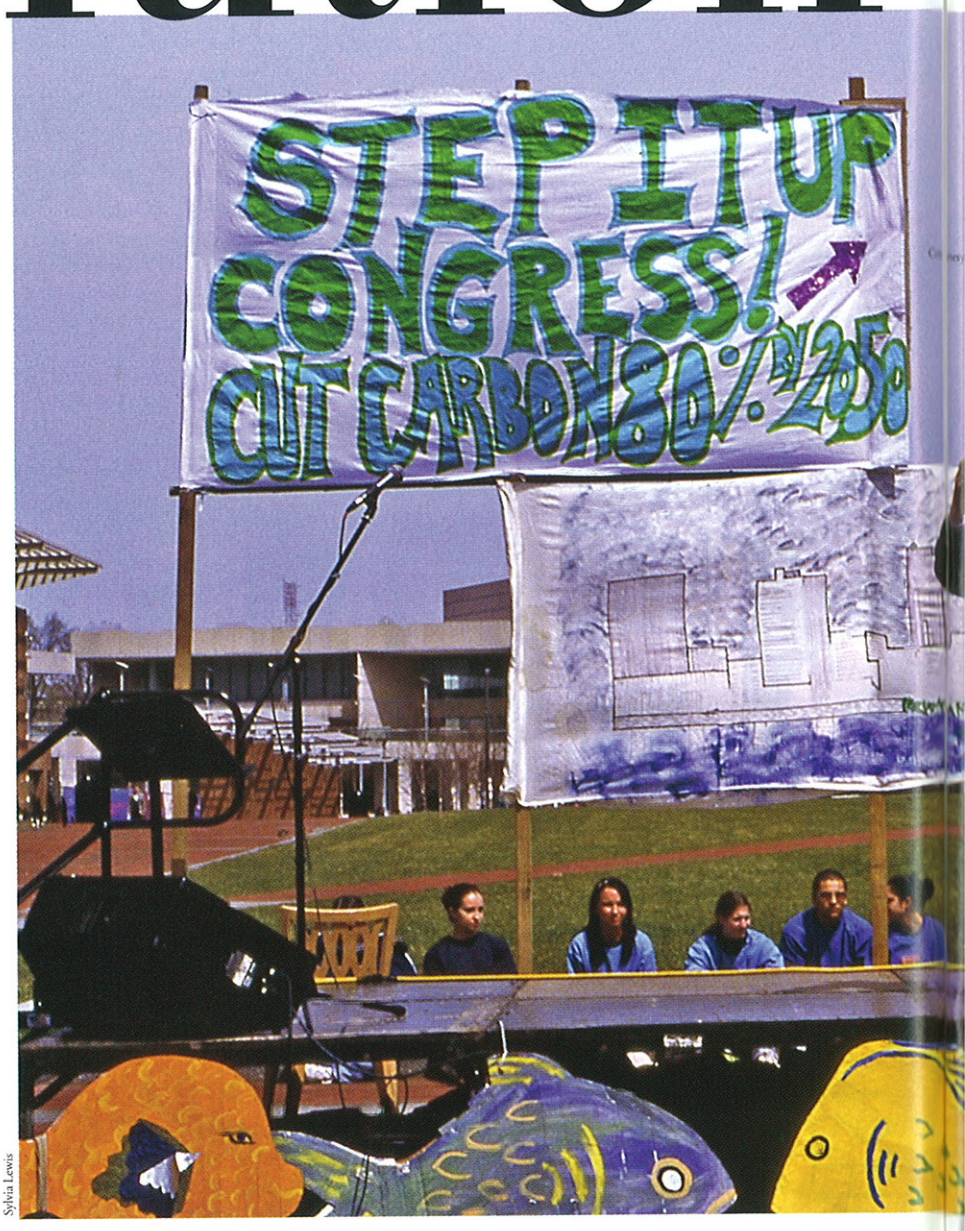
Pollution

Reducing emissions in your own city is an important first step in helping the globe.



Sylvia Lewis

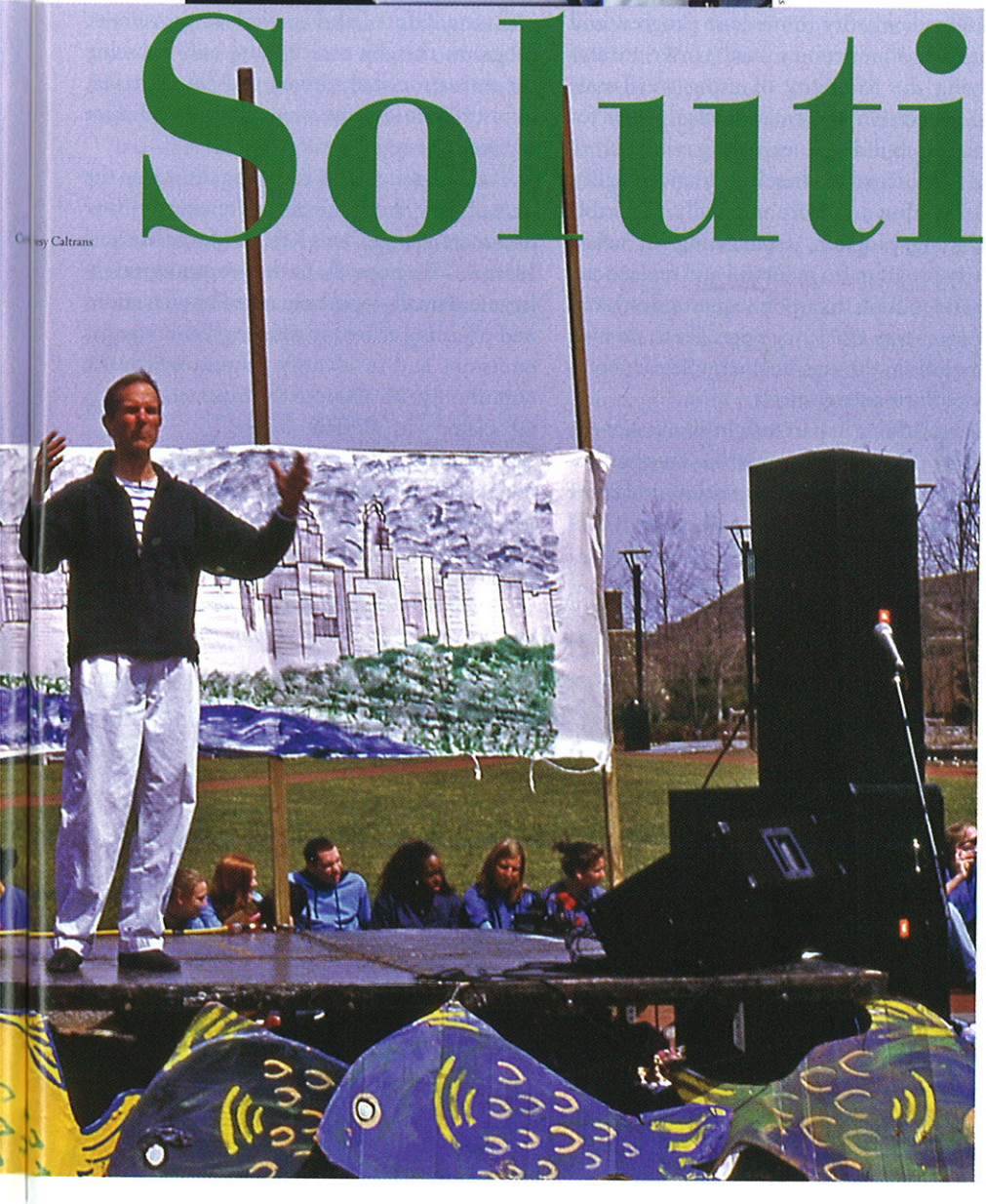
"Hyperbolic clouds of rhetorical gas" was how a *Seattle Times* editorial described the 1988 attempt by King County council members Ron Sims and Bruce Laing, FAICP, to set up an Office of Global Warming. "If Sims and Laing want to study the greenhouse effect, they should buy themselves some tomato plants and a bag of steer manure," said the newspaper.

Nearly 20 years later, Sims is now forging ahead

Courtesy Caltrans

Solutions

By Adam Millard-Ball



Courtesy Caltrans

Left: Local entertainer Bill Mettler speaks at a Step It Up rally in Philadelphia in April—one of many across the U.S., where participants urged Congress to cut carbon emissions. Also at the event: a hybrid city bus. Above: SunEdison recently installed three large solar arrays at Caltran's District 10 office in Stockton, California. Kome Ajise of the transportation agency and Rebecca Nabors, a city council member, threw the switch in June.

with a climate plan as chief executive of the county. "They're not laughing at Ron Sims now," proclaimed a *Seattle Times* headline last year.

King County, Washington, is riding the crest of a wave of greenhouse gas reduction plans that is rolling across the country. As of June, more than 500 mayors had signed onto the U.S. Mayors Climate Protection agreement, spearheaded by Sims's neighbor, Seattle Mayor Greg Nickels. On top of that, nearly 250 local governments in the U.S.—plus another 400 around the world—have joined the Cities for Climate Protection Campaign run by nonprofit ICLEI, the International Council for Local Environmental Initiatives. And the Clinton Climate Initiative is working with nearly 40 large cities worldwide, including Los Angeles, Philadelphia, and Houston.

The mayoral agreement commits members to strive for a seven percent reduction below 1990 levels of greenhouse gas emissions by 2012 by reducing sprawl, promoting alternatives to the private automobile, increasing energy efficiency and recycling rates, and planting trees. Symbolically, the seven percent target is the same as the U.S. would have faced had it ratified the Kyoto Protocol.

If We Can Do It, So Can You!

Keene, New Hampshire, may not be the first place that comes to mind when people think of cities that are cutting their greenhouse gas emissions and conserving energy. That's okay. We won't hold it against you. Despite being a small municipality (pop. 23,000) in a traditionally conservative state, Keene is actively planning for a different future—one that includes global warming.

Keene has already experienced predicted climate change impacts. Many parts of the city were flooded in 2005 from frequent, heavy rains, with resulting damage to homes, bridges, and roadways. Besides being vulnerable to high winds, ice storms, snowfall, and rainfall heavy enough to damage property and infrastructure, Keene could also see disruptions in tourism, loss of seasonal jobs, shifts in local food supplies, and irrevocable damage to natural resources as a result of climate change.

Both residents and local officials recognize that the community can't just sit back and hope someone else will fix the problem. Identifying and planning for the opportunities and vulnerabilities that arise from a changing climate will ultimately put Keene in a better position to ensure its continued economic, social, and environmental viability.

Five years before the flood—in April 2000—with the support of the mayor and city council, the city joined the Cities for Climate Protection Campaign of ICLEI-Local Governments for Sustainability. In 2004, Keene adopted a greenhouse gas emission reduction action plan that commits the city to reducing its emissions by 20 percent by the year 2015. As a result, Keene has actively pursued measures to reduce its carbon footprint, as well as to cultivate cross-departmental and community relationships to ensure the long-term success of its action plan. Together, these steps have made the city a climate change leader in New Hampshire.

To cut down on emissions and conserve energy, the city uses biodiesel for municipally owned diesel vehicles and machinery; it has installed a landfill methane recovery system that provides energy to operate the city's recycling and solid waste transfer facility; it operates a geothermal pump system to heat and cool the public works facility; and it has replaced traditional incandescent traffic signals with LED (light emitting diode) signals, which are more energy efficient. These measures are just an example of some of the emissions-reducing programs that Keene has spearheaded.

In addition, the city has a recycling program in all city buildings, uses bicycles for downtown and neighborhood police patrols, and has adopted an anti-idling policy for non-emergency city vehicles. By implementing these measures, the city has been able to reduce its energy consumption and reduce its growth in total greenhouse gas emissions.

What's next?

The city is now collecting data to update its emissions inventory to measure progress and identify new reduction measures. We are also studying the feasibility of using small-scale wind generation and micro-hydro power for municipal buildings, exploring whether to build a municipal biodiesel production facility, implementing an environmentally preferable purchasing program, establishing an urban forestry program (to maintain and replace city trees and to assist in carbon sequestration), and making energy efficiency upgrades to existing city buildings through an energy service company performance contract.

Keene is doing its part to fight climate change not only through mitigation but through adaptation as well. On the adaptation side of the equation, the city was approached by ICLEI to assist in testing and refining a new program, Climate Resilient Communities. This program will help local governments assess and rank vulnerabilities to climate change, and then identify ways to adapt to the impacts and costs associated with climate change.

In Keene, the CRC program will help to integrate climate preparedness strategies into the city's existing comprehensive master planning efforts and capital improvement program, thereby anticipating and reducing the costs associated with natural disaster relief, infrastructure improvements, and other climate induced changes.

"Once again, Keene is leading the way in the state of New Hampshire in addressing the issue of climate change," says Keene's Mayor Michael Blastos. "We hope that other communities—large and small—will be inspired by our actions and planning efforts to reduce greenhouse gas emissions and to identify ways in which the community can adapt to the expected impacts associated with climate change."

As the first pilot city for the climate change adaptation program, Keene will help lay the groundwork for other communities across

Whitcome Mill Road in Keene, New Hampshire, was damaged by floodwaters in 2005. Officials expect storm severity and frequency to increase due to climate change.

Courtesy David Bergeron

the U.S. and around the world with their efforts to become more resilient. Last year, on behalf of Mayor Blastos, city council member James Duffy attended a meeting in Anchorage, Alaska, where participants, including 30 mayors, witnessed the devastating impacts of climate change firsthand, from retreating glaciers to insect-infested forests.

"When the leaders of our cities gathered in Alaska, we demonstrated the ability to take responsibility for our present and our future. That is the only true purpose any community, any government, can serve," says Duffy.

It is expected that CRC will extend municipal planning efforts beyond disaster preparedness to embrace changes in policy, infrastructure, capital improvements, building and development codes, and economic development strategies—all aimed at making communities less vulnerable to the impacts of climate change.

Mikaela Engert

Engert is a city planner for the city of Keene, New Hampshire, and guides the city's implementation of its greenhouse gas reduction action plan and the formulation of its climate adaptation plan.

Cities for Climate Protection members—including towns, counties, and other local agencies as well as cities—agree to a more formalized five-step process. A baseline emissions inventory and forecast is followed by adoption of an emissions reduction target, development of a local action plan, implementation of specific policies and measures, and monitoring of results.

Some of these adopted targets call for deep cuts in communitywide emissions, taking a "backcasting" approach based on the scale of action that is needed. King County and Berkeley, California, have both committed to an 80 percent reduction by 2050.

"The 80 percent target represents what scientists are saying that we have to achieve as a globe to avoid significant damage," says Timothy Burroughs, Berkeley's climate coordinator, who joined the city this year after a stint as climate program officer at ICLEI.

Berkeley voters adopted the target by an overwhelming majority of 82 percent as part of Measure G last November. And Burroughs points to strong political support as a driving force behind the plan.

"Mayor Tom Bates has stated that he wants Berkeley to be the greenest city in the country. He's made greenhouse gas reduction his major issue," says Burroughs. "That gives staff the freedom to develop creative options, and keep it in the minds of the public. If he's on board, that allows city staff to be on board as well."

"We're lucky to be in a region that is fairly progressive on this issue," he adds. But he suggests that there are also opportunities for climate planning in more conservative communities.

"Depending on where you are, greenhouse gas emissions may not be the thing you want to emphasize," advises Burroughs. "But you can frame projects in different ways." Communities that lack political support for something called a "climate initiative" might stress air quality or walkability benefits instead, he suggests.

More than one reason

"We're finding that some of the most progressive work is being done in unlikely places, such as Keene, New Hampshire," agrees Glen Brand. He's cofounder and director of the Sierra Club's Cool Cities campaign, which aims to help cities realize their targets under the U.S. Mayors agreement.

Brand says that cost savings are behind many of the success stories in unexpected places. Houston, Texas, is aiming for 80 percent of new fleet vehicle purchases to be hybrids by 2010, saving nearly $1,900 in lifecycle costs per car. "Mayor Bill White can talk about the fiscal benefits as well as the environmental benefits," says Brand.

In Twin Falls, Idaho, the school district signed an energy savings performance contract with Honeywell Corporation, which provided much of the upfront capital investment in lighting and heating, ventilation, and air conditioning systems. The firm is paid through the energy savings, which are expected to total $3.5 million over the building's lifetime. "That's a lot of money for a tiny school district in a conservative part of the country," says Brand.

"Not all of these cities [with climate initiatives] have said that climate change is part of this bigger issue of environmental sustainability," adds Michele Betsill, assistant professor of political science at Colorado State University–Fort Collins, who tracks the development of local climate policy. "Some of them have said that this is something we can do where there's a lot of economic benefit."

"Changing [incandescent] traffic lights to LEDs is a great demonstration project," Betsill suggests. "It shows people that for relatively little up-front cost you can save on labor—as you don't have to change the bulbs as often—save on electricity, and reduce greenhouse gas emissions."

Many local climate initiatives, however, go far beyond municipal energy use by laying out policies to achieve emissions reductions in the wider community. According to the U.S. Mayors best practices guide, St. Paul, Minnesota, is aiming to save 3,600 tons of carbon dioxide per year through urban reforestation, which reduces cooling loads on buildings, while Salt Lake City's plan includes savings of 16,500 tons of carbon dioxide equivalent through methane capture at landfill sites. Chicago, meanwhile, promotes green building design, including reflective roofs to reduce air conditioning loads, and has committed to achieving LEED silver ratings for new city buildings.

It's taxing

Another ambitious effort can be found in Boulder, Colorado, where voters adopted a first-of-its-kind Climate Action Plan Tax last November.

A per-kilowatt hour surcharge on electricity bills is estimated to raise about $1 million per year for greenhouse gas reduction efforts. The tax, which sunsets in 2012, will be collected by the local utility, Xcel Energy. Boulder estimates that the average household will pay $1.33 per month, with the average business contributing $3.80 per month.

Sarah van Pelt, the city's environmental sustainability coordinator, describes going to the voters as a gamble, but one that was essential to implementing the climate plan.

Green Roofs: A Way to Start Small

Corry Berkooz

An increasing number of U.S. cities now require green roofs in new construction projects—partly to help mitigate global warming. Green roofs slow the flow of rainwater into a stormwater system, reduce the energy needed for heating and cooling, and diminish urban heat island effects. More than two million square feet of Chicago's rooftops have been planted with low-growing sedums, native grasses, herbs, and shrubs. Minneapolis, Boston, and other large cities have various "green" requirements as well.

But even medium-size cities that do not have incentives in place have found innovative ways to encourage construction of green roofs.

Ann Arbor, Michigan (pop. 114,000), prides itself on being an eco-friendly, bike-supportive, cultural hub with five colleges and universities, including the University of Michigan. The city has an ambitious alternative energy savings plan to significantly reduce its climate footprint. The goal is to use green energy for 30 percent of its municipal operations by 2010.

Mayor John Hieftje is a great supporter of green roofs as part of Ann Arbor's energy savings plan, but he faces constraints. "One of the hurdles we face is that in Michigan the local building codes cannot exceed the state building code, so we can't mandate green roofs in any way," he says.

Despite limited regulatory authority, local planners, developers, citizens, and designers are encouraging green rooftops in Ann Arbor. Architects and landscape architects educate their clients on green roof benefits. Planning commission members suggest green roofs in site plan reviews as a way to manage stormwater runoff. Building owners want the payback in energy savings. This collective push is causing a flurry of construction activity in the city.

Nine green roofs in the Ann Arbor area are planned, under construction, or already built. Sites include a residence, a public library, educational institutions, office buildings, and an appliance store. Mark Lloyd, planning and development services manager, explains that "the city is happy to be a part of that trend; there will be more demand for green roofs as projects with very little open space meet obligations for stormwater retention needs."

The first public building to be fitted out with a green roof was a branch library. Malletts Creek Branch Library, a part of the Ann Arbor District Library system, was built in 2004 in adjacent Pittsfield Township with a grant from the U.S. Environmental Protection Agency. "It will take 12 to 15 years to pay off the green roof project (in energy savings), which isn't bad for what is considered a 40-year building," says library director Josie Parker.

Malletts Creek's green roof covers the building's entire roof structure and measures 16,000 square feet. Maintenance is easy, according to Parker. Landscapers weed the roof only twice a year because the sedums crowd out unwanted plants. Rainfall has been sufficient to meet water needs. Malletts Creek does not rely on its green roof for stormwater runoff mitigation, instead relying on an extensive ground level bioswale system.

Jerry Hancock, Ann Arbor's Natural Resources and Environmental Planning Coordinator, conducts stormwater reviews for new construction in the city. He appreciates a green roof's ability to hold a "first flush" (small) rainstorm event. "There are two ways to assess how much a green roof affects storm water," Hancock says. "First is to take the volume of water that the roof can handle and subtract that amount from detention requirements. The second method is to modify the runoff coefficient of the roof."

Two years ago, Hancock approved a site plan for an appliance superstore on a small lot. The building was to be equipped with a 13,000-square-foot green roof.

This May the GreenGrid Company installed modular units on the roof of Big George's Home Appliance Mart, on the west side of Ann Arbor. Mark Bishar, the store owner, describes himself as "an environmental guy," but he looks closely at costs.

At $80,000, the upfront costs of building a green roof seem high to Bishar, but the roof saves money by reducing the size of the stormwater management system for the site ($30,000 for the underground detention system with the green roof). A civil engineer estimates that

Hawkins Partners, Inc.

Left: Big George's Home Appliance Mart in Ann Arbor, Michigan, boasts a green roof. Above: Nashville Public Square features a 2.25-acre green roof deck, built over five levels of parking.

without the green roof, the detention system would cost twice as much, according to Bishar. But the stormwater management benefits aren't the only draw.

"A green roof saves energy; that's its big selling point," Hancock says. The original Big George's building had heating and cooling costs of about $12,000 a month. The new structure and green roof will be much more efficient (cutting costs by 30 percent), Bishar estimates.

Now under construction is the Stephen M. Ross School of Business at the University of Michigan. When completed in the fall of 2008, the building will have a 20,000-square-foot green roof with 12 varieties of sedum plants. According to Neal Kessler, senior landscape architect with the Ann Arbor consulting firm of JJR, the university was initially sold on the green roof because of its aesthetics; it is visible from multiple points inside the building complex. After many discussions about green roofs, Kessler says the university "feels really good about what they are doing" for the environment, which may lead to more green roof converts in Ann Arbor.

On a final note, many sedums, grasses, and herbs for Ann Arbor's green roofs are grown in Michigan, giving economic development a needed boost.

Corry Buckwalter Berkooz

Berkooz is an environmental writer in Ann Arbor. She was formerly planning director of Schuyler County, New York.

More than half of the revenue—$3.3 million over six years—is slated for energy efficiency programs, such as raising awareness of the utility's rebates for energy efficient equipment and appliances. "We want to make sure contractors know about the rebates and have training in best practices," she says. "Boulder is trying to fill gaps in services that are provided by Xcel, and leverage Xcel's [energy efficiency] service."

The tax also allows the city to continue staffing its climate programs, which previously had been funded on a short-term basis from the trash tax and contingency funds. "This type of work needs so much one-on-one engagement with business leaders, decision makers, and community groups that you have to have staff if you're going to be effective," says van Pelt. "That's how you get the work done."

Ground-level attack

Elsewhere, transportation and land-use strategies to reduce the need to drive are a cornerstone of local climate plans. While climate planning efforts are often led by local departments of the environment or a city manager's office, land-use and transportation planners have been pursuing many of the same policies for years.

Karen Wolf, AICP, senior policy advisor in the King County Executive Office, draws the analogy with public health to argue that climate can provide an extra impetus for smart-growth planning.

"A lot of what we do in government can come together under this carbon umbrella," says Wolf, who managed the county's most recent comprehensive plan update. "I was thrilled a couple of years ago when I realized that as a land-use planner, I could call on public health to support my policies."

"When I've got the public health officials for the whole county talking about how important is it to integrate transportation and land use with public health, that adds a whole new credibility to what we're doing," Wolf continues. "It's the same with climate change. It's another way to reinforce what we're doing and to do more and to do better."

Wolf and her colleague Elizabeth Willmott, the county's global warming coordinator, stress interdisciplinary thinking as fundamental to the county's climate efforts. The climate plan was developed last year by a global warming team led by deputy chief of staff Jim Lopez.

The team brings scientific and technical expertise together with managers from transportation, buildings, public health, and other departments. "We have a mix of managers who can make sure that the actions of the plan will be funded and implemented, but we also have the technical expertise to make sure that we are in the right zone of policy," says Willmott.

The county will embark on a public participation process this fall in tandem with the HealthScape project, which looks at how the built environment and transportation affect public health, air quality, and climate change. Lopez, meanwhile, has been trained by former Vice President Al Gore to deliver the PowerPoint slideshow seen in Gore's Oscar-winning documentary, *An Inconvenient Truth*.

Climate planning is as much about the process as the plan itself, suggests Colorado State University's Michele Betsill. "This is the same with any plan that you are doing: Early stakeholder involvement has been shown to increase the likelihood that your plan will be implemented," she says.

Berkeley's outreach program, designed to explain the range of options that can achieve the voter-adopted emissions reduction target, kicked off in May with a workshop led by Mayor Bates.

"A lot of cities have greenhouse gas reduction plans, but most of them don't have plans that were developed through a community process," says Timothy Burroughs. "It makes Berkeley somewhat unique."

The outreach may help develop consensus as to whether more controversial measures should be part of the plan. "Measure G gave us an amazing mandate to do this community process," says Burroughs. "But it's easier to commit to a target than to say 'yes, you can charge me more to park downtown.'"

Burroughs sees standardizing methodologies as a key next step for local climate planning efforts. This approach can help state agencies account for local greenhouse gas reductions, he says, and improve the effectiveness of the online emissions measurement system being funded through the Clinton Climate Foundation.

Due to be launched by the end of the year, the tool is being developed by Microsoft, in partnership with ICLEI and the nonprofit Center for Neighborhood Technology. Available free to cities, it aims to implement a common measurement system, estimate emissions reduction impacts, and allow sharing of best practices.

Cities must tackle numerous technical issues when they develop greenhouse gas inventories and estimate the potential for reductions, adds Jen McGraw, climate change program manager at the Center for Neighborhood Technology. Planners need to determine the boundaries of the plan and whether to focus on carbon dioxide or include other greenhouse gases such as methane emissions from landfill sites.

Focus on Environmental Analysis

The threat of legal action may be another reason for planners to consider the climate effects of plans and new development, following a series of lawsuits over environmental impact analysis.

Most of the action to date has taken place on the West Coast, under the California Environmental Quality Act (CEQA). In April, state attorney general Jerry Brown filed suit against San Bernardino County, east of Los Angeles, for failure to look at climate impacts in the environmental impact report for its newly adopted general plan.

Earlier lawsuits on similar grounds have been filed by two environmental nonprofits, the Center for Biological Diversity and the Natural Resources Defense Council, against the city of Banning, California, and the state Reclamation Board, respectively.

California legislation adopting targets for reducing emissions gives "great credence to the argument that climate change should be addressed during the CEQA review process," concludes a draft white paper from the Association of Environmental Professionals. It suggests that "ad hoc methods and individual judgment" will be needed until regulatory guidance is issued or legal challenges are resolved.

"If you are doing any controversial development, it's just imprudent not to include a reasonable climate section in your EIR," says Michael Wara, a San Francisco-based climate and land-use attorney at Holland+Knight. Besides quantifying greenhouse gas emissions from traffic and energy use, planners should look at impacts on carbon sinks such as forests and streambeds, along with increased risks from floods and wildfires, he advises.

Local governments, in turn, should consider making a statement of overriding considerations when approving major projects, Wara adds. Under California law, such statements allow plans or projects to proceed, even if significant environmental impacts are not mitigated, based on competing objectives such as housing needs.

In New England, meanwhile, state-funded and large private projects subject to the Massachusetts Environmental Policy Act are now required to quantify greenhouse gas emissions. The new policy, announced in April, also requires mitigation measures such as energy efficiency, green roofs, and transportation demand management.

Meghan Stromberg

In June, Chicago launched its "Cool Globes: Hot Ideas for a Cooler Planet" public art project. One hundred globes, including this one encouraging green government, are on display along the lakefront.

Airports are a big question, she says, because some cities exclude them altogether while others like Seattle factor airport emissions on the percentage of use by local residents. "Air travel is a small percentage of global emissions, but it's growing and really polluting," she says.

Carbon trades

Another driver for standardized measurement protocols—at least for emissions from municipal operations—is the Chicago Climate Exchange, a marketplace where carbon savings or "offsets" can be bought and sold. While the exchange primarily caters to private companies, a growing number of state and local governments are signing up, including Aspen, Berkeley, Boulder, Chicago, Oakland, and King County, which operates King County Metro Transit, and thus houses the first major transit agency to join.

"We joined so that we could start to write the rules on markets," says Willmott, calling for a broader view that takes account of emissions savings from transit as well as the direct emissions from buses. "We want rules that don't penalize us for the greenhouse gas emissions from our transit system, but rather reward us for having a transit system that gets people out of their cars."

King County is also exploring ways to include the cost of carbon into all planning and project decisions, Willmott says. "We believe that carbon markets are coming."

Some environmental groups are more cautious about the rush to trade in carbon offsets. "States and cities should not join the Chicago Climate Exchange," was the title of an open letter distributed last year by a coalition of environmental groups, including Environmental Defense and the Natural Resources Defense Council.

The letter pointed to the lack of guarantees that offsets are "additional"—i.e., would not have happened anyway—and expressed a concern that participation may hamper the development of mandatory programs.

"There may be a role for trading, but it's only after the municipalities have implemented the solutions that reduce carbon locally," argues the Sierra Club's Glen Brand. "We think that trading should be a last resort when they've exhausted all the opportunities, and when we've gotten the most out of renewable energy and energy efficiency in particular."

Lip service?

Despite the planning efforts across the country, the jury is still out on climate plans' effectiveness

in cutting greenhouse gas emissions. Michele Betsill's research suggests that plans to date have had little impact.

"Even these cities that have really integrated climate protection into various components of their local governance are not achieving significant reductions in greenhouse gases," she says. "They are not meeting the targets that they've set for themselves."

According to Betsill, the growth in popularity of climate planning has not been accompanied by deeper efforts. "There are a few cities who are truly engaged in meaningful action, but there's a lot going on at a superficial level of just rhetorical commitment," she says. "We found that several cities were taking things they were already doing and repackaging them as climate-friendly policies."

A report this year from the Institute for Local Self-Reliance concurs. With the exception of Portland, Oregon, it found that emissions had increased substantially in the 10 cities studied, and that at most one or two would meet their seven percent target under the U.S. Mayors Agreement. "Many cities will likely fail in their attempts unless complementary state and federal policies [such as renewable energy requirements and fuel-economy standards] are put in place," says the report.

"Cities are not investing significant amounts of their own money to reduce GHG emissions," the report continues. "This may be understandable, given tight budgets, but cities should remember that energy-related investments, unlike many public investments, repay themselves, often in relatively short time frames."

But Betsill suggests that the impact of climate plans may stretch beyond the city's own operations and policies, and help with a broader process of community engagement on climate issues. "People who wouldn't usually have thought about climate change are coming to meetings or doing their own internal audits," she says. "I see local governments having an important role as agents of learning within their communities."

One of the main purposes of the U.S. Mayors agreement is to "put pressure on states and the federal government," rather than making a concrete local commitment, adds Betsill.

Brand agrees that local planning efforts have broad spillover benefits. "Some clean energy solutions are unfamiliar to the general public or public officials," he says. "Seeing a solar panel on city hall is a way of not only educating people, but making it tangible for folks, and demonstrating that the energy solutions to global warming are feasible, cost-effective, and politically popular."

Bigger playing field

Regional agencies can also play a key part, says Brand. He believes that metropolitan planning organizations can act as one lever of change, given their role as a conduit for federal transportation dollars and responsibilities for air quality conformity. "Many people see that carbon dioxide will be added to the list of responsibilities for MPOs," he says.

In the San Francisco Bay Area, the air quality management district is developing a regional climate strategy through the multiagency Joint Policy Committee. In addition to a regional emissions inventory and a preliminary study of greenhouse gas reduction technologies, the district is considering carbon dioxide emissions when developing rules for criteria pollutants under the Clean Air Act. Ana Sandoval, principal environmental planner, points to a new rule restricting emissions from charbroilers in restaurants, which is the most stringent in the state for criteria pollutants and looks at energy efficiency as well.

The district is also launching a $3 million grant program to reduce greenhouse gas emissions, with an initial call for projects expected this year. According to Sandoval, while guidelines for the program are still under development, possibilities for funding include capital improvements, technology, and educational and faith-based programs.

Other efforts are coming from the green building community. The American Institute of Architects adopted its "2030 Challenge" last year, a position statement that calls for all buildings designed by 2030 to be carbon-neutral.

Brand suggests that this type of initiative could provide a model for the American Planning Association, which is developing a global warming policy guide for consideration at the 2008 national conference in Las Vegas.

"We all need to do our part to address this problem," says Brand. "Citizens need to do it, businesses need to do it, mayors, public officials, states, and the federal government need to do it, but also professionals need to do it. They are one ones who set the course and the agenda for the next generation."

"Land use is where a lot of this happens," agrees King County's Karen Wolf. "As planners, we need to understand how important our job is to the future. It's daunting, but it's exciting because it's a great opportunity to expand the influence of planning in a lot of what we do."

Adam Millard-Ball is a transportation planner and a doctoral student at Stanford University's Interdisciplinary Program in Environment and Resources. His research focuses on transportation and local climate policy. Contact him at adammb@pangea.stanford.edu.

Resources

Local sources. ICLEI's Cities for Climate Protection Campaign: www.iclei.org/index.php?id=1118. U.S. Mayors Climate Protection Agreement and best practices guides: www.seattle.gov/mayor/climate and www.usmayors.org/climateprotection. Cool Cities Campaign: www.coolcities.us and www.coolmayors.org. Center for Clean Air Policy Transportation Emissions Guidebook: www.ccap.org/safe/guidebook.html.

King County 2007 Climate Change Plan: www.metrokc.gov/exec/news/2007/0207warming.aspx and www.metrokc.gov/exec/news/2007/pdf/ClimatePlan.pdf. King County's Climate Impacts Group guidebook on how to plan for global warming: www.metrokc.gov/exec/news/2007/0420guidebook.aspx.

State sources. New Jersey has been studying targets for greenhouse gas emissions and green building technologies. Information on these topics is available from the E.J. Bloustein School of Planning and Public Policy at Rutgers University: www.njssi.org and http://greenbuilding.rutgers.edu.

National sources. U.S. Environmental Protection Agency: www.epa.gov/climatechange/wycd/stateandlocalgov/local_resources.html.

APA's 2007 Federal Policy & Program Briefing (September 30 to October 2 in Washington, D.C.) will feature a daylong forum on global warming, energy, and environmentally friendly development: www.planning.org/policyconference.

Institute for Local Self-Reliance report: www.newrules.org/de/pioneers.pdf.

APA Policy Guide on Global Warming: A draft APA policy guide on global warming is in the works. It will be posted on www.planning.org.

APA *Advocate* update on legislative and policy issues: www.planning.org/apaadvocate.

Audio recordings of 2007 National Planning Conference sessions (www.planning.org/store/audiotapes.htm): Climate Change and Sustainable City Design, with Edward J. Blakely, Alex Hinds, Margaret Sohagi, and Kenneth C. Topping; Planning for a Disaster-Resistant Community with Nancy Carpenter, Hibak A. Hersi, James C. Struve, and Kenneth C. Topping; and Creating Sustainable Communities with Nature and Culture, with Ken M. Hughes and Karen S. Walz.

Reading. *Environmental Planning Handbook*, by Tom Daniels and Katherine Daniels. APA Planners Press, 2003. *Planning for the Unexpected*, by Suzanne Frew, Laurie Johnson, and Laura Samant, APA Planning Advisory Service, PAS 531, 2005. *The Land Use/Transportation Connection*, by Terry Moore, Paul Thorsnes, and Bruce Appleyard. APA Planning Advisory Service, PAS 546/547, 2007. Available at APA's PlanningBooks.org.