality Board, the Electric Board, and the Natural Resources Board.

Staff will prepare a resolution for Council consideration at the February 6, 2007 Council meeting.