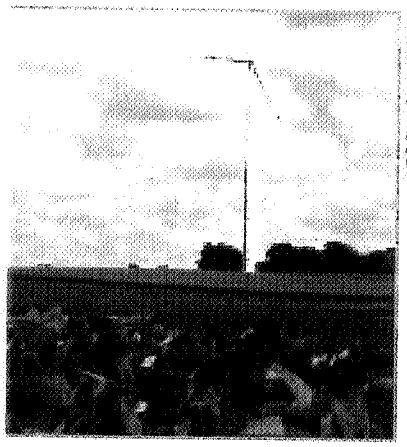
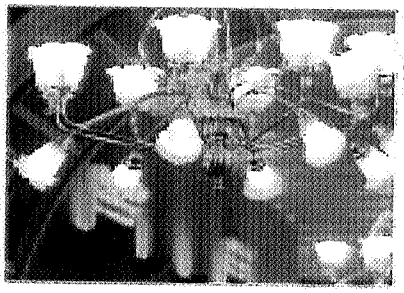
Cool CITIES

Solving Global Warming One City at a Time



WAVERLY POWER AND LIGHT

DAVID WASSERMAN



SALT LAKE CITY

INTRODUCTION—

Re-Energizing Our Cities

All over America, cities, counties and states are launching an exciting grassroots movement to help solve one of our country's most pressing problems: global warming. Frustrated by stalling on the federal level, local leaders are moving forward with innovative energy solutions that cut our dependence on oil, benefit public health, and save taxpayer dollars. These mayors, county commissioners, and governors are leading the way toward a safer and more secure future.

The purpose of this guide is to provide a resource for citizens and local officials who are ready to take real action to reduce energy waste and heat-trapping global warming pollution in their communities. In the following pages, you will find inspiring city success stories from a broad range of cities, from larger metropolitan centers such as Salt Lake City, St. Paul, and Charlotte to smaller cities like Twin Falls, Idaho, and Waverly, Iowa.

The strategies that these and other Cool Cities are pursuing fall under three categories: **Cleaner Vehicles, Energy Efficiency, and Renewable Energy.** Every one of these local solutions is already saving taxpayer dollars and improving public health by reducing energy waste and pollution. By taking innovative actions, forward-looking cities are re-energizing our nation, proving that we can solve global warming one city at a time.

Every one of these local solutions is already saving taxpayer dollars and improving public health by reducing energy waste and pollution.

GLOBAL WARMING—

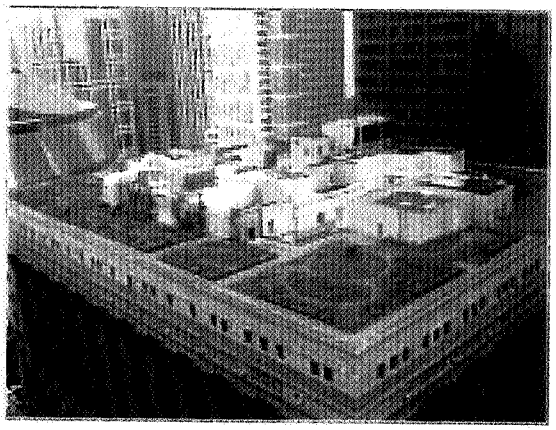
The Time to Act Is Now

The scientific community has concluded that burning fossil fuels—oil, coal, and natural gas—to power our cars, homes and businesses is causing global temperatures to rise. This heating of the earth poses a serious threat to our health, safety, and environment.

The national science academies of the United States, England, France, Russia, Germany, Japan, Italy, Canada, Brazil, China and India issued the following joint declaration in June 2005: "The scientific understanding of climate change is now sufficiently clear to justify nations taking prompt action." The world's leading scientists ask us to "recognize that delayed action will increase the risk of adverse environmental effects and will likely incur a greater cost." [Source: "Joint Science Academies' Statement: Global Response to Climate Change," June 2005—royalsoc.ac.uk/document.asp?id=3222]

GEO-HEAT CENTER/NREL

KATRIN SCHOLZ-BARTH/NREL



Keeping Warm, Keeping Cool—In Klamath Falls, Oregon, a geothermal district heating system keeps the sidewalks clear and dry at the Basin Transit station. The 22,000 square-foot garden on the "green" roof of Chicago's city hall cools the building during the city's hot summers.

Cities Take the Lead

The good news is our cities have not become paralyzed by the threat of global climate change. Instead, they are taking the lead with the "U.S. Mayors Climate Protection Agreement" initiated by Seattle Mayor Greg Nickels. Introduced on February 16, 2005—the same day that the Kyoto Protocol international global warming treaty took effect in 141 nations—the agreement is gathering support around the country and has earned the backing of the U.S. Conference of Mayors. To date, more than 200 mayors representing more than 42 million Americans in 38 states have signed on, pledging to reduce global warming carbon dioxide (CO_2) pollution citywide to 7 percent below 1990 levels by 2012. [Go to seattle.gov/mayor/climate for more information on the mayors' climate protection agreement.]

How will these cities accomplish these ambitious goals in the next seven years? And how can your city become a Cool City?

Seattle: Cool City Model

The city of Seattle is on the forefront of global warming local solutions. Under Mayor Greg Nickels' leadership, the city government has already reduced its own global warming pollution by more than 60 percent by constructing green buildings and operating alternative fuel vehicles. Seattle City Light is the only electric utility in the country producing zero net greenhouse gas emissions, and the city is working to expand transportation choices, recycling, and urban forest restoration.

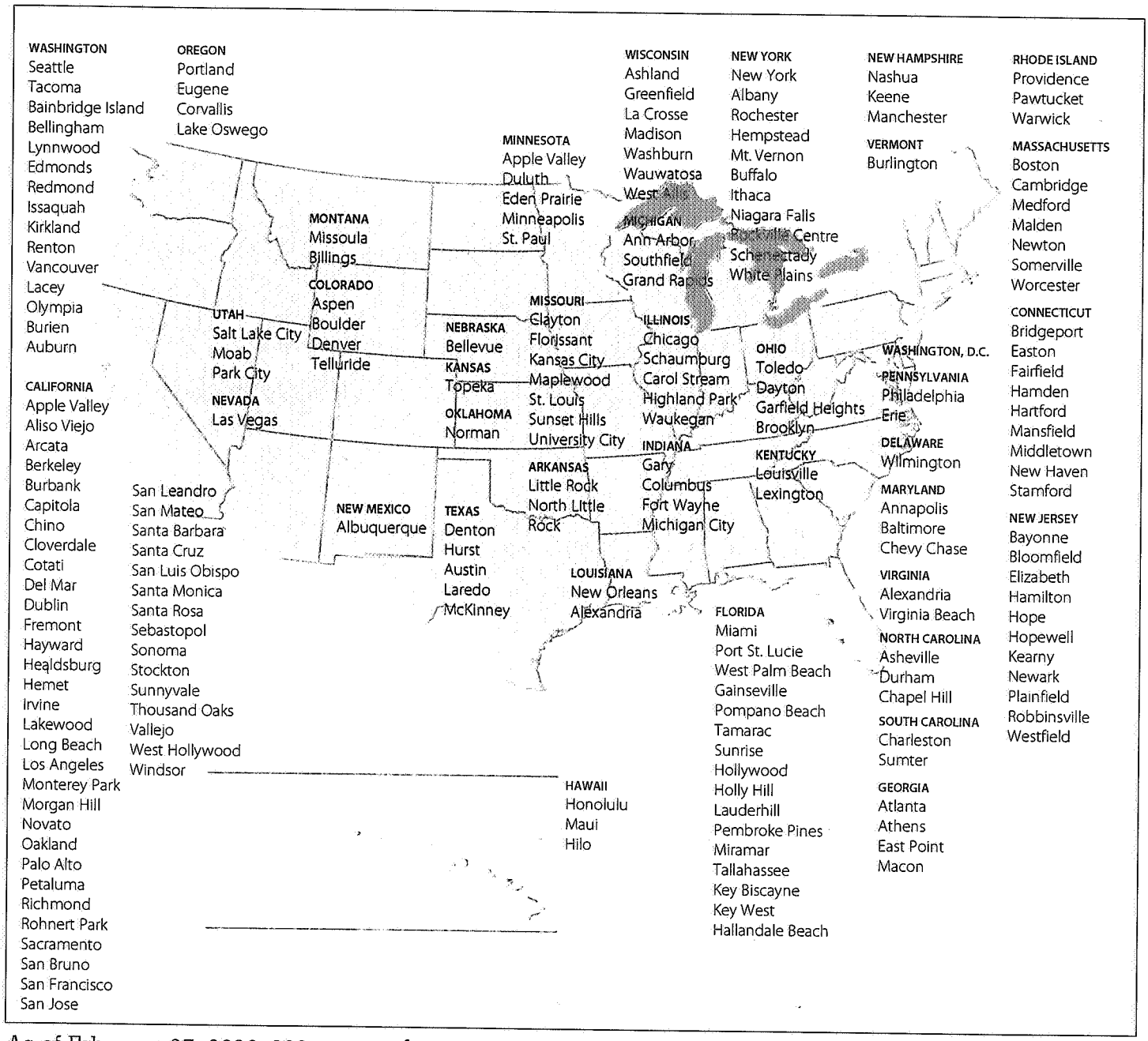
Mayor Nickels has also created a Green Ribbon Commission on Climate Protection, composed of business, environmental, government, community, and labor leaders. The Commission is developing a plan for Seattle to meet its global warming pollution reduction targets, and identifying key economic opportunities for Seattle's transition to a clean energy future.

"By making smart choices like building sustainable buildings, replacing old vehicles with a 'Clean and Green' fleet, and setting strict 'no-net-emissions' goals for Seattle City Light, the City has shown we can take local action on global problems," said Mayor Nickels.

LEARN MORE

To find out about Seattle's Climate Initiative, see ci.seattle.wa.us/environment/climateinitiative.html

Cool Cities Across America



As of February 27, 2006, 208 mayors from 38 states representing more than 42 million Americans have pledged to reduce global warming carbon pollution in their cities to 7 percent below 1990 levels by 2012.

"With the passage of significant international accords and adoption of this statement by U.S. mayors, we have hope that the global community can successfully join together, as nations did to solve the problem of ozone depletion, to prevent the most devastating consequences of global climate change."

—Salt Lake City Mayor Rocky Anderson

PUTTING GLOBAL WARMING SOLUTIONS INTO ACTION

Four Steps to Become a Cool City

Getting your city to become part of the fight against global warming is as simple as the four steps outlined below. These steps are modeled on the Cities for Climate Protection program, a successful initiative run by the International Council for Local Environmental Initiatives (ICLEI) to help cities reduce global warming pollution. Encouraging your city to join ICLEI's Cities for Climate Protection program is an excellent way to fulfill the Cool Cities pledge. But any city can start making a difference by putting existing smart energy solutions to work today.

Visit iclei.org for more information on the Cities for Climate Protection program.

Step 1: Take the "Cool Cities" Pledge

The first step towards curbing global warming pollution in your community is to ask your mayor to sign the U.S. Mayors Climate Protection Agreement. This agreement sets the goal of reducing citywide global warming carbon dioxide (CO_2) pollution to 7 percent below 1990 levels by 2012. See seattle.gov/mayor/climate

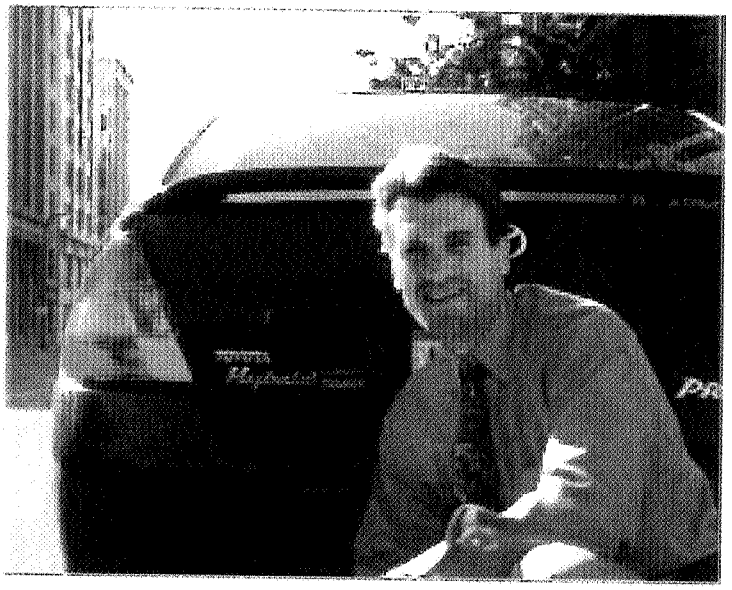
Step 2: Conduct a Global Warming Emissions Inventory

The next step is to conduct an inventory of your city's current global warming emissions. This information will identify the city's major CO_2 sources (and the greatest opportunities for reductions), and will provide a baseline to judge the city's progress towards its goal. Cities can receive technical assistance to conduct a global warming emissions inventory from a variety of sources including state and federal agencies as well as ICLEI through its Cities for Climate Protection program.

Step 3: Create a Solutions Plan

After completing its global warming inventory, your city will be ready to develop a solutions plan that can reduce emissions while lowering energy costs for the city. While every city's energy solutions plan will be unique, there are three important strategies: **Green Vehicle Fleets, Energy Efficiency,** and **Renewable Energy.** In some combination, these solutions, which are illustrated with specific success stories later in this guide, will form the foundation of your city's comprehensive energy-saving plan.

For examples of Cool City Solutions Plans, visit sierraclub.org/coolcities



"Minneapolis has set high standards for CO_2 reduction and we're meeting them—a strategy that has earned our city tremendous environmental and economic benefits. Climate disruption is a global problem but we feel the effects locally. We are thrilled with Seattle and Mayor Greg Nickels' initiative and will work hard to challenge our nation through our example."

—Minneapolis Mayor R.T. Rybak, in front of his hybrid car

Step 4: Implement and Monitor Progress

Of course, a plan alone cannot cut global warming pollution. It is essential that your city put the plan into action and monitor its progress periodically. With a strong commitment, a sound plan, and real action, your city will be on its way toward meeting the goals of the U.S. Mayors Climate Protection Agreement.

■

With a strong commitment, a sound plan, and real action, your city will be on its way toward meeting the goals of the U.S. Mayors Climate Protection Agreement.

Green Vehicle Solutions

The technology exists today to significantly reduce global warming pollution from America's cars, trucks, and SUVs. Improving automobile fuel economy is the biggest single step to curbing global warming, since every gallon of gasoline burned creates 28 pounds of heat-trapping carbon dioxide pollution. [Source: Oak Ridge National Laboratory: U.S. Department of Energy.]

Because transportation is a major source of global warming pollution, numerous cities are incorporating gas-electric hybrid vehicles and other fuel-efficient vehicles into their fleets. By using less gasoline, hybrid vehicles release a fraction of the global warming pollution emitted by conventional vehicles while saving money at the gas pump. Cities are also switching away from polluting diesel city and school buses to cleaner alternatives like compressed natural gas (CNG) powered vehicles.

Solution #1—Green Fleets

Governments of all sizes regularly purchase automobiles to help provide a wide range of taxpayer services. Recognizing an opportunity for action, many cities, counties, and states are saving taxpayer dollars and reducing air pollution by "greening" their fleets with hybrid gas-electric and other vehicles that go farther on a gallon of gas.

Currently, 48 U.S. towns and cities in 36 states have green fleets programs, as do 26 county and 17 state governments. From police departments and school districts to administrative agencies and taxi services, green fleets are a winning city solution. [Source: **greenfleets.org**]

For a general overview and step-by-step advice for writing a green fleets ordinance in your city, go to **greenfleets.org/stepone.html**

For a model green fleets ordinance, see the city of Denver's ordinance at **www.greenfleets.org/denverrevised.html**

Solution #2—Hybrid Vehicle Incentives

In addition to purchasing hybrid vehicles for city fleets, local governments can encourage citizens and businesses to buy hybrid vehicles with a wide range of incentives. Some cities are already providing incentives such as free parking for hybrid vehicles and lower registration fees and taxes.

Solution #3—Clean Buses

City residents have long had to endure the sight and smell of black smoke belching from dirty diesel-engine buses. Now many cities are replacing these polluting old buses with buses that run on cleaner compressed natural gas (CNG) or with hybrid-electric diesel engines.

"Increasingly, cities are providing the answers to some of America's toughest problems. So it's fitting that we're leading the way on global warming as well."

—Madison, Wisconsin, Mayor Dave Cieslewicz

NOTE: You can find all links referenced in this report at **sierraclub.org/coolcities.**

Houston TEXAS

In April 2005, Bill White, the mayor of the nation's 4th largest city, announced plans to convert a substantial portion of the city of Houston's fleet of cars, pickup trucks, and sport utility vehicles to hybrids by the year 2010. The city estimates that 80 percent of all new vehicle purchases and over 50 percent of the city's fleet could be hybrid vehicles by the year 2010.

Gentlemen, Start Your Hybrid Engines—Houston Mayor Bill White announces the greening of his city's fleet.

Considering the size of the city's light duty fleet (more than 3,500), Houston's investment in hybrids will pay big dividends down the road. Over its projected five-year life-cycle, the Toyota Prius hybrid should provide net savings of almost $1,900, in comparison to a conventional gasoline-only full-sized sedan, according to a city of Houston study.

Because hybrids are so fuel efficient, they release a fraction of the global warming pollution emitted by conventional vehicles. Over the lifetime of the vehicle, a hybrid Toyota Prius will release 43 fewer tons of global warming pollution compared to an average sedan.

"This makes economic sense, it makes environmental sense and it is going to set an example," said Mayor White. "We're going to save on fuel costs and we're going to help save our air quality."

LEARN MORE

Details on the city of Houston's greenfleets program are available at: houstontx.gov/mayor/press/20050408.html

Charlotte NORTH CAROLINA

When Charlotte's fleet managers found that hybrid gas-electric vehicles are less expensive to operate than conventional cars, Mayor Pat McCrory and Council members Susan Burgess and John Tabor took action. Working with city staff and with the cooperation of Mecklenburg County, the City Council supported a plan to bring the total number of hybrids in the fleet to over two dozen by the end of 2006—more than tripling the city/county's current number of hybrids.

Although they typically cost more initially than standard gasoline-fueled cars, gas-sipping hybrids save on gasoline, have lower maintenance costs, and retain a higher resale value at the end of their useful life, according to Charlotte's Fleet Environmental Analyst David Friday.

Mr. Friday estimates that switching from a gas-only Ford Taurus to a hybrid Toyota Prius or Honda Civic would save city taxpayers approximately $800-$1200 annually per vehicle, including over $400 in annual fuel costs.

"This results in a payback of the extra purchase cost within 2.5 to 5.5 years, depending on the model chosen and miles driven," said Friday. [Source: "Ford Taurus to Honda Civic Hybrid and Toyota Prius Comparative Analysis," David Friday, Charlotte Fleet Environmental Analyst, May 2005]

LEARN MORE

Charlotte's Fleet Environmental Analyst David Friday can be reached at dfriday@ci.charlotte.nc.us.

Marion County FLORIDA

When gas-electric hybrid vehicles hit the market, Wyatt Earp, Director of Fleet Management for the Marion County Sheriff's Office in Florida, did some cost analysis to see whether it would be a good idea to pay a little more up front for a car that gets superior mileage. The answer?

"It costs a little more to start with, but operating expenses are less," says Earp. "Plus, we're working for the environment and showing people that we don't need to be so dependent on foreign oil."

The Toyota Prius vehicles are used by the department to deliver subpoenas, transfer prisoners, and run administrative errands. In addition, trained civilians use one of the hybrids to cruise the county checking out bridges, pipelines, and other potential terrorist targets as part of the department's "Homeland Security Patrol".

"We work to conserve as much energy as we can—that's our obligation to the American people," said Earp, a descendent of the legendary frontier lawman. "We spend taxpayers' money wisely, and that means we don't run experiments. We've got a good car here. Hopefully American car companies will offer something similar, soon."

Earp also manages the annual procurement of cars for the Florida Sheriff's Association, which negotiates wholesale rates for about 5,000 city and county agencies. Last year it bought 100 hybrids. "Now the word is getting around. I think we'll have 10 times more orders than we had last year," Earp says.

LEARN MORE
Visit the Marion County Public Affairs department's Web site at:
marioncountyfl.org

You Have the Right to Get Good Mileage—For Wyatt Earp, director of fleet management for Marion County Sheriff's Department in Florida, purchasing fuel-efficient hybrid vehicles and reducing dependence on oil make sense for the environment—and the county budget.

Washington D.C.

The millions of visitors who visit our nation's capitol each year to see the monuments and museums can breathe easier because of the city's clean, natural gas buses which improve air quality and cut global warming pollution.

MARK WENZLER

Over the past four years, the Washington Metropolitan Area Transit Authority has replaced 414 of its polluting diesel buses with cleaner burning, compressed natural gas buses. Every natural gas bus replaces the need for nearly 10,000 gallons of diesel fuel each year. Since natural gas buses release 25 percent less global warming emissions than diesel, these cleaner buses result in real cuts in global warming pollution.

Natural gas buses also help to reduce smog. Compared to traditional diesel buses, the city's natural gas buses release over 50 percent less smog-forming nitrogen oxides and 85 percent less soot pollution.

LEARN MORE
Visit the Washington's transit authority Web site at:
wmata.com/about/met_news/pressroom/archived_releases/pr_cng.cfm

Energy Efficiency Solutions

Energy efficiency means using less energy through better technology to power buildings, light streets, and industry. Reducing energy use is one of the most cost-effective and fastest ways to save energy and reduce global warming pollution.

Every city can make substantial energy efficiency improvements by putting policies in place to promote efficient technologies and integrating them into planning decisions. The policies outlined below represent some of the most effective steps currently being taken on the city and local level.

Solution #1—Making New Buildings More Energy Efficient

Incorporating energy efficiency requirements into municipal building codes increases the overall energy efficiency of new buildings. Many cities have chosen to adopt the Leadership in Energy and Environmental Design (LEED) standards created by the United States Green Building Council (usgbc.org). LEED standards provide energy efficient design guidelines for a variety of building types and developments.

Solution #2—Energy Efficiency Retrofits to Existing Buildings

In addition to improving the energy efficiency of new buildings, cities can make substantial energy efficiency improvements to existing buildings. Modernizing lighting, heating, cooling, and other operations can reduce the energy requirements of existing buildings in a cost-effective manner, lowering energy costs and reducing pollution.

The U.S. Green Building Council has also developed LEED standards for existing buildings. The standards provide guidance on improving the energy efficiency of building operations and other systems without making major changes to the interior and exterior of the building. Cities around the country have made major strides in improving the energy efficiency of police and fire stations, city office buildings, and schools.

Solution #3—Energy Efficient Street Lighting

Street lighting and traffic signals can use a significant amount of energy. By replacing traditional light fixtures with super-efficient light emitting diode (LED) bulbs, cities are reaping energy and cost savings.

Solution #4—Public Benefit Funds

Cities with community-owned, local municipal utilities can integrate energy efficiency into the city's overall energy plan. If your city has a municipal utility, it can set up a local Public Benefits Fund (PBF), where a small surcharge on consumer energy bills is used to create a fund to finance energy efficiency projects in the utility service area, thus lowering the overall energy costs for consumers.

Austin Energy (austinenergy.com) and the Sacramento Municipal Utility District (smud.org) are examples of municipal utilities that have used public benefit funds to lower energy use and costs through energy efficiency.

Solution #5—Combined Heat and Power

Cities and businesses can also benefit from energy efficient combined heat and power (CHP) systems. These systems produce both electricity and steam for heating and cooling from a single power plant located near consumers. As a result, CHP systems recover heat that is normally wasted at power plants and funnel the heat into surrounding buildings. This reduces energy costs and lowers pollution by eliminating the need for separate fuel sources for electricity and heating.

"The International Panel on Climate Change has warned that New Orleans is the North American city most vulnerable to the effects of climate change. The rise of the Earth's temperature, causing sea level increases that could add up to one foot over the next 30 years, threatens the very existence of New Orleans. We will continue to collaborate and support efforts on global warming."

—New Orleans Mayor C. Ray Nagin

Salt Lake City UTAH

Salt Lake City has dramatically reduced its energy costs by aggressively pursuing energy efficiency measures. Currently, the city saves over $32,000 a year on its energy costs as a result of installing 861 light emitting diode (LED) traffic signals. The city plans to expand this program to all of its 1630 red and green lights, which is expected to save over 500 tons of heat-trapping carbon dioxide (CO_2) pollution each year with annual cost savings of $53,000. The city has also found that LED signals require less maintenance than conventional lighting.

SALT LAKE CITY

In addition, the city has replaced the conventional incandescent bulbs in its city and county office buildings with more energy efficient compact fluorescent bulbs (CFLs). These bulbs use much less energy and last significantly longer, saving the city over $33,000 a year and reducing CO_2 emissions by 344 tons per year.

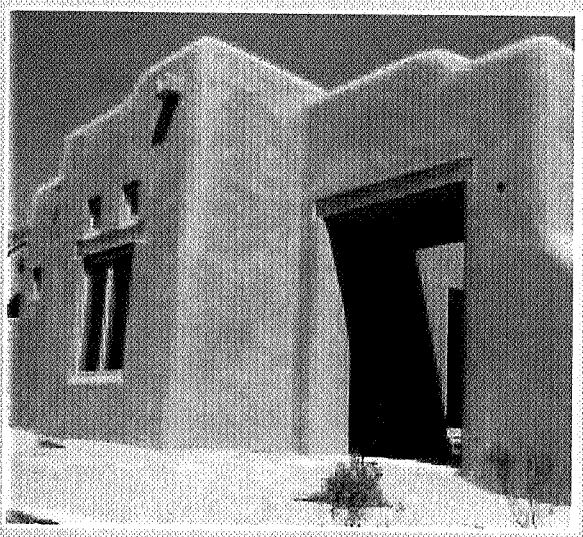
These energy efficiency measures are a part of a city wide action plan to protect the environment and reduce global warming emissions.

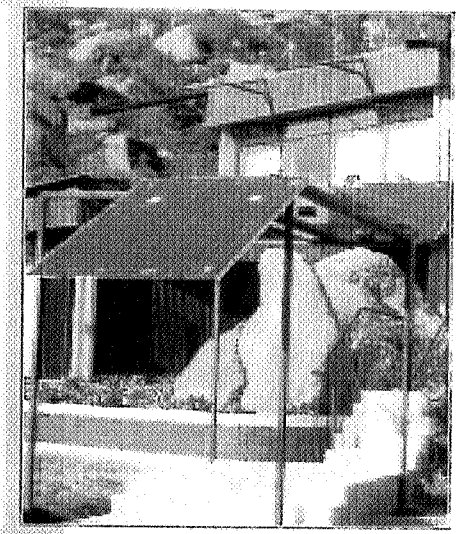
LEARN MORE

Read Salt Lake City's plan at slcgov.com/environment/actionplan.htm

Scottsdale ARIZONA

The city of Scottsdale has been a leader in the Southwest on energy efficiency for buildings. In 1998, Scottsdale introduced Arizona's first green building program which helps builders and home owners learn about how to integrate energy efficiency and water saving features into new homes. Between 1998 and 2003, the green building program worked with 99 builders and issued 230 permits for green building projects in the city.





Harnessing the Desert Sun— New energy-efficient homes in Scottsdale use both renewable technologies like solar panels, as well as thick adobe walls that cool the house in the summer and keep it warmer in the winter.

In March 2005, Scottsdale became the first city in the nation to require that all new city buildings and renovation projects meet LEED GOLD standards for energy efficiency and sustainability – one of the highest LEED ratings.

LEARN MORE

Read about Scottsdale's green building program at scottsdaleaz.gov/greenbuilding

COOL CITIES

Twin Falls IDAHO

Like many other school districts around the country with growing numbers of students and decreasing budgets, the Twin Falls school district began searching for creative ways to reduce costs. School officials realized that the district could reduce energy costs and cut pollution by increasing the energy efficiency of its 11 schools. The upgrades included more efficient lighting and improvements to the heating, ventilation, and air-conditioning systems. The upgrades are expected to generate $3.5 million in energy savings.

In an innovative financing agreement, the school district signed an energy savings performance contract with Minnesota-based Honeywell Corporation. Under a performance contract, a private company pays to make energy efficient improvements and is then reimbursed with the money saved through lower energy bills over the lifetime of the project.

According to Dr. John Miller, the Director of Operations for the Twin Falls School District, the performance contract gave the school district "the capital to accomplish in months, what would have normally taken us a decade to complete because of budget constraints."

LEARN MORE
The Twin Falls school district project Web site is available at newsite.schoolfacilities.com/cd_1695.aspx

St. Paul MINNESOTA

During the long, cold Minnesota winters, the majority of the buildings in downtown Saint Paul stay warm using District Energy's energy-efficient combined heat and power (CHP) system. Providing electricity to the grid and heating service to more than 80 percent of downtown Saint Paul and adjacent areas, including the Minnesota State Capitol and nearly 300 homes, the system uses heat drawn from a biomass-fired power plant located in the heart of the city.

By using a renewable resource as its primary fuel and by capturing ambient heat that would otherwise have been wasted, St. Paul's CHP system reduces overall energy consumption, costs, and pollution.

LEARN MORE
Details of Saint Paul's CHP system are available at districtenergy.com/currentactivities/chp.html

DISTRICT ENERGY ST PAUL

Heat and Power—
By producing both heat and electricity from one power plant, the District Energy plant helps save money and cut pollution.

Renewable Energy Solutions

By harnessing natural sources of energy like the sun and the wind, renewable energy sources can replace our reliance on outdated, polluting power plants that rely on fossil fuels. Today's solar panels efficiently transform sunlight into electricity while blending into the design of homes and office buildings. Modern wind turbines rise high above the ground, capturing the strongest winds to produce reliable electricity.

Currently, dirty fossil fuel power plants account for over a third of the nation's total global warming emissions. Meeting our energy needs with clean, renewable energy can move the country towards a brighter, cleaner, and cheaper energy future.

Cities around the country are discovering that investing in innovative renewable energy sources reduces global warming pollution and creates a reliable source of clean, homegrown electricity.

Solution #1—Renewable Energy Standards

A renewable energy standard requires an increase in the percentage of electricity from clean, renewable energy sources (such as wind and solar power) in a city or utility area by a specific target date. These standards are phased in over time so that renewable energy capacity can be built and incorporated into the necessary energy management and reliability plans. For instance, a 20 percent Renewable Energy Standard could be phased in over ten years, requiring an additional 2 percent of electricity generation to come from renewable sources each year. Cities that operate municipal utilities have been able to set renewable energy standards for their community-owned utilities.

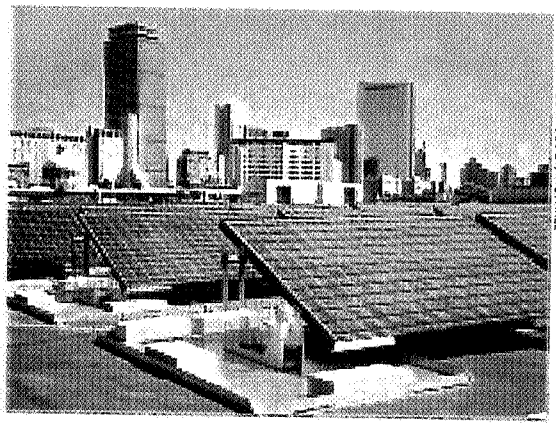
Solution #2—Solar and Wind Installations

Some cities are moving forward by financing the construction of renewable energy projects themselves. In some cases, cities are working with local municipal utilities to construct wind turbines. In other cases, cities are working with privately owned utilities and renewable energy developers to construct solar arrays on city buildings, schools, and homes.

Solution #3—City Utility Contracts

Some cities are incorporating renewable energy requirements into their contract renewals with privately owned local utilities. For example, Denver, Colorado is working with its local utility, Xcel Energy, to establish modest renewable energy goals as part of the city's contract.

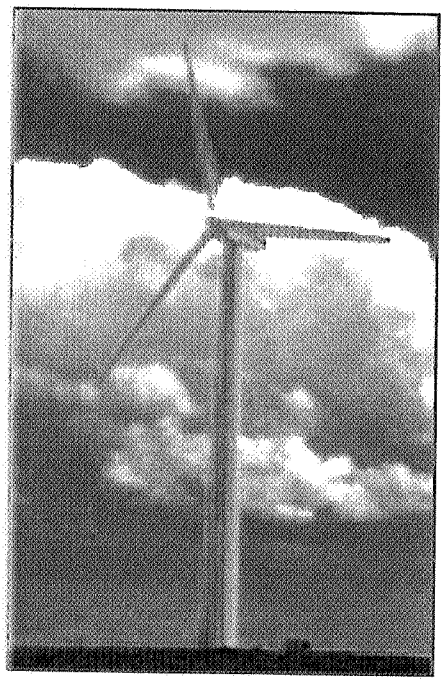
APOLLO ALLIANCE



ASCENSION TECHNOLOGY, INC./NREL

Clean Energy, Good Jobs—Clean energy investments not only save taxpayer dollars and protect the environment, they also create good jobs for the future. One example is the rooftop solar panels powering Northeastern University's Eli Student Center in Boston.

Fort Collins COLORADO



Sitting along the eastern edge of the Rocky Mountain Front, the city of Fort Collins has embraced renewable energy and energy efficiency as key components to meet the city's energy needs. In 2003, the City Council adopted the Electric Energy Supply Policy which aims to "maintain high system reliability, maintain competitive electric rates, and reduce the environmental impact of electricity generation."

This program sets strong clean energy targets, and is working to produce 15 percent of the city's electricity with renewable energy by 2017 and reduce per capita energy consumption 10 percent by 2012. Over the full time frame of the program, Fort Collins expects to reduce its global warming carbon dioxide emissions by 472,000 tons.

Clean energy is not only reducing global warming emissions in Fort Collins, but it is also saving money by reducing costs. According to the city's municipal utility, the cost of meeting energy needs through energy efficiency is about 1.7 cents per kWh, while the cost of providing energy is about 3.7 cents per kWh. That means that in Fort Collins energy efficiency is meeting citizens' needs at half the cost of energy coming from existing power plants.

According to Michael B. Smith, Fort Collins' Utilities General Manager, "We are pleased that some of our future energy growth will come from renewable energy sources. The Electric Energy Supply Policy is a positive blueprint for the future."

Funding for the city's efficiency and renewable energy programs comes from a 2 percent increase in customer rates. Even with these increases, Fort Collins continues to enjoy electricity rates below the state average, and will see lower energy costs as a result of the energy efficiency programs.

LEARN MORE
Read Fort Collins' Electric Energy Supply Policy at
ci.fort-collins.co.us/utilities/energypolicy.php

Columbia MISSOURI

Last year, with 78 percent of the vote, the citizens of Columbia, Missouri overwhelmingly approved a plan to require the city to increase its use of renewable energy sources, like wind and solar power, over the next 20 years. The measure will create a Renewable Energy Standard that requires that the city's municipal utility obtain 2 percent of its power from renewable energy by 2007, ramping up to 15 percent by 2022.

Columbia's successful ballot initiative is part of a growing national trend of voter-driven policies to increase the use of clean, renewable energy sources. Voters in Colorado recently approved a statewide Renewable Energy Standard that requires utilities in the state to produce 10 percent of their electricity with clean energy sources like wind and solar power by 2015.

LEARN MORE
Additional information about Columbia's renewal energy standard is available at
dsireusa.org/documents/Incentives/MO04R.htm

COOL CITIES

Waverly IOWA

Wind energy is not only generating pollution-free energy to the town of Waverly, but it is also providing local economic development. As the first municipal utility in the United States to install its own wind turbines, Waverly Light & Power serves 4,300 customers in a 33 square-mile area. The utility has constructed wind turbines on land leased from local farmers, creating electricity for the city and additional income for the farmers.

Waverly Light & Power's Board of Trustees has set a goal of increasing wind production to 10 percent of the total local power supply, and is advancing quite well towards that target. Currently, the city's wind turbines generate 5.52 percent of the area's total electricity generation, and provide enough electricity to meet the needs of 761 homes each year. That translates into a reduction of carbon dioxide emissions by nearly 6,850 tons per year.

LEARN MORE

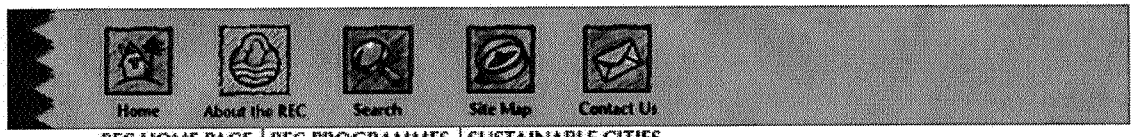
Read more on Waverly Light & Power's Web site at waverlyia.com

WAVERLY LIGHT & POWER

WAVERLY LIGHT & POWER

"This is not only an environmental protection issue, but also an economic development and sustainability issue. Protecting our environment, we are protecting our resources and preserving them for future generations to come."

—Hallandale Beach, Florida, Mayor Joy Cooper



What is a Sustainable City?

What is a sustainable city?

India

Argentina

Sweden

Central Europe

The term *sustainable development* goes beyond the boundaries of science and business development and trade to include human development, values, and differences in cultures. In fact, many organizations are referring to *sustainable human development* as opposed to sustainable development in order to emphasize issues such as the importance of gender equality, participation in decision-making processes, and access to education and health.

Cities have become the focal points of these components as major consumers and distributors of goods and services. However, many cities tend to be large consumers of goods and services, while draining resources out of external regions that they depend on. As a result of increasing consumption of resources, and growing dependencies on trade, the ecological impact of cities extends beyond their geographic locations. It has been recognized that the concept of sustainable development is an evolving, debatable term. This section gives you an overview of how sustainable (urban) development was defined by the Brundtland Commission and how it is defined by different organizations in different geographical regions.

The most widely known definition of sustainable development comes from the Brundtland Commission, which defined sustainable development as **"development that meets the needs of the present without compromising the ability of future generations to meet their own needs."**

Rees, William E. and Roseland, Mark. 1991. Sustainable Communities: Planning for the 21st Century. Plan Canada. 31: 3. 15.

During the preparatory meetings for the URBAN21 Conference (Berlin, July 2000) the following definition was developed to define sustainable urban development:

"Improving the quality of life in a city, including ecological, cultural, political, institutional, social and economic components without leaving a burden on the future generations. A burden which is the result of a reduced natural capital and an excessive local debt. Our aim is that the flow principle, that is based on an equilibrium of material and energy and also financial input/output, plays a crucial role in all future decisions upon the development of urban areas."

However, there are many more definitions out there. Let's look at a few:

"Sustainable community development is the ability to make development

choices which respect the relationship between the three "E's"-economy, ecology, and equity:

- ***Economy*** - Economic activity should serve the common good, be self-renewing, and build local assets and self-reliance.
- ***Ecology*** - Human are part of nature, nature has limits, and communities are responsible for protecting and building natural assets.
- ***Equity*** - The opportunity for full participation in all activities, benefits, and decision-making of a society."

- Mountain Association for Community Economic Development (MACED): Hart Environmental Data

http://www.subjectmatters.com/indicators/Sustainability/DefinitionsCommunity.html

"A sustainable community is one in which improvement in the quality of human life is achieved in harmony with improving and maintaining the health of ecological systems; and where a healthy economy's industrial base supports the quality of both human and ecological systems."
- Indigo Development

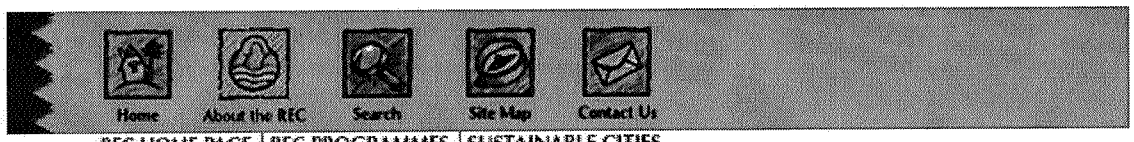
Indigo development:
http://www.indigodev.com/Sustain.html

"A sustainable community uses its resources to meet current needs while ensuring that adequate resources are available for future generations. It seeks improved public health and a better quality of life for all its residents by limiting waste, preventing pollution, maximizing conservation and promoting efficiency, and developing local resources to revitalize the local economy."
- Concern, Inc. (1993)

"Sustainable communities are defined as towns and cities that have taken steps to remain healthy over the long term. Sustainable communities have a strong sense of place. They have a vision that is embraced and actively promoted by all of the key sectors of society, including businesses, disadvantaged groups, environmentalists, civic associations, government agencies, and religious organizations. They are places that build on their assets and dare to be innovative. These communities value healthy ecosystems, use resources efficiently, and actively seek to retain and enhance a locally based economy. There is a pervasive volunteer spirit that is rewarded by concrete results. Partnerships between and among government, the business sector, and nonprofit organizations are common. Public debate in these communities is engaging, inclusive, and constructive. Unlike traditional community development approaches, sustainability strategies emphasize: the whole community (instead of just disadvantaged neighborhoods); ecosystem protection; meaningful and broad-based citizen participation; and economic self-reliance."
- Institute for Sustainable Communities

Institute for Sustainable Communities:
http://www.iscvt.org/FAQscdef.html

"A community that believes today's growth must not be achieved at tomorrow's expense."



Characteristics of a Sustainable City

General

Central Europe

India

Argentina

Sweden

Africa

"There is a sense of great opportunity and hope that a new world can be built, in which economic development, social development and environmental protection as interdependent and mutually reinforcing components of sustainable development can be realized through solidarity and cooperation within and between countries and through effective partnerships at all levels."

United Nations City Summit Habitat Agenda
(Chapter I, June 1996 .pg. 1.)

Characteristics - General

Cities will need to become more aware of the impact that their consumption patterns have on other regions and ecosystems. A sustainable city will also need to acquire accountability and responsibility for increasing consumption patterns. Cities may work towards responsibility by adapting a policy to reduce, recycle, and re-use consumed goods. Some cities may go as far as implementing user fees in order to control unsustainable consumption patterns.

By examining the characteristics of a sustainable community, a better understanding can be reached about defining a sustainable community. Being very complex entities, cities can be characterized by a number of different properties. These properties may change across countries and geographical regions. This section gives you an overview of the most important sustainability issues in cities - grouped by the geographical locations of the project partners.

" Economy, ecology and social cohesion are the pillars of a sustainable city. These must be in balance and therefore require an integrated approach. Dialogue is the basic principle for achieving this for Local Agenda 21."

Conference Strategies for Sustainable Cities
(The Hague, 23, 24, 25 June 1999:
http://www.denhaag.nl/sust.cities99/theme.htm)

According to **RRP International**, the five basic elements to the community include:

- Affordable housing supporting pride & self-reliance;
- Diversified economic development;
- Life-long learning;

- A self-governing, self organizing community; and
- Stewardship of the environment.

Source:
http://www.rppintl.com/5elementsframe.htm

Sustainability characteristics outlined by the **Centre for Sustainable Development** include:

- the formulation of goals that are rooted in a respect for both the natural environment and human nature and that call for the use of technology in an appropriate way to serve both of these resources;
- the placement of high values on quality of life;
- respect of the natural environment;
- infusement of technology with purpose;
- optimization of key resources;
- maintenance scale and capacity;
- adoption of a systems approach;
- support of life cycles;
- responsiveness and proactiveness;
- value for diversity; and
- preservation of heritage.

Source:
Centre of Excellence for Sustainable Development

Excerpts from **Beth Lachman's article** describes the issues that will have to be addressed with long-term planning to accomplish sustainable urban development:

"Economic issues include good jobs, good wages, stable businesses, appropriate technology development and implementation, business development, etc. If a community does not have a strong economy, then it cannot be healthy and sustainable over the long term.... From an environmental standpoint, a community can be sustainable over the long term only if it is not degrading its environment or using up finite resources. Environmental concerns include protecting human and environmental health; having healthy ecosystems and habitat; reducing and/or eliminating pollution in water, air, and land; providing green spaces and parks for wildlife, recreation, and other uses; pursuing ecosystem management; protecting biodiversity; etc.... If a community has significant social problems, such as serious crime, then it cannot be healthy and stable over the long term. Furthermore, such a community probably will not be able to address other key community issues, such as environmental problems, because it is so busy dealing with its social problems. Social issues addressed in sustainable community efforts include education, crime, equity, inner-city problems, community building, spirituality, environmental justice, etc. A major assumption of the sustainable community definition is that trying to address such issues in isolation eventually ends up hurting some other part of the community's health...
Most sustainable community efforts also involve an open process in which every member of the community is encouraged to participate. The focus is on consensus building for the community. The emphasis is on communication and cooperation among many different interests and stakeholders from the community and also from those outside the

geographic community if their actions might affect the community. Compromise by special interests is also key where necessary. All the different segments of the community at the local and regional level, including businesses, individuals, environmental and community groups, and government, need to work together cooperatively to move toward sustainability.

Another critical dimension to creating a sustainable community is fostering a sense of community. Such sustainability activities try to enhance individuals' and organizations' feelings of attachment, value, and connection to the community. Many experts feel that only by caring about and feeling a part of their neighborhood, town, county, and/or city will individuals truly work together over the long term to develop a healthy community."

- *Beth E. Lachman.*

Linking Sustainable Community Activities to Pollution Prevention: A Sourcebook:
http://www.rand.org/publications/MR/MR855/index.html

Another way of looking at the characteristics of a sustainable community is by examining behavioural patterns, resource consumption patterns, and policies. In a report prepared for the Ontario Round Table on Environment and Economy, Nigel Richardson, a consultant, compares strategies for their sustainability or lack of sustainability.

More Sustainable	Less Sustainable
Compact forms of residential Development.	Low-density, spread-out residential development.
Mixed land use; homes, jobs and shopping in close proximity/TD.	Segregation of land uses: homes, jobs and shopping separated into uniform tracts or concentrations.
Employment based primarily on education and skills.	Employment based primarily on environment polluting or non-renewable resource based industry.
Movement on foot and by bicycle and transit.	Heavy dependence on private cars.
Wind and solar energy.	Thermal and nuclear energy.
Tertiary treatment of sewage; use of natural means of sewage treatment.	Discharge of sewage into water bodies or water-courses untreated or with low level of treatment.
Protection and use of natural hydrologic systems.	Hard surfaces preventing infiltration; channeling natural water-courses.
Natural open space; protection of wetlands, woodlands, stream valleys, habitat, etc.; use of manure, compost, integrated pest management, etc.	Destruction of natural landscape; "manicured" parkland with exotic species; heavy use of chemical fertilizers, herbicides, pesticides.
Reduction of waste; recovery, re-use and recycling of waste materials.	Landfills, incinerators.

- Nigel Richardson. Prepared for by the Ontario Round Table on

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NEWS

Sustainable City Plan
City of Santa Monica
www.smepd.org

FOR IMMEDIATE RELEASE
September 27, 2005

Contact: Greg Reitz
310.458.8459
greg.reitz@smgov.net

Santa Monica Offers Incentives for Building Green

Faster permits and financial incentives intended to build demand for green buildings in Santa Monica

When the City of Santa Monica asked residents if they believed buildings should be healthier and more efficient, 93% of them said "yes." When the city asked developers what it could do to help encourage them to build these green buildings, they asked for expedited plan checks or financial incentives. Now, the City of Santa Monica is offering both expedited plan checks and financial incentives for buildings registered for certification under the LEED® Green Building Rating System™, a nationally recognized certification from the U.S. Green Building Council.

Effective immediately, any project that registers for LEED® certification and provides proper documentation will be given first priority for plan checks in Santa Monica. Priority plan check has the potential to shave weeks from the approval process. Buildings eligible for expedited permits are also eligible for grants of $20,000 to $35,000 (depending on the level of LEED® certification). The city hopes the combined incentives along with the demonstrated demand for green buildings in Santa Monica will result in increased green building activity in the private sector. "While there have been a number of green buildings built in the city," said Green Building Advisor Greg Reitz, "we have seen little activity in the for-profit development community. We expect that to change as we make it easier for developers to make the commitment."

Check the City of Santa Monica's Green Building Program website or go to or call (310) 458-8549. For additional information check the US Green Building Council or LEED® website.

###

10 Sustainability Successes

[In celebration of our 10 Year Anniversary]

Here's a sample of some of the many accomplishments our community has made over the past decade

1. ***Santa Monica Bay***–Reduced dry weather pollution to the Bay by 95% **2.** ***Less Waste***–over 1,000,000 tons of solid waste kept out of the landfill **3.** ***Energy***–1st US city to buy 100% renewable electricity and cut greenhouse gas emissions by 6% **4.** ***Less Chemicals***–toxic-free parks and public buildings **5.** ***Water Savings***–over 328,500,000 gallons per year **6.** ***Healthy Kids***–first locally grown, organic school salad bars in the nation **7.** ***Big Blue Bus***–voted best bus line in the country and now a leader in clean air technology **8.** ***Sustainable Businesses***–a growing group of business leaders helping the local economy, environment and quality of life **9.** ***Quality Open Space***–additional and improved parks and trees **10.** ***National & International Leader***–Santa Monica is recognized as a leader in community sustainability

Santa Monica Sustainable City Plan celebrates 10 years of progress by harnessing the power of community to conserve and enhance our local resources, safeguard human health and the environment, maintain a vibrant and diverse economy, and improve the livability and quality of life for all community members in Santa Monica.

For more information call **310-458-2213**
or visit **www.smepd.org**

SUSTAINABLE CITY PLAN
celebrating 10 years of progress
CITY OF SANTA MONICA

City of
Santa Monica

City of Santa Monica Environmental Programs Division

10 Ways a Sustainable Community Works

[In celebration of our 10 Year Anniversary]

1. To have cleaner air, water and beaches **2.** To safeguard the health of families and the environment **3.** To maintain a strong and diverse economy **4.** To maximize open space resources and recreation **5.** To maintain a diverse and engaged community where everyone can meet their basic needs **6.** To create a safe, caring, and fair community **7.** To provide all community members with life-long learning opportunities **8.** To create a more walkable, bikeable, and livable city **9.** To reduce Santa Monica's impact on the global environment **10.** For our children and our children's children

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