

# A Community Takes Charge: Boulder's Carbon Tax

Carolyn Brouillard  
Sarah Van Pelt

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## **Abstract**

This paper discusses the development and implementation of Boulder's carbon charge and offers a brief history of Boulder's climate protection program. The city of Boulder needed a long-term revenue source to fund its climate protection program and meet City Council's Kyoto Goal. In 2003, growing momentum for city action on energy issues led to the dedication of \$100,000 from the city's General Fund for limited analysis and programs in 2004. A two-year increase in the city's Trash Tax provided an annual budget of \$258,000 for energy and greenhouse gas programs. The short-term and limited nature of the Trash Tax, as well as public concern over the tax increase, meant that a new, long-term revenue stream would be needed to continue the greenhouse gas programs beyond 2006. Staff hired a consultant team to complete a report on potential long-term funding options. The public and city staff process surrounding the report highlighted limitations of the options and resulted in the city aggressively pursuing the carbon charge concept. Xcel Energy, the investor-owned utility serving Boulder, agreed to collect the charge on Boulder's behalf on the condition that it was passed by the voters. On November 7, 2006, Boulder voters approved Initiative 202, the Climate Action Plan Tax, marking the first time in the nation that a municipal government will impose an energy tax on its residents to directly combat climate change.

## **Introduction**

Unlike many cities with community energy and greenhouse gas (GHG) programs, Boulder does not have a municipal utility or a statewide system benefit or public goods charge to provide program funding. Like many cities, Boulder has faced declining revenues and the need to make significant budget cuts, forcing City Council to make difficult decisions about scaling back levels of services and staffing. As such, there were no substantial and unrestricted internal sources of funding that could be diverted to fully fund the climate change program at approximately \$1 million per year through 2012. In order to fund the climate program and meet City Council's Kyoto Goal, the city would need a source of new, long term revenue.

This paper discusses the development and implementation of Boulder's carbon charge and offers a brief history of Boulder's climate protection program. Relevant City Council meeting documents and the Climate Action Plan are available on the Community Relations page within the Energy and Climate section at [www.environmentalaffairs.com](http://www.environmentalaffairs.com).

## **Background**

Boulder is a college town in Northern Colorado known for its beautiful mountain landscapes. Boulder has approximately 100,000 residents, including resident students at the University of Colorado. Boulder is also home to many federal laboratories, such as the National Center for Atmospheric Research (NCAR) and the National Oceanic and Atmospheric Administration (NOAA), high-tech companies, energy and environmental consultants and natural lifestyle companies. The community has a strong and long-lived interest in environmental protection, as is shown by its commitment to preserving open space, recycling and waste diversion, promoting the natural and organic products industry, and maintaining a high quality of life.

The Office of Environmental Affairs (OEA) at the city of Boulder is responsible for implementing many of the city's environmental policies and programs. The OEA works in the following program areas: waste reduction, green building, integrated pest management, pollution prevention, and energy and GHG emissions reduction. As of December 2006, there were seven full time employees, with each employee generally dedicated to a specific work area or program. The OEA reports directly to the City Manager's Office and works closely with City Council and its advisory board.

## **The Kyoto Resolution and the BREEE Report**

In 2002, the Boulder City Council formally recognized the need to take action on climate change and passed a resolution committing the city to an initial goal of reducing greenhouse gas (GHG) emissions to seven percent reduction below 1990 levels by 2012. The resolution, referred to as the Kyoto Resolution, directed staff to develop a local action plan outlining cost-effective actions to reduce emissions in all sectors. The resolution also prompted the creation of a volunteer working group—the Boulder Renewable Energy and Energy Efficiency working group (BREEE)—comprised of local energy experts, students, interested residents and city staff. Initially, BREEE intended to develop a preliminary energy efficiency and renewable energy roadmap for the city. However, a local carbon expert suggested that efficiency and renewable energy be addressed within the context of a comprehensive GHG mitigation plan. BREEE met bi-monthly over the course of several months and developed a report including a preliminary greenhouse gas emissions inventory, policy and program recommendations to reduce emissions,

an estimate of the emissions reductions of existing city programs and potential long term funding sources. The report was an important first attempt at defining the scale of the challenge and highlighting potential opportunities to save energy and reduce emissions. It also was successful in helping to catalyze city action and commitment to developing a comprehensive emissions reduction program. Much of staff's early work, particularly reports to City Council, was made possible by the efforts of the dedicated individuals engaged in BREEE.

The BREEE report was completed in early 2003 and the group continued to meet to discuss strategies for reducing emissions in Boulder. The growing momentum inspired staff to launch its first formal energy efficiency program in the fall of 2003. Through participation in Xcel Energy's Custom Efficiency rebate program, the city could offer Xcel rebates to Boulder businesses that completed efficiency projects, particularly lighting retrofits.<sup>1</sup> Staff also placed more emphasis on raising awareness of energy issues through water bill inserts and increased visibility of energy in its pollution prevention program, Partners for A Clean Environment (PACE).

### **2004: The Energy Builds**

As part of the 2004 budget process, City Council made a one-time appropriation of \$100,000 from the City Manager's contingency fund for greenhouse gas and energy programs. Specifically, the funds were to be used to hire a consulting company, Econergy, to begin quantifying and analyzing the emissions reductions needed to meet the goal and to hire a fixed term, full time employee to work on energy programs and assist with the development of the action plan.

The 2004 budget allocation allowed staff to dedicate time and resources towards research, planning and analysis, outreach and limited programs, and to cultivating relationships with community stakeholders, other Front Range cities and national programs, such as ENERGY STAR and the Chicago Climate Exchange. Highlights from the 2004 Progress Report include:

- Finalized GHG Emissions Inventory;
- Completed commercial buildings analysis and report;
- Analyzed environmental and economic impacts of various packages of energy efficiency measures;
- Created a preliminary residential buildings analysis;
- \$55,000 in lighting rebates provided to 13 local businesses, saving a combined \$104,000 a year in energy costs;
- Distribution of over 2,100 energy-efficient light bulbs and related educational material;
- Replacement of 250 halogen floor lamps with energy efficient models, as part of a community halogen lamp swap; and
- A small (under 1,000 mtCO<sub>2</sub>e) but significant start in reducing GHG emissions toward the Council's Kyoto Protocol goal.

The decision to hire a consulting firm, Econergy, to complete the emissions inventory was partly a result of concerns by some BREEE members and energy experts about available software.

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<sup>1</sup> For more information on the city's participation in Xcel's rebate program, see "Lightening the Load: Promoting Utility Rebates to Boulder Businesses" at [www.environmentalaffairs.com](http://www.environmentalaffairs.com)

Specifically, they found that it was not transparent, making it difficult to judge if it was consistent with the WRI Protocol. Additionally, the inventory in the BREEE report was based on data from three or four years. Econergy refined the inventory using data from each year back to 1990 and developed an Inventory Maintenance System to track annual emissions. The updated inventory improved confidence in the 2012 forecast. A valuable outcome of developing the inventory was strengthened communication and relationships with Xcel Energy and other city departments, on which staff was dependent for data. Econergy's commercial buildings analysis was also useful in understanding the magnitude of the challenge and for providing data for future analyses.

### **The Trash Tax**

As 2004 drew to a close, it was necessary to secure funding if work was to continue in 2005. Staff did not seriously begin looking at potential long term funding options in 2004, because they wanted to complete more planning and analysis to determine how much funding would be required to meet the Goal. In short, without a completed inventory and analysis and relatively little community engagement, it seemed premature to spend a significant portion of the limited budget on developing a long term funding source. Moreover, it was unlikely that City Council would be comfortable making a decision on a funding source without a clear understanding of how the funds would be used.

The city's Trash Tax was highlighted as a source of two year bridge funding. The Trash Tax is an occupation tax on the trash haulers in Boulder, based on the amount of trash they collect in the city limits. This tax is passed on to customers based on the customer's level of trash service. Though not technically earmarked, Trash Tax revenues historically had been used for waste reduction programs and related personnel expenses. City Council has the authority to increase the tax up to the voter-approved cap.

In order to provide funds for the GHG program, the Trash Tax would have to be increased. This increase would be in addition to a \$210,000 increase proposed by waste reduction staff for more waste reduction programs. GHG staff initially requested an annual budget of \$440,000 to complete the planning and analysis, increase program offerings and add another full time employee. Feedback from the City Manager's Office and City Council instructed staff to reevaluate its budget needs, i.e. scale back its request. Staff developed an alternate and lower budget of \$258,000 per year. The lesser amount reflected the elimination of .5 FTE and cuts in programs. At the October 2004 Study Session, Council also directed staff to focus on limited commercial and residential energy programs and not on analysis of other sectors, particularly analysis by private consultants.

Consideration of the Trash Tax evoked lively debate on whether it was an appropriate source of funds for energy and greenhouse gas programs and ultimately required Council to either reaffirm or reject its commitment to meeting the Kyoto Goal. This was a significant issue as many of the Council members that voted for the resolution were no longer on the Council and some of the new members had serious concerns over whether climate protection was a legitimate role for city government. Specific to the Trash Tax, some Council and community members questioned the strength of the nexus between the funding source and work to be funded. The situation was intensified due to a perceived lack of notice, specifically to the business community, of the tax

increase. Several members of the community felt like the tax was being pushed through “under the radar,” which naturally prompted public resentment. In retrospect, staff made the mistake of relying on the media to cover the Study Sessions and city conversations about the tax increase. The media did not cover the story until it was a controversy, for which the media found willing and vocal opponents. For example, the media focused on the percent increase rather than the actual dollar increase, which was as much as \$1.30 per month per household depending on trash subscription level. It is likely that part, if not most of the controversy could have been avoided with more concerted and timely effort to explain the tax increase to the public. Ultimately, Council decided to raise the Trash Tax, providing an annual budget of \$258,000 for the GHG Program. A hotline received complaints for approximately a month and then the calls ended. As promised, the GHG portion of the Trash Tax was sunset at the end of 2006.

### **The Search for Long Term Funding**

Along with limited commercial and residential energy efficiency programs, Council directed staff to concentrate on developing options for long term funding of the GHG Program. In March 2005, staff released an RFP seeking a consultant(s) to complete an analysis of potential funding options to generate long-term revenue for the implementation of the city of Boulder’s Greenhouse Gas Emissions Management Plan. The RFP stated that the funding source should be capable of generating one to three million general fund dollars annually for greenhouse gas programs and related personnel expenses. The funding source should be able to be implemented by January 1, 2007 and generate revenue for at least six years. The funding source should also be within the city’s legal ability to implement, have a logical relationship to the work being funded, and not involve a sales tax increase. Staff had approximately \$40,000 to dedicate to the funding analysis.

It is instructive to note that though staff had ideas on potential funding sources, they did not have the time or legal or financial expertise to adequately analyze and determine the feasibility of the options. Staff sought consultants that could contribute that expertise, as well as provide an independent analysis for staff and Council’s consideration. It is also instructive to note that in early 2005 a local energy efficiency advocacy organization had written a bill that was debated in Colorado’s House and Senate authorizing natural gas demand side management (DSM) programs and creating a statewide system benefit charge. Xcel Energy supported the natural gas DSM programs, but did not support the system benefit charge citing administrative burdens. The bill was vetoed by the Governor, leaving the impression that Xcel would fight a local system benefit charge. At that time, it was not known whether a local system benefit charge would require changes to the city’s franchise agreement with Xcel or the city charter. The decision was made to pursue other funding options given the apparent likelihood that Xcel would not collect a charge on Boulder’s behalf.

The funding RFP was reissued in April, as the quantity and quality of responses were low from the first round. It is assumed that part of the reason for the low response was a short turnaround time and conflicts with Spring Break. It wasn’t until mid May 2005 that staff hired a consultant team headed by Heidi VanGenderen, the University of Colorado’s Wirth Chair. To assist with this project, the Chair assembled a multi-disciplinary team (Team) with state-of-the-industry experience in identifying, securing and financing new revenue streams to fund sustainability and other governmental initiatives. In addition to the Chair, the Team was comprised of Shaw

Environmental and Infrastructure, Inc. (Shaw), Scott Balice Strategies, Policy Solutions Ltd. and Natural Capitalism Solutions (NCS).<sup>2</sup>

As part of the funding analysis, the Team completed a resource inventory cataloging city taxes, fees, and bonds, as well as applicable grants and programs that could potentially provide funds for GHG mitigation. The goal of the inventory was to highlight existing revenue sources or fund balances that could potentially be directed to the GHG Program as one-time seed funding or for on-going support. When this idea and the possible options were vetted with other city directors, it was found that many funding pools could not legally be diverted to other purposes and even if they could, it would shift the burden to other departments to raise replacement funds. Many of the fund balances were being held in reserve for future purposes or as a safety net.

The Team also thoroughly reviewed Boulder's 2004 Comprehensive Annual Financial Report (CAFR) and 2005 Budget to understand the structure of City finances and to identify potential revenues and existing, available funding sources to support the Plan. They also identified existing practices used by other local governments to fund emission reduction strategies.

The consultants' research culminated in a report containing thirteen potential revenue sources that met the criteria outlined in the RFP. The thirteen options could be used in isolation or as part of a package. The options included:

- Establish a Boulder Energy Enterprise and Fee
- Create an annual Vehicle Sticker Fee
- Extend the Trash Tax
- Create a Renewable Energy Mitigation Program/Renewable Energy Mitigation Fund
- Increase the Development Excise Tax
- Create a stand-alone Development Fee
- Increase certain Planning and Development Services fines
- Utilize Special Purpose Districts
- Increase the Admissions Tax
- Levy an Occupational Privilege ("Head") Tax on employees and employers who work in Boulder
- Increase the Public Accommodations Tax
- Increase parking fines
- Grants and Intergovernmental Revenue Sources

Staff and the consultants reviewed these options with the Deputy City Manager and Department directors. The group had the following concerns: competition for funds, particularly with the

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<sup>2</sup> Team members included:

- Heidi VanGenderen, Project Director and Senior Associate of the Wirth Chair in Environmental and Community Development Policy at the Graduate School of Public Affairs of the University of Colorado Denver and Health Sciences Center
- Bill Abolt, Chicago Office Director, and Erin Daughton, Senior Researcher, Shaw Environmental and Infrastructure, Inc.
- Phoebe Selden, Senior Vice President, Scott Balice Strategies
- Christopher Juniper, Vice President and L. Hunter Lovins, President, Natural Capitalism Solutions.
- Henry Henderson, Principal, Policy Solutions, Ltd.

Transportation Master Plan; some options had a weak nexus between funding source and work to be funded, which would be problematic for a fee; some options were politically challenging and undesirable; and there had been no public process up to this point. As a result, the group recommended that some of the options be removed from consideration and that staff should present only the most feasible and desirable options to City Council. The city's Finance Director resurrected the idea of an energy consumption tax to fund the Energy Efficiency and Renewable Energy (EERE) enterprise based on the direct nexus. Staff took note, but proceeded with the consultants' work so as to present to Council a variety of possible options.

Of the thirteen options in the report, staff identified five as having the greatest potential for successful implementation. The five options included the following:

- Establish an Energy Efficiency and Renewable Energy (EERE) enterprise and fee;
- Create an annual Vehicle Sticker Fee;
- Extend the Trash Tax;
- Create a Renewable Energy Mitigation Program/Renewable Energy Mitigation Fund; and
- Increase the Development Excise Tax.

In December 2005, City Council directed staff to continue research on the five options and review them with a variety of committees and stakeholders and return to them in April 2006 with more detailed analysis and recommendations in preparation for a final decision in June. They also requested that the funding sources be accompanied by a final Climate Action Plan. Throughout the first and second quarter of 2006, staff reviewed and discussed the funding options and draft Plan with the newly-formed Climate Action Plan Committee (CAPC) and other groups. The CAPC was created to provide input on the funding options and the draft Climate Action Plan. Participants were selected based on an expressed interest in the program, previous involvement with the program, policy knowledge in the field, the time and ability to serve, or by recommendation from other invitees. The members represented a variety of viewpoints and levels of knowledge about climate change and mitigation strategies.

The discussions with city staff and the CAPC highlighted the limitations of the options included in the report. For example, many people had a difficult time understanding the EERE Enterprise and the associated fee or tax. The City Attorney's Office cautioned that there would be state preemption issues with the vehicle sticker fee and it could be problematic to fund building efficiency and other climate programs with a transportation-based fee. Generating sufficient revenue through the Trash Tax would necessitate a dramatic rate increase and again raise nexus concerns. People were generally supportive of the Aspen-style Renewable Energy Mitigation Program, but were concerned that it would be too unstable, narrowly-focused and limited to generate the necessary revenue. It was also mentioned that the option would be best implemented on a county-wide level; Boulder County is exploring the option as a way to address the surge in large homes. Similar problems were raised about increasing the Development Excise Tax to fund the Plan.

In part due to the limitations of the proposed options, two CAPC members introduced other funding proposals. One of the proposals echoed earlier ideas of a local energy consumption or system benefit charge, which became the foundation of the carbon tax. The other proposal was a

fee based on a building's square footage, using square footage as a proxy for energy consumption. Of the two options, the CAPC favored the carbon charge option due to the strong nexus to the work being funded. Staff worked with the City Attorney's Office to submit an informal request to Xcel Energy asking for initial feedback on collecting the charge on the city's behalf. Preliminary conversations with Xcel proved more promising than anticipated, prompting staff to aggressively pursue the option. It is important to note that this conversation happened in parallel with the city's investigation of forming a municipal electric utility. It is unknown how much the municipalization discussion influenced Xcel's position on collecting a Boulder-specific charge on their customers' bills.

There was considerable discussion among the Committee about whether the charge should be a fee or a tax. The primary distinctions are that fees are enacted by City Council and require a demonstrable nexus between the fee and the benefit; Taxes require voter approval and have greater flexibility in terms of the nexus. A voter-approved tax was selected because of potential legal difficulties associated with a fee and the desire to have clear public support. Having public support was also important to Xcel, as they recognized that they would receive the majority of complaints since the charge would appear on their bills.

Even though none of the options from the consultants' report were selected for implementation, the process was valuable. The process helped develop credibility and importance for the climate program within other city departments and provided a framework to have serious discussions with city and community leaders. The process also yielded a few options that could potentially have been used if the carbon tax failed, which was always a possibility.

### **The Climate Action Plan Tax**

At an April 2006 Study Session, staff presented three options to City Council and requested direction on which option or options, if any, to include in the 2007 budget process. The three options, in order of staff recommendation, were the energy tax collected on Xcel bills, square footage fee collected on city water bills or a new fee collection system, and Trash Tax increase. City Council directed the City Attorney's Office to submit a formal letter to Xcel Energy asking them to collect the charge.

Council also directed staff to develop rate structures that varied how much each sector contributed to the total collected revenue. The following table summarizes information that was used to develop rate structures. For example, the table shows that the residential sector contributes 27% of total emissions, is expected to contribute 31% of the total estimated reductions by 2012, is expected to pay 19% of total private investment in energy efficiency and renewable energy, and receive 58% of total city funds through programs, services and education.

	<b>Residential</b>	<b>Commercial</b>	<b>Industrial</b>
Percent of Total Emissions (2005)*	27	53	19
Percent of Total Reductions	31	41	22
Percent of Total Private Investment	19	76	5
Percent of Total Public Investment	58	39	3

\*Other contributing sectors include transportation and solid waste. These emissions were distributed equally among the residential, commercial and industrial sectors.

Other considerations included:

- Some industrial users are addressing emissions and have set targets at a corporate level.
- Increased energy use and emissions are a byproduct of increased production and growth, for which industrial users should not be punished.
- The residential sector will not have access to the level of utility efficiency rebates available to the commercial and industrial sectors. The commercial sector is expected to receive 92% of the anticipated rebates flowing into Boulder.
- Tenants in all sectors may have limited potential for reducing consumption and therefore reducing the charge.
- The charge will represent a higher percentage of monthly income for low-income residents.
- Low income residents are likely renters in older homes with limited potential for reducing charge.
- Customers subscribing to Xcel’s wind power program, Windsource, should not pay the charge for that portion of their electricity use, since their electricity is carbon-neutral.
- Customers of other REC marketers cannot be exempt through Xcel bill for logistical reasons.

Given these considerations, the following rate structures were developed and based on:

- *Emissions allocation model*: Sector contribution to total GHG emissions, such that the percent contribution to total emissions is equal to the percent contributed to total revenue.
- *City funding allocation or “revenue recycling” model*: Proposed allocation of city funds to each sector, such that the amount that each sector pays is equal to what they will receive in city funds through programs and services.
- *Uniform rate model*: Uniform rate for all sectors, such that every household and business pays the same rate.

Each option had advantages and disadvantages. Notably, the Industrial sector had concerns that under the emissions allocation model they would contribute approximately 20% of the revenue, but receive only 3% of city expenditures. The charge could exceed \$20,000 per industrial sector company. Under the city funding allocation model, the residential sector rate is higher and better matches the efforts and funding dedicated to the sector. A drawback of the city allocation model is that the rates could potentially widely vary from year to year. However, under all models the rate would change from year to year. The ability to annually adjust the rate is a key safeguard to optimize the rates in light of the design constraints and achieved outcomes.

City Council decided to set the rate based on the estimated allocation of city funds. This option seemed to balance industrial sector concerns and increase the amount that households would pay, while not being overly burdensome. To address the problem of increasing costs for low income households and renters, staff developed additional programs to help them reduce their electricity consumption.

It should be noted that the limited scale and timeframe of the tax did not demand as rigorous analysis and considerations as if the tax was considered for state-wide or national implementation. Notably, the tax is not designed to influence company investments or consumer decisions, as the tax does not reflect the social cost of carbon or marginal damage associated with increased GHG emissions. To set the rate to better reflect carbon's true cost on a city-wide level would have disadvantaged Boulder companies and increased the already high cost of living in Boulder. It also would have generated a budget in excess of what the city had the capacity and perhaps the political and legal authority to spend. Another limitation is that as electricity consumption increases, the rate actually decreases to maintain desired revenue levels, creating a perverse incentive. However, if emissions are steadily increasing the city has the flexibility to propose a larger budget and consequently higher rates to achieve additional and perhaps harder-to-reach reductions. The city could also pursue regulatory strategies, which are currently not included in the Implementation Plan section of the Climate Action Plan.

Similarly, the city entertained the idea of establishing a Boulder-specific cap and trade program, but staff determined that it was infeasible given the lack of accounting and tracking infrastructure, low potential for flexibility, absence of a long-term goal and high transaction costs. Additionally, to generate public revenue the city government would have to sell emission allowances, which could create a contentious political situation.

### **Setting the Rate**

The first step in establishing the rate was to finalize budget estimates for 2007 to 2012. Staff used a bottom-up approach to estimate the budget. The budget is based on projected expenses for the identified programs, services and related expenses, such as salaries, administrative costs and direct renewable energy purchases, as outlined in the Implementation Section of the Climate Action Plan. These cost estimates were derived from the city's pilot programs, as well as other programs around the state and country and input from technical groups. Additionally, it reflects participation rates and results that are believed to be reasonable, achievable, and slightly conservative, so as not to overestimate results or underestimate the necessary budget.

The estimated budget was used to determine minimum and maximum rates for inclusion in the ballot measure. The Implementation Plan section of the Climate Action Plan outlined detailed activities for each year. Staff used information from existing programs and reasonable assumptions to estimate the necessary budget. The budget ranges from \$860,265 in 2007 to \$1,342,000 in 2012. The annual budget increases reflect larger renewable energy purchases for city operations, annual salary increases, and consumer price index.

The budget estimates were broken down by sector expenditures, such that the residential sector contributes 58%, the commercial sector contributes 39% and the industrial sector contributes 3%. Staff used 2005 electricity consumption data as the basis of forecasting future consumption. Staff

developed a variety of scenarios to ensure that the requisite budget would be generated each year.

During this process, there were a few key factors affecting revenue levels to consider, including:

- As electricity consumption increases, the rate per kilowatt-hour (kWh) will decrease.
- As electricity consumption decreases, the rate per kWh will increase.
- As Windsource subscription increases, it will have the effect of decreasing electricity consumption that is taxed and will increase the rate per kWh. However, the impact on the rate will be related to the level of increase or decrease in consumption of traditional electricity.
- The rate is based on assumptions of electricity consumption for the upcoming year (e.g. 2007), using the past year's data (e.g. 2005).
- Xcel Energy assumes electricity demand will increase by 1.8% annually, but Boulder has experienced greater increases in the past.
- If the energy efficiency measures outlined in the Plan are successfully implemented, it would result in approximately a 10% reduction in projected 2012 consumption, compared to business-as-usual.
- Each sector's rate could change with changes in the allocation of city funds, the budget and above or below average changes in sector consumption.
- To keep administration costs low and the tax simple, only electricity consumption is covered.

As currently designed, the tax will generate about \$1 million annually through 2012 when the tax is set to expire. The City Council set the first year tax at a maximum rate of \$0.0022 per kWh for residential customers; \$0.0004 per kWh for commercial customers; \$0.0002 per kWh for industrial customers. The average household will pay \$1.33 per month and an average business will pay \$3.80 per month.

In subsequent years, the City Council has the authority to increase the rates as needed to fund the Plan, as it may be amended, to a maximum rate of \$0.0049 per kWh for residential customers; \$0.0009 per kWh for commercial customers; \$0.0003 per kWh for industrial customers. These maximum tax rates are estimated to support a maximum \$1,342,000 program budget.

### **Climate Action Plan**

In June 2006, City Council approved the Climate Action Plan (CAP).<sup>3</sup> The plan outlines baseline information, including the emissions inventory, and establishes the context for the GHG work. It also presents emissions reduction strategies for each sector. The primary strategies for reaching the emission reduction goal are to increase energy efficiency (i.e. reduce use), shift to renewable fuel sources for electricity and vehicle fuel, and reduce vehicle miles traveled. The specific strategies are based on programs and policies in other communities, utility energy efficiency programs, staff research, and input from the CAPC. The CAP is continuously evolving in response to new information, legislation and opportunities.

Section VI of the CAP—The Implementation Plan—outlines the specific programs and actions that are proposed for 2007 to 2012, with service levels and programmatic details subject to

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<sup>3</sup> The Climate Action Plan can be viewed at [www.environmentalaffairs.com](http://www.environmentalaffairs.com).

change in response to new circumstances and as targets are achieved. Because energy efficiency is the most cost-effective strategy for reducing emissions, the majority of the annual budget will be directed toward energy efficiency programs, services and outreach.

## **The Election**

In August, City Council took great care in drafting the ballot language and unanimously approved the Climate Action Plan Tax for inclusion on the November ballot. City Council's leadership was very important in gaining public support for the ballot measure. Legally, the city is not allowed to use public funds to advocate for ballot measures. To promote the measure, a group of local supporters, including the mayor, came together to solicit campaign donations, write letters to the editor, hand out yard signs, hold rallies and generally build support for the initiative. Many of the people had been involved in BREEE, consulted with about the Plan or participated in the city's activities and programs. Others were simply interested residents. It is reasonable to assume that staff's outreach and communication efforts and community activities and programs helped familiarize the community with energy and climate change issues and demonstrate the corollary benefits associated with reducing emissions. Staff's efforts in 2004 through 2006 helped build the awareness and confidence needed to pass the measure.<sup>4</sup> At the time of the election, there was no formal opposition to the measure.

It is important to note that despite the Chamber of Commerce's involvement on the CAPC and concerted staff effort to address their concerns, the Chamber initially opposed the ballot measure. Their opposition included the assertions that companies are already taking cost-effective measures to reduce emissions and hiring additional city staff to encourage people to do what they should already be doing or are doing is unnecessary. They also had concerns about the rates for the industrial sector and larger companies. However, after additional internal discussions and a letter from Hunter Lovins (co-founder of the Rocky Mountain Institute and founder of Natural Capitalism Solutions) highlighting the merits and economic benefits of the Plan, the Chamber of Commerce announced support for the measure.

On November 7, 2006, Boulder voters approved Initiative 202, the Climate Action Plan Tax, marking the first time in the nation that a municipal government will impose an energy tax on its residents to directly combat global warming. The Initiative passed with 60% of voters for the measure.

## **Conclusion**

Prior to the November election, staff implemented programs and outreach activities and developed a detailed action plan to demonstrate the city's commitment and competence and to build support for the city's greenhouse gas emissions reduction program. The Emissions Inventory and the Inventory Maintenance System for annual updates were also very important for being able to confidently measure progress. Having two full time employees dedicated to the GHG program also made much of the progress possible. It is difficult to imagine completing the necessary scope of work with less than two dedicated people. Additional staff time, when it was available, noticeably increased the work that could be accomplished. Furthermore, the relatively small budgets enabled staff to complete a range of activities, while requiring that staff be as

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<sup>4</sup> For more information on 2005 and 2006 activities, see the Annual Progress Reports at [www.environmentalaffairs.com](http://www.environmentalaffairs.com)

efficient as possible. The pilot projects were of critical importance in understanding the types of services that are useful to the community and in building relationships. It is reasonable to assume that without staff's efforts to engage the community and demonstrate the economic benefits of saving energy and reducing emissions that it would have been harder to pass the ballot measure authorizing the tax. Additionally, City Council's support was crucial; without it the program would not have been successful.

With passage of the CAP tax, 2007 represents the first year in which funding and staff levels for the city's climate protection efforts will be aligned with the comprehensive actions and programs necessary to make significant progress in reducing emissions. Staff will continue to engage members of the community on suggestions for improving programs and developing new strategies for the Climate Action Plan. Staff will also seek out new partners, such as other cities, counties and non-profit organizations, to leverage resources and share best practices. With this cooperation and the dedicated funding, Boulder is well-equipped to tackle its Kyoto Goal.