

TELLURIDE'S CLIMATE CHANGE **MITIGATION CAMPAIGN**

AN ACTION PLAN FOR DECREASING TELLURIDE'S
CARBON FOOTPRINT

September 15, 2006

OVERVIEW

Global warming poses serious threats to Telluride’s environment, economy, and quality of life. As part of the Canary Initiative, the Mayors U.S. Climate Protection Initiative, and the Rocky Mountain Climate Organization, the Town plans to aggressively reduce global warming pollution from city-owned buildings and fleets, as well as assist the community at large in reducing its global warming pollution to minimize the impacts of this threat.

This program is intended to be consistent with Telluride’s 2006 Master Plan. One Master Plan goal (E) is for Telluride to be a leader in preservation of the natural environment and to strive to be at the forefront of Colorado communities in implementing programs to limit pollution, provide open space protection and other resource protection programs. Another Master Plan goal (I) is for Telluride to explore “sustainable” use of natural resources in policy decisions in order to minimize its use of scarce resources.

It is the intention of this program to prompt staff and all Councils, Commissions, and Advisory Committees to investigate how Climate Change may impact this region specifically and begin to discuss how we as a community might prepare for such a change.

Finally, portions of this program are to be implemented year-round. The awareness campaign is intended to be an annual, local information “fest” that brings the Community into contact with the latest scientific thinking, the most up-to-day technologies, and the Community’s progress regarding Climate Change and Climate Mitigation.

SLOGAN

“Telluride Unplugged”

SCHEDULE

Week Of	Subject Title	Ecology Commission Contact
October 2-6	Telluride Unplugged Kickoff	Karen G. (729-1015, Karen@telluride-co.gov) for advertising
October 9-13	Energy Efficient Lighting	Karen G. (729-1015, Karen@telluride-co.gov) for advertising Kathy Green (728-3596, bonezone@rmi.net) content
October 16-20	Food – How We Eat	Karen G. (729-1015, Karen@telluride-co.gov) for advertising Colin Hubbard (369-1423, chubbard@telluride.k12.co.us) content
October 23-27	Purchasing, Packaging, Reusing, & Recycling	Karen G. (729-1015, Karen@telluride-co.gov) for advertising Kate Wadley (729.1375, highlandskate@yahoo.com) content
October 30 – November 3	Phantom Loads – Those ghoulish electronics	Karen G. (729-1015, Karen@telluride-co.gov) for advertising Lulu Hunt (708.5335, luluhunt@msn.com) content
November 6-10	Transportation	Karen G. (729-1015, Karen@telluride-co.gov) for advertising Daniel Murray (728-2165, dmurray@telluride-co.gov) content

GOAL

To decrease Telluride's carbon emissions from 2004 levels by no less than 15 percent by December 2010 (i.e., in 4 years) and by no less than another 15 percent of 2004 levels by December 2015 (i.e., over an additional 5 years). This goal is incorporates new growth.

NOTE: These goals are based on the scientific consensus that we have a 10-year window to turn global warming around. Also note that the 2003 Town Government Energy Audit (page 9) states that existing Town Buildings could reduce their annual consumption by 20-25 percent by 2010. This statement, however, does not consider the addition of buildings, such as the Pavilion.

OBJECTIVES

NOTE: All outreach to be bilingual (Spanish-English)

1. Decrease Telluride Town Government Carbon Emissions from 2004 gross levels by no less than 15 percent by December 2010 (i.e., in 4 years) and by no less than another 15 percent of 2004 levels by December 2015 (i.e., over an additional 5 years).
 - a. Create a Carbon Footprint for each Department and then work within each Department to set realistic goals for each year 2007 through 2015
 - i. Public Works Department
 1. Transit
 2. Streets & Utilities
 3. Water & Wastewater
 4. Administration
 - ii. Parks and Recreation Department
 - iii. Marshals Department
 - iv. Building Department
 - v. Planning Department
 - vi. Clerks, Finance, Legal, & Manager's Department
 - vii. Town Council
 - b. Develop a reference list for decision making to facilitate understanding about Carbon Impacts.
 - c. Financial Impact Statements on Town Council Memorandums should discuss monetary cost plus carbon costs.
 - d. Use energy more efficiently in the way we travel and heat/power our buildings
2. Educate, Work With, and Motivate Local Businesses to Lower Carbon Emissions
 - a. Telluride Watch Series of Articles chronicling cost savings to businesses that have gone green
 - b. Employee car pooling
 - c. Employee Training for Property Management Companies, Janitorial Companies, Transportation Companies. Have a trainer go to them at their convenience to discuss ways for them to be more "green"
3. Educate and Motivate Citizens and Visitors to Lower Carbon Emissions
 - a. Telluride Watch Series of Articles on 3 levels –
 - i. Climate Change on a Broad Scale

- ii. Climate Change and its immediate impact on the Telluride Region
 - iii. Make it practical – what can I do?
 - b. Create a pamphlet to go into SMPA Bills that makes suggestions for saving power and lowering carbon footprint.
 - c. Create a KOTO Announcement Series, 1 per week repeated at the beginning of the Community Calendar (e.g., this week, change out 2 lightbulb from incandescent to compact fluorescent or LED)
 - d. Work with hardware store to stock and specially identify energy saving devices (comparing the Carbon Emissions of Each Purchase)
- 4. Educate and Motivate the School and School-aged Children to Lower Carbon Emissions
 - a. Meet with the School Board and various other appropriate Boards to see whether the children can spearhead an “Energy Audit” of their building (Elementary, Middle, High School, Pre-Schools?) and identify ways to work toward decreasing or offsetting energy use.
 - b. Mentorship?
 - c. Investigate how to spearhead putting solar panels on school roofs that could be used to power the school and/or input to the SMPA grid.
 - d. Develop a K-12 curriculum of mini-lessons designed to teach Climate Chemistry, the mechanisms of Climate Change, and how man’s everyday choices may cause impacts.
- 5. Create a Sign to add to the Civil Liberties Safe Zone at Town Entrance

RECOMMENDED CHANGES TO TOT BUSINESS PRACTICES IN 2007 FOR CLIMATE CHANGE MITIGATION INITIATIVE

1. Climate Change Mitigation Should Be Part of Business Discussions for Every Town Department, Commission, & Advisory Board

To succeed with implementing a Climate Change Mitigation Initiative and meet CO₂ reduction goals, all aspects of Town Government must begin to change their thinking. Town goal should be to work hard at training ourselves to think differently throughout 2007 so that the new thought patterns will stay with us into the future.

- a. Council should establish a formal Climate Change Policy.
- b. Council should strongly consider appointing a “Champion” within the Town staff, or better yet, “a Champion in Each Department” to “keep the energy up and help ensure that Climate Change Mitigation is a constant consideration.” Staff and Town Volunteers on every level should be engaged; currently, they are not.

2. Town Staff Reports & Recommendations to Town Council

Town staff reports and recommendations to Town Council should not only state the monetary costs under the “*Financial Impacts*” section of their memorandums, they should also state the CO₂ costs. This would help to shift Town Government thinking so that “COST = MONEY + CO₂”, helping the Town to meet its adopted Climate Change Mitigation Goals.

3. Tree Management & Carbon Sequestration Accounting

Trees provide important water quality (1 large tree can reduce Stormwater runoff by up to 4,000 gallons per year, Center for Urban Forest Research), air quality (trees trap and filter particulates in their leaves and twigs and absorb gaseous pollutants), and climate mitigation functions (e.g., 1 tree will consume 1 ton CO₂ in its lifetime. Strategically planted trees—one on east and two on west—can substantially reduce building heating and cooling costs).

In the last 25 years, the Town of Telluride has planted literally hundreds of trees throughout its parks and along its right-of-ways. However, there is no formal accounting of these town assets and there is no singular line item in Town budgets for increased planting and maintenance (i.e., a Tree Asset Management program) of this “green infrastructure.” For example, in Brookline, Massachusetts, the urban forestry budget is a component of the town’s Capital Improvements Program, which places it onto more equal footing with the town’s gray infrastructure. Currently, the Town treats its trees and greenscape, not as a formal asset, but as a nice amenity, a luxury. The evidence shows that it is worth much more to us and therefore it deserves more serious focus and attention.

To establish a Tree Asset Management Program, the Town would have to complete the following tasks:

- (1) Complete a publicly-owned tree inventory that specifies the location, species, size, health, and canopy of each tree.
- (2) Assign a value to each tree.
- (3) Incorporate these assets into the Town’s accounting.
- (4) Establish a tree canopy goal that is tied to CO₂ sequestration to facilitate meeting the TOT Climate Change Mitigation goals.
- (5) Establish a Capital Budget Line Item to finance long-term outlays on these assets to meet and maintain the long-term, tree canopy goal.

This information will be important when determining how the Community can move toward becoming Carbon Neutral.

4. Open Space Management & Carbon Sequestration

Telluride's Open Space provides important water quality, air quality, and climate mitigation functions. These values should be quantified for each acre of major habitat type (e.g., forestland, open meadows, wetlands). In this way, the Community, Town Council, and Staff can begin to have discussions about Open Space—the cost to purchase new open space and other associated expenditures—that reflect the true value of these areas and their benefits. This information will be important when determining how the Community can move toward becoming Carbon Neutral.

5. Energy Independence

a. Solar Potential w/n Telluride's Boundaries

The solar gain along the “sunnyside” of Town is well known to even the most recent arrivals and a general perception that many homes and commercial buildings (i.e., the schools) could be powered at least in part by solar electricity generated on their roofs. Unfortunately, there is a general belief throughout the local population that solar panels are prohibited in the Town's Building Guidelines. It is recommended that the Town create a Solar Power Initiative that undertakes the following tasks:

- (1) Create and pay for a full-page informational advertisement that clarifies the Town's Design Guidelines' position on solar panels. Provides information about how much power the typical roof solar system could generate (e.g., can it provide complete power usage for an average-size home?) and the cost of installation and maintenance.
- (2) Create an incentive program, e.g., cost share for FY 2007 and 2008, to help homeowners to convert to solar.
- (3) Open a dialogue with the R-1 School District about the possibility of installing solar power on their roofs. Potentially help to fund a feasibility and benefit/cost study for the middle/high school building and the elementary school building.

b. Wind Power

Generating wind power may not be feasible within the Telluride Valley. However, the Town might consider offsetting at least a portion of its annual CO₂ emissions by committing to purchase a large block of wind power generation elsewhere each year. Town Council and Telluride citizens would have to determine how much funding should be made available for such an annual purchase. If it were to be based on annual CO₂ emissions generated by government operations, then Town Council would have to determine which year. The Ecology Commission recommends that 2004 CO₂ Emissions be used as a base year for this decision, as it is for all other Climate Change Mitigation determinations.

NOTE: Telluride's 2003 Energy Audit recommended purchasing windpower blocks from SMPA, rather than retrofitting Town Buildings with solar panels. The reason for this is purely financial—the time required for payback is too long.