



## Tomorrow's Energy Today

*for Cities and Counties*

*Sustainable communities meet the needs of current residents without sacrificing resources, such as this river, that are necessary for future generations to survive and prosper.*

# Sustainability Protects Resources for Future Generations

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*Today, many cities and counties are taking steps to ensure tomorrow's urban centers remain livable for generations to come. Collective efforts to accomplish this mission are referred to as sustainable development, or sustainability.*

Sustainability has become an increasingly popular concept in local governments. The United Nations defines sustainability as development that meets "the needs of the present without compromising the ability of future generations to meet their needs."

Visualizing practical applications of sustainability may be difficult. To illustrate this concept, it may be helpful to compare nonsustainable cities and sustainable cities.

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### *The Nonsustainable Versus Sustainable City*

Today's leaders strive to enhance the quality of life for urban residents by providing much-needed and desired services such as transportation systems and waste disposal. To provide these services, nonrenewable resources are often extracted from the environment. Because no practical process exists to replenish the supply, these nonrenewable resources grow more scarce each year.

In a nonsustainable city, no attempts are made to reduce reliance on nonrenewable resources, use resources more efficiently, or mitigate harm to the environment caused by use of those resources. On the other hand, a sustainable city takes only the resources that are needed and that can either be continuously recycled or returned to the environment in the least harmful way to help generate more resources.



Bob Bower, Shoot the Works

*“The path to sustainability is different for every city because of the variability in terms of culture and politics.”*

—Calvin Broomhead  
Project Manager  
Bureau of Energy Conservation  
City of San Francisco



Linda Cicero / VL1106

San Francisco's popular environmental fair booth is the work of four city departments that have partnered in several sustainability initiatives.

In reality, no city is *completely* sustainable. However, more and more cities are recognizing the need to *strive* for sustainability. Communities that show their commitment to sustainability by creating policies and initiatives are described below.

### *Sustainable City Project*

Local governments are in a unique position to contribute to the sustainability of their communities. Recognizing this potential, in the late 1980s the Urban Consortium Energy Task Force (UCETF) funded a project to create sustainability planning guidelines for local governments. These guidelines are included in *Sustainable Energy—A Local Government Planning Guide for a Sustainable Future*, available from UCETF (see *For More Information*).

This Sustainable City Project included Portland, Oregon, and San Francisco and San Jose, California. For 2 years, these cities collaborated, yet pursued independent solutions that were most appropriate for their local needs.

#### *Portland, Oregon*

For Portland, the issue was creating a new energy policy that would go beyond energy efficiency to include planning goals in areas such as transportation, waste management, housing, and economic development. The city's first energy policy, adopted in 1979, had stipulated an evaluation 10 years later, which coincided with the time frame of the Sustainable City Project.

So the city's Energy Commission, which was responsible for developing the policy, solicited input on energy use from city departments, neighborhood groups, businesses, and environmental organizations in creating the new policy. These same groups joined 1200 individuals in reviewing the resulting draft of the new energy policy. The Portland City Council

approved the new energy policy in April 1990 (see *Linking Energy Use and City Planning*, part of this Cities and Counties fact sheet series).

The new policy included 89 objectives divided into nine broad sections. To meet the objectives of one of these sections—energy efficiency in commercial and industrial facilities—Portland created BEST (Businesses for an Environmentally Sustainable Tomorrow). BEST helps local businesses be more profitable and productive while being more environmentally conscious. BEST promotes four sustainable business practices: energy efficiency, water conservation, waste reduction (recycling), and clean and efficient transportation.

More than 150 businesses have been helped by BEST. Several have been recognized with annual BEST awards, including the five Portland locations for Red Lion Hotels & Inns, which have saved more than \$290,000 per year in lower energy, water, and sewer costs. Another Portland business, NIKE, Inc., received a BEST award for reducing vehicle miles traveled by employees by more than 135,000 per year through innovative alternative commuting. And a chemical manufacturing plant, Elf Atochem North America, decreased water use by as much as 346,000 gallons (1,310,000 liters) per day, saving the company \$110,000 per year and leaving more water for the rest of the city.

#### *San Francisco, California*

In the past, San Francisco officials determined the feasibility of energy efficiency measures by estimating the impact on energy costs. This process took into account availability of resources and political support for proposed initiatives. But the Sustainable City Project provided San Francisco a new and essential opportunity—to look to the future and consider sustainability in all its planning activities.



Vantage Point Photography

*The San Jose Convention Center uses a cogeneration system for heating, cooling, and lighting. Planning for this project began during the city's participation in the Sustainable City Project.*

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*Each policy is evaluated for its potential contribution to the sustainability of the city as a whole.*

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The Bay City added a sustainability framework for developing all city policies, not just energy policies. Policy decisions are no longer made in isolation. Each policy is evaluated for its potential contribution to the sustainability of the city as a whole and for potential links to other policies.

Links among policies help garner support for implementation from other city departments and non-government organizations. For example, a policy on housing density in specific areas of the city encourages collaboration between the housing department and the transit agency.

Calvin Broomhead, project manager at San Francisco's Bureau of Energy Conservation, believes one of the most important lessons learned from the Sustainable City Project is that no *single* approach to sustainability exists. "The path to sustainability is different for every city because of the variability in terms of culture and politics," says Broomhead.

Even though the Sustainable City Project officially ended several years ago, Broomhead says San Francisco has continued on the path to sustainability. "The things that have lasted are the organizational things we tried," he says. "Sustainability is about creating partnerships and

relationships. San Francisco is promoting interdepartmental cooperation on projects ranging from city facilities to public education."

Broomhead thinks cities can no longer afford to support energy projects that are just energy projects, especially in an era when resources are so scarce. "Sustainability projects have to be multiservice and multipurpose," he says.

One such project is an environmental fair booth displayed around the city as an educational outreach effort to citizens. It's a result of a partnership among four city departments—Energy, Environmental Regulation and Management, Household Hazardous Waste, and Water. In this hands-on booth, people get tips on ways to save energy, use less water, and dispose of hazardous household wastes. The booth is so popular that it's booked for the next 6 months.

"People are drawn to the booth because they have to walk into it to discover what it's about," explains Broomhead. The booth is being used in schools and in numerous street fairs around the city.

In addition, local officials established a Commission on the Environment to advise the San Francisco Board of Supervisors. This group, which was created with input and encouragement from city departments, provides a central point of contact on environmental issues.

#### *San Jose, California*

Although San Jose's Energy Management Program had completed many energy projects before joining the Sustainable City Project, those projects were essentially isolated. The Sustainable City Project enabled San Jose to lay the groundwork for a comprehensive energy policy that linked energy concerns with environmental and economic issues.



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*Newark is already*

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*home to more than*

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*70 recycling firms that*

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*employ more than*

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*1000 people.*

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### *Newark's Environmental Master Plan*

The Environmental Master Plan describes specific actions and ordinances that have helped catapult Newark, New Jersey, into the sustainability arena. The city has made the following changes because of the plan.

- Installed high-pressure sodium street lights to replace less efficient fluorescent, incandescent, and mercury-vapor units.
- Adopted a landmark law restricting the use and disposal of ozone-depleting chemicals.
- Passed an ordinance requiring builders to replace trees removed from construction sites or pay into a special Planting and Preservation Fund used to plant trees in the city.
- Implemented a policy to plant at least 2000 trees each year.
- Created an Urban Gardening Program that encourages transformation of vacant lots into community gardens.
- Banned retail food establishments in the city from using two forms of plastic—polystyrene and polyvinyl chloride—unless they recycle at least 60% of their packaging.
- Established a recycling program that has saved taxpayers more than \$15 million in 8 years.

The first step of San Jose's work was an environmental scan to ascertain energy use and costs throughout the city. Based on that information and projections, the city adopted a long-term energy policy based on sustainable development and set a target of a 10% reduction in energy consumption by the year 2000.

The city's Energy Management office identified numerous program options to achieve the 10% reduction goal. After further evaluation, the City Council selected four programs for implementation during the first year of the project: educational programs, municipal operations, technical assistance programs, and policy and regulation.

One direct result of the Sustainable City Project is the San Jose Convention Center cogeneration system. By using a cogeneration plant to provide electrical power and thermal energy, the convention center saves 50% on energy costs for heating, cooling, and lighting. The same cogeneration system supplies electricity to the city's main library and a downtown hotel. In addition, the city makes money from the system by selling excess electricity from the cogeneration facility to the local utility during off-peak hours.

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### *Newark, New Jersey*

Years ago, when local government officials in Newark, New Jersey, embarked on the road to sustainability, they didn't have any guidelines to help in their planning efforts. In spite of this, the city made significant strides toward sustainability and is overcoming a legacy of industrial development at the expense of the environment.

Newark has received numerous awards—from the United Nations, the International Council for Local Environmental Initiatives, and the U.S. Environmental Protection Agency—for its various sustainability programs. One Newark program repeatedly recognized is recycling.

Newark currently recycles 52% of its solid waste under a program established by ordinance in 1987. Since 1990, the city's recycling program has saved taxpayers \$15.44 million in disposal fees and collected nearly \$167,000 in revenue from the sale of recyclables.

Two subsequent ordinances support the city's recycling efforts. In 1988, the Municipal Council approved an ordinance requiring proposals for new developments of 50 or more single-family units, 25 or more multi-family units, or 1000 square feet or more of commercial/industrial space to incorporate provisions for the separation, collection, and disposal of recyclable materials. The city ensured a market for recycled materials by adopting legislation requiring city agencies to purchase finished recycled products.

Recently, the city established a business development program—Planet Newark—for companies in the recycling industry. Newark is already home to more than 70 recycling firms that employ more than 1000 people and generate millions of dollars in economic activity and revenues. City officials believe Planet Newark will create a ripple effect of economic activity and increased tax revenues to support further environmental initiatives.



Chattanooga Venture

A total of 2600 citizens from all walks of life participated in Chattanooga's ReVision 2000 planning process. Of those, 23% were more than 55 years of age.

## Chattanooga, Tennessee

Following closely on the heels of Newark is a city nestled in southeastern Tennessee less than 30 miles from the Appalachian Mountains. Chattanooga, Tennessee, has made major steps toward ensuring the abundance of resources for generations of Chattanoogaans to come. Some of these steps are coordinated by Chattanooga Venture, an organization formed in 1984 by leaders to involve the community in revitalizing the decaying city.

Concern for future generations forced Chattanooga to consider sustainability. "The children weren't staying. They'd grow up here, and then leave," says Susan Kendall Tillman, director of Chattanooga Venture. Chattanooga collectively decided to reverse the tide.

Recently, an innovative program, called ReVision 2000, brought together residents from all walks of life—business people, educators, politicians, parents, teenagers—to create a better way of doing things for the city. Chattanooga Venture facilitates the program. Joining Chattanooga Venture in this initiative are Chattanooga, Hamilton County, and the Chattanooga Area Chamber of Commerce, as well as other civic and neighborhood groups.

In the first stage of ReVision 2000, more than 2600 citizens conceived ideas about how to improve the city. Those ideas were later molded into specific goals and recommendations.

As evidence of its commitment to ReVision 2000, the community established a Vision Committee—comprising volunteers from businesses, public and private organizations, and neighborhood groups—to involve the broader community in implementing goals and recommendations.

Tillman believes Chattanooga's strength is its ability to forge public-private partnerships. "We've lifted our goals to a community agenda instead of one sector's agenda. It's amazing how the city has been able to make progress that way," says Tillman.

ReVision 2000 covers topics such as economic development, environment, transportation, development and planning, government, and parks and greenways. In the area of transportation, for example, one recommendation is to construct bike paths to link residential areas to school, shopping, and workplaces to reduce traffic congestion. Another recommendation is to create centers where residents can dispose of hazardous household waste.

Once the ReVision 2000 goals are implemented, Chattanooga could have recycling and waste minimization programs, rail-bus park-and-ride systems, employers that offer alternative work schedules and job sharing, and waterways free of pollution.

"The people here treasure the resources around us. We're aware of what we have and what we could lose if we don't become sustainable," Tillman says.

## Conclusion

Simply described, sustainability means taking from the environment only what you need and recycling what you take. The cities described here are well on the way to becoming sustainable, as evidenced by their policies and initiatives. Your city, too, can begin the journey that will ensure the availability of resources for years to come. By taking the initiative now, the entire community can benefit in the future. ■

*"We're aware of what we have and what we could lose if we don't become sustainable."*

—Susan Kendall Tillman  
Director  
Chattanooga Venture

## For More Information

**Susan Kendall Tillman**  
Chattanooga Venture  
850 Market Street, 2nd Floor, Miller Plaza  
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Ms. Tillman can provide further information about Chattanooga's progress toward sustainability.

**Calvin Broomhead**  
Bureau of Energy Conservation  
1155 Market Street, 4th Floor  
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Mr. Broomhead can describe what sustainable development has done for the city of San Francisco.

**Susan Anderson**  
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Ms. Anderson is very familiar with Portland's sustainability initiatives.

**Frank Sudol**  
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Mr. Sudol can give information on Newark's transformation in the area of sustainability.

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UCETF publishes *Sustainable Energy—A Local Government Planning Guide for a Sustainable Future*, which gives sustainability planning guidelines for local governments.

**EREC**  
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The Energy Efficiency and Renewable Energy Clearinghouse (EREC) is a service funded by the U.S. Department of Energy to provide information on renewable energy and energy efficiency technologies.

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