



America's Greenest Mayors

CITIES: The federal government has been dithering on climate change and energy conservation for years. Lucky for us, America's local leaders are filling the vacuum.

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April 16, 2007 issue - Sometimes great ideas are born of desperation. For Seattle Mayor Greg Nickels, that sense of urgency developed in the winter of 2004-05, when the annual snowfall failed to materialize in the neighboring Cascade Mountains. That's a serious issue in Seattle, where melting snow feeds the city's reservoirs in the springtime and swells the river that supplies its hydroelectric energy. Nickels's advisers were coming to him weekly with reports that the snow pack was just 1 percent of normal. "I don't think 'normal' exists anymore," Nickels remembers saying, having endured a succession of unusually warm winters. "Normal would be cause for popping champagne corks."

Nickels wasn't the only one who was starting to worry about climate change. In February 2005, 141 nations worldwide were preparing to put the Kyoto Protocol into effect—aiming to reduce global warming by cutting greenhouse-gas emissions 7 percent below 1990 levels by 2012. The United States was notably not one of them, so Nickels decided to "show the world there was intelligent life in the United States after all" by getting American cities to commit to Kyoto's targets. He drafted a document called the U.S. Mayors Climate Protection Agreement and presented it along with eight fellow mayors at the U.S. Conference of Mayors in March 2005. Their goal: to have 141 of their colleagues sign within a year, equaling the number of foreign countries that were party to Kyoto.

Two years later, a maverick idea has blossomed into a movement. To date, 435 mayors have signed on, Republican and Democratic, in Red States and Blue, from the crunchy coasts to the conservative heartland. Some of them govern cities with longstanding records of environmental activism, such as Chicago, San Francisco and Portland, Ore. But their ranks also include recent converts like conservative Republican Robert Cluck of Arlington, Texas, and Tom Barrett of Milwaukee, who just two years ago said it would be hard for him to join because of his city's commitment to promoting industry. Their combined efforts are now far more than symbolic. "These cities represent 61 million people," says Nickels. "That's equivalent to the population of France and larger than the United Kingdom."

The resources they bring to the task vary widely. In San Francisco, the city's Department of the Environment tackles sustainability with a staff of 70 people and a budget of \$20 million. In Fayetteville, Ark., Mayor Dan Coody just hired his city's first sustainability director. Still, a remarkable patchwork of programs is emerging, from the creation of car-sharing schemes on the West Coast to a new initiative in Cambridge, Mass., that aims to green at least half the buildings in town. In the process, city officials are discovering that these measures save money, reduce demands on overstretched utilities and make cities more pleasant places to live and work. "We're not talking about some broad international policy that doesn't trickle down," says Coody. "Cities are where the rubber meets the road." Here are some ways they're taking action:

Energy Efficiency

Embarking on an environmental program sounds like a great idea. But if you're a mayor trying to cut greenhouse gases, where do you begin? How do you even know how to measure your current levels? That's where an organization called ICLEI—Local Governments for Sustainability can help. Founded in 1991, ICLEI provides computer software that walks city officials through the calculation one step at a time, helping tote up emissions from buildings (based on energy-consumption data from utilities) and vehicles (based on volume of traffic—that's what those little black strips on roads are for). The software even takes into account emissions from landfills, which generate methane, a potent greenhouse gas. ICLEI presents officials with a menu of energy-saving measures and helps calculate the reductions they can achieve from each. "We show them the low-, medium- and high-hanging fruit," says executive director Michelle Wyman.

One of the easiest measures is also one of the most cost effective. That's converting stoplights from incandescent bulbs to LEDs. On the downside, the conversion demands a major investment upfront. "When I

found out the cost, it scared me," says Cluck in Arlington, Texas, noting that the new lights will cost his city \$1.35 million. But since LEDs use 80 percent less energy than standard lights—and last six to 10 times longer—they pay for themselves in several years. After that, cities reap the savings. For Arlington, that's a projected windfall of more than \$250,000 a year. In a larger city like New York, it's even more. The Big Apple—which has replaced 80,000 incandescent bulbs in 12,000 intersections—will realize savings of \$6.3 million a year once the initial investment of \$28 million is paid off.

There are dozens of other ways for a city government to cut its power use. Buildings themselves can be made more energy efficient with good insulation, tight ducts and efficient air-conditioning systems. "In cities, buildings account for 50 to 70 percent of energy consumption and, therefore, greenhouse-gas emissions," says Rob Pratt, head of the climate-change initiative at the Henry P. Kendall Foundation in Boston. Many municipalities now require that new government buildings meet the certification standards of the U.S. Green Building Council.

But to achieve ambitious energy-reduction targets, a city needs to get private developers and citizens onboard, too. One of the best examples is Austin, Texas, home to the nation's first green building program. A major citywide energy-conservation program in the 1990s allowed the city-owned utility to avoid construction of a new 500-megawatt power plant that would have been needed by 2000. Now Mayor Will Wynn has an even more ambitious program: to make all new homes in Austin "zero-energy-capable" by 2015. That means they will draw 65 percent less energy than a new home built today—so little that the rest of their energy needs could be supplied by solar panels on the roof, if the homeowners installed them. "Houses like this are possible today," says Roger Duncan, deputy general manager of Austin Energy. But they require every energy-saving trick in the green builder's book.

The city of Cambridge is hoping for a more immediate impact with a sweeping \$100 million initiative announced two weeks ago to cut the energy consumption of every neighborhood in town—municipal, university, commercial and residential alike. "Energy audits" of buildings will be provided free to those who want them, along with recommendations on how to cut energy use. To help owners make the suggested upgrades, low- or zero-interest loans will be available, to be repaid as savings accrue from the new efficiencies. Realistically, the organizers hope for a 50 percent participation rate, which would cut emissions an estimated 10 percent by 2012. The same program will soon roll out in Boston and four other Massachusetts cities.

Transportation

After buildings and lighting, the next obvious issue for a city to address is motor vehicles. As their fleets age, many towns are gradually converting their cars, garbage trucks, salt spreaders, tow trucks and fire engines to hybrids or alternative-fuel vehicles that use ethanol, compressed natural gas or biodiesel. In San Francisco, officials are going the extra mile, so to speak, and will soon use recaptured fat, oil and grease from restaurants to make biodiesel fuel for the city's garbage trucks. These fleet upgrades "aren't quite as cost effective as lighting changes," says Garrett Fitzgerald, director of programs at ICLEI. "But they're simple to do, and they provide a great opportunity to reduce emissions."

Many cities are also encouraging private individuals and taxi companies to switch to hybrids and other high-efficiency vehicles by offering a variety of incentives. In Salt Lake City, says Mayor Rocky Anderson, "the transportation department will put a decal in your rear window, and you can park at any city meters without ever having to pay." And in Boston the Massachusetts Port Authority, which runs Logan airport, is about to start giving hybrid taxis two passes per shift allowing them to cut to the front of the passenger-pickup line. But the very existence of a program for hybrid taxis in Boston is due at least in part to a private initiative by architect John Moore, who last year got permission to follow a standard cab around town for a day in a borrowed Ford Escape hybrid. At the end of the day, the hybrid had used just 3.5 gallons of gas, versus 10.2 for the cab—and with fewer emissions. Moore's experiment helped persuade the city to approve hybrid cabs, a shift that could ultimately translate into greater reductions of greenhouse gases than for most autos, since cabs are on the road all day.

Better yet are trips not taken at all—at least not in privately owned cars. Des Moines, Iowa, has installed bike racks on the front of buses to make longer, car-free commutes more practical, and it has sponsored contests to design artistic bike racks for public spaces. In addition, a growing number of cities have seen the arrival of car-sharing programs like Flexcar in Seattle. For a \$35 annual fee, you can go online and reserve cars parked

at convenient locations. "Like a cash machine, there should always be one within a couple blocks," says spokesman John Williams. You pay \$9 per hour, but the company covers gas, insurance and parking in designated spots. It's so convenient that about half the members end up selling an existing car or avoid buying a new one.

Vibrant Downtowns

New York is the most energy-efficient city in the nation, since millions of residents live in densely packed apartment buildings and rely on walking or public transit for most of their transportation needs. "New Yorkers use half the energy per capita as residents of other cities," says Deputy Mayor Dan Doctoroff.

No wonder cities across the country are trying to attract residents back downtown to live, not just work. In Miami, the city code and zoning laws are being overhauled for that very purpose. "Miami was developed haphazardly by engineers whose only interest was in making it easier for cars, so they built broad roads and narrow sidewalks," says Mayor Manny Diaz. "We want to change that, to have wide sidewalks, with shade trees and parks that create a pedestrian feel." Admittedly, the plan will take decades to implement, but Diaz seems committed to a broad range of shorter-term changes, too, including cleaning up city waterways and building green buildings. "We're on the front line of global climate change here," he says. "The water level doesn't have to rise too much for us to be riding around Miami in canoes."

The greening of city centers isn't just metaphorical. In Chicago, city officials have mapped the "heat islands," where asphalt and black roofs absorb heat and raise the city's overall temperature. These areas are then planted with trees—400,000 to date. "Trees are like big air conditioners," says Environment Commissioner Sadhu Johnston. They lower the temperature, filter air, remove carbon dioxide, absorb storm water and provide shade and beauty. (They even boost the economy. "Research has shown that people are willing to spend up to 12 percent more on a product if they're shopping in a district with mature trees," thanks to the pleasant ambience of the neighborhood, says Johnston.)

At Chicago's Center for Green Technology, the city also runs free programs on topics like planting green roofs, which are actual plots of grass on roofs. They absorb storm water, reduce heat loss in winter and help cool buildings in summer. "We run green-roof test plots to see how much they bring down the temperature," says Johnston. The verdict: a green roof can reduce the surface temperature of a summer-sun-drenched roof from 170 degrees to just 80 to 90 degrees. Chicago has 300 such roofs already built or under development.

The Small Things

Then there are the little things we can all do. "If every household in America switched out one compact fluorescent bulb, it would reduce energy consumption as much as taking a million cars off the road," says Des Moines Mayor Frank Cownie. We could also start drinking tap water rather than the bottled variety. "Production of the bottles alone consumes over 1.5 million barrels of oil a year," says Rocky Anderson in Salt Lake City. Even worse is the energy squandered on shipping water halfway around the world. As a result, he says, "you pay more for a bottle of water than an equivalent amount of gasoline." And we could carry our own mesh shopping bags. Two weeks ago, San Francisco grabbed headlines for banning nonbiodegradable plastic bags, which were costing the city \$8 million a year to clear from streets, storm drains and recycling machines.

In the future, there will no doubt be more amazing ways of contributing. San Francisco has major plans for renewable energy from solar, wind and even tidal power, which would be created by harnessing the tides flowing in and out through the narrow channel below the Golden Gate Bridge. Giant bi-directional blades would spin in the current, fueling generators. "And unlike solar and wind power, which are unpredictable, tidal power is incredibly reliable," says Jared Blumenfeld, director of the San Francisco Department of the Environment.

While the U.S. government continues to dither on climate change, foreign countries are sending representatives to San Francisco to study its green policies. "The Danish, Irish and French environment ministers have come to meet with us in the last six months," says Blumenfeld. "When we asked why, they said, 'Our governments are taking action at the federal level, but we have no idea what to do at the local level.'" America's green mayors could teach them a thing or two.