



# Chapter 5: Develop a Local Action Plan

## Long Term Initiatives

### Education

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*Education is one of the most important long-term initiatives that a city can use to address its greenhouse gas (GHG) emissions. Through education, a city gains greater engagement and support from the community to reduce carbon emissions. At the same time, education fosters critical thinking and nurtures the environmental leaders and experts of the future.*

*There is no right way a city should go about creating an education initiative, but many cities are trying different programs with great success. A few will be highlighted in case studies below. The most important thing to remember is that in order to create a successful education initiative, people must be interested, engaged and feel that they can take steps in their own lives to make a difference.*

### Community Education Initiatives

Initiatives to educate communities on climate change and GHG reduction include:

#### School Initiatives

Create a challenge for local schools to meet, such as reducing their school’s energy use or reducing waste. Give the winning school or class a prize (such as a field trip, school event, award or prize related to reducing emissions). Some schools have offered faculty and students a share of the savings they achieved by shutting off unneeded lights and otherwise reducing energy waste. They have often been surprised by the size of the resulting savings. Similar programs can be offered to the facilities staff. Resulting awards can be used to increase staff salaries, hold a party or buy needed equipment for programs. Or even better, the savings can go into a fund to capitalize further savings.

### School Curriculum

Develop a curriculum for schools focused on a specific grade, specific class or a course section for all grades. The curriculum can be either optional or mandatory. Focus on making the curriculum engaging and interactive.<sup>1</sup> The electric utility BC Hydro worked with schools in the Vancouver area to create a software program that students could use in their school to identify and capture energy savings, and another that they could take home to do an audit of their own houses.

### Community Emissions Reduction Challenges

Create a community-wide goal. For example, Burlington, Vermont challenged the community to reduce carbon emissions 10% by 2010. Provide incentives, education and resources for participants. The more people know about the climate reduction program, the greater its likely success.

### Distribute Educational Materials

Make educational materials widely accessible and engaging to all ages and groups.

### Museum and Science Centers

Encourage local museums and science centers to include interactive, hand-on displays on climate change and its relation to energy use. Encourage and provide incentives to local schools to take students to visit.<sup>2</sup>

### Engage Community Stakeholders

Successful education programs incorporate local groups, experts and activists in all stages of the planning and implementation processes. Refer to Chapter 5, Stakeholder Engagement section for more information and resources.

## Community Education

### CASE STUDY: Burlington, VT

In May of 2000, the City Council of Burlington adopted a Climate Action Plan aimed at reversing the steady growth of GHG emissions in the city of Burlington. In April of 2002, the 10% Challenge program was launched as a joint effort between the Mayor's task force and community leaders. The goal of the program was to encourage individuals, households and businesses to reduce GHG emissions and to educate communities in and around Vermont on the threat of global climate change to the environment and the economy. The program's goal is to reduce GHG emissions by 10% below 1997 emissions levels by 2010.<sup>3</sup>

Since the program's launch, 93 businesses and 1,200 residences have begun to reduce their global warming pollution. Many cities near Burlington have also joined the 10% Challenge. Employees in municipalities are encouraged to create energy saving initiatives such as making thoughtful decisions regarding consumption of office products, turning office equipment on to "sleep" mode when not in use, purchasing Energy Star equipment and buying office supplies in bulk whenever possible.<sup>4</sup>

The 10% Challenge provides the tools and the information people need to conserve energy at home and at work.

An online emissions calculator helps businesses and residence calculate their current annual greenhouse gas emissions and their target emissions. Resources on the website give participants ideas on how they can meet their goals. The program also provides incentives and awards for participants who meet their 10% goal.

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<sup>1</sup> For ideas on school curriculum see resources at end of this document.

<sup>2</sup> For more information and ideas for museum and science center displays see, [globalwarmingcalifornia.net/museums.htm](http://globalwarmingcalifornia.net/museums.htm), 5 October 2006.

<sup>3</sup> Clean Air—Cool Planet, [www.cleanair-coolplanet.org/for\\_communities/behavior\\_change.php](http://www.cleanair-coolplanet.org/for_communities/behavior_change.php), 29 September, 2006.

<sup>4</sup> The 10% Challenge. [www.10percentchallenge.org/](http://www.10percentchallenge.org/), 5 October 2006.

## CASE STUDY: Telluride, CO

The Town of Telluride, Colorado launched the “Telluride Unplugged” Initiative in 2006. Telluride Unplugged was a 6-week campaign focused on educating and engaging the public about what they can do to reduce carbon emissions. As a signer of the U.S. Mayor’s Climate Protection Agreement, Telluride’s initiative is part of its effort to reduce GHG emissions 7% by 2012.<sup>5</sup>

Each week of the event focuses on a different area, with themes

ranging from energy efficient lighting to food to transportation.

The first week’s introduction began with a free screening of Al Gore’s “An Inconvenient Truth” and a call for residents to calculate their carbon footprint to provide each person with a baseline for setting individual reduction goals. Carbon footprint calculation worksheets were made available at the public library, town hall and the local farmer’s market, as well as online.

According to Karen Guglielmono, a Telluride public works official, “Telluride Unplugged is the beginning of Telluride government trying to engage the broader community in its efforts to reduce our carbon footprint.”<sup>6</sup>

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## CASE STUDY: SYNERGY, Actus Lend Lease

SYNERGY, which stands for Saving Your Nation’s Energy, is an Actus Lend Lease<sup>7</sup> program that strives to reduce energy consumption through community-based education efforts, portfolio-wide technological solutions and symbiotic partnerships with our stakeholders. SYNERGY is the only program in the real estate industry to take this kind of comprehensive approach to the reduction of energy usage—with a focus on both building efficiency and behavioral modification.

SYNERGY has helped residents, businesses and organizations throughout the country make substantial savings in energy use.

At Fort Campbell (Kentucky) and Fort Hood (Texas), SYNERGY has assisted in reducing energy consumption by as much as 12% over the same month the prior year. At Fort Drum (New York), electricity costs plummeted \$13,000 (or 14%) from May 2006 to June 2006 as SYNERGY community programs and

educational efforts got underway.<sup>8</sup>

Sample efforts include:

**Distributing and reviewing conservation tips with all new residents**

**Making all resident activities “green” (see the EPA’s Guide to Green Events)**  
**Financially rewarding consumption below the DOE’s normalized baseline**

<sup>5</sup> Town of Telluride, [www.town.telluride.co.us/home/index.asp?page=2](http://www.town.telluride.co.us/home/index.asp?page=2), 5 October 2006.

<sup>6</sup> Katie Klingsporn, “Town Launches Unplugged Campaign.” Telluride Daily Planet, Oct. 1, 2006. [www.telluridegateway.com/articles/2006/10/02/news/news01.txt](http://www.telluridegateway.com/articles/2006/10/02/news/news01.txt), 5 October 2006.

<sup>7</sup> Actus Lend Lease, [www.actuslendlease.com/](http://www.actuslendlease.com/), 5 October 2006.

<sup>8</sup> Full Case Study archived, [www.natcapsolutions.org/ClimateManual/Cities/Chapter5/LongTermInitiatives/Education/ActusLendLease\\_Synergy.pdf](http://www.natcapsolutions.org/ClimateManual/Cities/Chapter5/LongTermInitiatives/Education/ActusLendLease_Synergy.pdf), 5 October 2006.

**Providing children’s activity books, complete with energy conservation checklists and prizes for completion**

**Partnering with national zoo educational staff to use characters in activity books that promote endangered**

**species awareness and protection**

**Providing free technology, like COSMEO from Discovery Learning, to residents to test energy management behavior modification**

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#### Community Education

### CASE STUDY: State of Maine

The Maine Energy Education Program (MEEP)<sup>9</sup> is a non-profit organization begun in 1985 with the goal of helping citizens understand energy concepts so that they will be capable of making informed energy decisions. MEEP has developed various free projects and workshops for 4<sup>th</sup> through 12<sup>th</sup> grade teachers to implement in the classroom. MEEP’s Green Schools Program gives students the chance to monitor the energy use of their school. Classrooms are given incentives to win energy challenges and to save their school’s energy and money.

For example, in the Vending Mi\$er Challenge, classes are lent a “Vending Miser” which saves energy by cycling down vending machines compressor when it is not in use. The class monitors the amount of energy used by the vending machine without the miser and with the miser and then calculates the energy savings (usually around 50%). If the class presents their findings to the administration or facilities, MEEP will donate a Vending Miser to the school.

Another one of MEEP’s most popular projects is the Model

Solar Car Competition where students actually build their own solar cars and then race them in a competition. As of 2006, eight to ten communities in Maine are involved in MEEP.

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<sup>9</sup> MEEP Homepage, [www.mEEPnews.org](http://www.mEEPnews.org), 5 October 2006.

## CASE STUDY: Albuquerque, NM

Albuquerque's education for a sustainable community<sup>10</sup> was a concept developed in 1975 due to growing concern over the city's explosive growth and the effects such expansion could have on the quality and supply of water, open space, waste disposal community as well as by schools. The hands-on interpretive approach of the book is designed systems, the built environment and the general quality of life.

The city of Albuquerque, Albuquerque Public Schools and local volunteers produced a teacher's resource book on environmental education. The final product, *Albuquerque's Environmental Story* (AES), was first printed in 1978.

AES quickly became more than a teachers' resource book, and served as a basis for a unique

environmental education program for use by the general adult to heighten readers' awareness, enhance their capacity to enjoy the beauty surrounding them and to develop a sense of social and environmental stewardship in readers. AES is interdisciplinary and stresses critical thinking. It is structured to add relevance to and augment the teaching of basic skills for young students.

The authors deal with the basic problem of adding environmental education to an already crowded curriculum by making it possible to infuse these materials easily into the existing required curriculum. Educators who have used the book have found this to be an approach that promotes awareness, knowledge, valuing and responsibility, while making the prescribed curriculum more interesting.

The second and third editions of AES were published in 1985 and 1996. Even though there are no newer published editions, the online version is frequently updated and many local schools still use AES as a part of their curriculum. In addition, the AES has served as a model for many other cities and has been replicated with success in southern Florida in *The Dade County Environmental Story* and *The Florida Key's Environmental Story*. Albuquerque's website provides information on how to replicate a resource book in your community and allows you to view the text of *Albuquerque's Environmental Story*.<sup>11</sup>

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<sup>10</sup> Albuquerque's Environmental Story, [www.cabq.gov/aes/index.html](http://www.cabq.gov/aes/index.html), 5 October 2006.

<sup>11</sup> How to Create your own Community's Environmental Story, [www.cabq.gov/aes/process/index.html](http://www.cabq.gov/aes/process/index.html), 5 October 2006.

## Additional Resources

### School Initiatives and Curriculum:

- California Climate Change and Energy, Education Resources Catalog [globalwarmingcalifornia.net/k12.htm](http://globalwarmingcalifornia.net/k12.htm)
- Clean Air Kids [www.clean-air-kids.org.uk/information.html](http://www.clean-air-kids.org.uk/information.html)
- Climate Change Education.Org. Website dedicated to education on global warming and climate change. Offers science, solutions, curriculum and resource directory [www.climatechangeeducation.org](http://www.climatechangeeducation.org)

### Hike & Bike Challenge

[www.environmentalsociety.ca/hikebike/how-to.html](http://www.environmentalsociety.ca/hikebike/how-to.html)

The Sierra Club has released a guide, “Cool Cities: Solving Global Warming One City at a Time.” The guide explains the steps toward making cities “cool” and tells success stories from a broad range of cities, from greening municipal vehicle fleets with hybrid cars in Houston and Charlotte; energy efficient street lights and buildings in Salt Lake City and Scottsdale, Arizona; to renewable energy investments in Waverly, Iowa and Columbia, Missouri. The guide is available online at [www.sierraclub.org/globalwarming/coolcities](http://www.sierraclub.org/globalwarming/coolcities).

### Maine Energy Education Program

[home.psouth.net/~meep/](http://home.psouth.net/~meep/)

### Community-Based Projects to Help Reduce Greenhouse Gas Emissions

[www.mb.ec.gc.ca/info/news/cc01s43.en.html](http://www.mb.ec.gc.ca/info/news/cc01s43.en.html)  
[www.on.ec.gc.ca/announce.cfm?ID=679&Lang=e](http://www.on.ec.gc.ca/announce.cfm?ID=679&Lang=e)

### Texas State Energy Conservation Office, Energy Education Links

[www.seco.cpa.state.tx.us/sch-gov\\_ed-links.htm](http://www.seco.cpa.state.tx.us/sch-gov_ed-links.htm)

### Museum and Science Center Resources:

Marian Koshland Science Museum, Washington, D.C.  
[www.koshland-science-museum.org/exhibitgcc/index.jsp](http://www.koshland-science-museum.org/exhibitgcc/index.jsp)

### Alliance to Save Energy, Green Schools Program

[www.ase.org/section/program/greenschl](http://www.ase.org/section/program/greenschl)

### Students Leading the Way 2004-2005: Energy Saving Success Stories from California's Schools

[www.ase.org/images/lib/educators/Success%20Book%2005.pdf](http://www.ase.org/images/lib/educators/Success%20Book%2005.pdf).

Also archived:

[www.natcapsolutions.org/ClimateManual/Cities/Chapter5/LongTermInitiatives/Education/CASchools\\_energysavings.pdf](http://www.natcapsolutions.org/ClimateManual/Cities/Chapter5/LongTermInitiatives/Education/CASchools_energysavings.pdf), 5 October 2006

### Science Museum of Virginia

[virginia.science.museum/Education/MiniMarine.html](http://virginia.science.museum/Education/MiniMarine.html)

The Colorado Energy Science Center School Program teaches students about the sources of energy and the economics and environmental issues associated with energy use. For the 2006-2007 school year, CESC offers the following programs to students, teachers and schools:

- Energy Hog Traveling Road Show—interactive school assembly program that teaches 3rd-6th grade students about the sources of energy, how we waste energy and how to conserve energy [www.energyscience.org/education/EnergyHog/index1.htm](http://www.energyscience.org/education/EnergyHog/index1.htm)
- Energy Science in the Home: Hands-on Activities for the Middle Grades—inquiry-based program that helps students explore the dynamics of home energy use through investigations that integrate math, science and economics
- Home Energy Investigation Contest event for middle and high school students which is a project-based learning experience to investigate home energy use; home energy efficiency, and; improvements in home energy efficiency [www.energyscience.org/education/homeenergy/index.html](http://www.energyscience.org/education/homeenergy/index.html)
- Special Projects for 2006-2007 [www.energyscience.org/education/Special.Projects.html](http://www.energyscience.org/education/Special.Projects.html)
- [www.energyscience.org/education/index.html](http://www.energyscience.org/education/index.html)



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