

Village Green

My carbon footprint should be petite. I live in a house lit by solar panels and snugly insulated with straw bales. I shower and wash dishes with the help of a superefficient water heater. I eat eggs laid near my home in the Rocky Mountains. Yet it's hard to be smug, for as soon as I leave my doorstep, my footprint swells several sizes. I drive to the grocery store. I fly on planes. I buy my shoes and solar-fed appliances from faraway factories that run on coal. Energy-thrifty alternatives, when they exist, are prohibitively time-consuming or pricey. So while climate protection starts at home, finishing the job calls for changing the systems around us.

We can't all crowd onto Samsø, the tiny Danish island that uses the sun and wind to liberate itself from greenhouse gas emissions. And most U.S. commuters can only dream about a place like Freiburg, Germany, where excellent public transportation and bike-friendly streets make cars virtually superfluous. Not to mention the city's ubiquitous solar panels that have helped them cut their emissions 10 percent over the past decade.

Samsø and Freiburg are pioneers, but they're no longer alone. Communities around the world are joining the effort to stabilize the climate. In the United States some 780 cities have pledged to meet the Kyoto Protocol's greenhouse gas reduction targets, even though President George W. Bush refused to sign the international agreement. From Los Angeles to Shepherdstown, West Virginia, from Miami to Milan, Minnesota, mayors have promised to shrink their cities' emissions to 7 percent below 1990 levels by 2012. Together they represent almost one in four Americans.

For Seattle Mayor Greg Nickels, climate change became a pressing concern in 2005, when a nearly snowless winter stripped Pacific Northwest ski slopes and squeezed the region's water supplies. Nickels knew that a single city would be foolhardy to tackle a global problem alone. "If only Seattle made the commitment, it would be purely symbolic, and it's hard to ask people to change their lives for something symbolic," he says. So Nickels challenged fellow mayors to join him.

Then the hard work began: improving bus service and bike lanes, expanding the city's green-building program, and placing an unpopular tax on parking in downtown commercial lots. Such efforts, along with major purchases of wind energy by the city utility, helped Seattle's government cut its emissions by almost 60 percent below 1990 levels. The entire city cranked down its greenhouse gas output by 8 percent from 1990 figures, beating Kyoto targets despite robust growth.

Nickels held a conference in Seattle, where mayors from around the country touted their accomplishments and traded ideas for doing more. Some are turning methane gas from their landfills into electricity, others are urging citizens to buy produce from local farm stands, and some are even pulling police officers out



of patrol cars and putting them on Segways, the high-tech electric scooters. And while the goals aren't binding—and not all cities will meet them—reaching the modest Kyoto Protocol targets can be relatively painless, even profitable. Simply switching the bulbs in all a city's traffic signals to new efficient light-emitting diodes (LEDs) can save hundreds of thousands of dollars in power costs and millions of pounds of carbon dioxide emissions each year. Purchases of wind and solar energy can create local construction and engineering jobs, as they have in solar-crazed Freiburg.

But scientists say that if we're serious about stabilizing the climate, we'll need even deeper emissions cuts. So Nickels and his fellow mayors are now setting their sights on reducing citywide emissions 80 percent below 1990 levels by 2050—and calling for the federal government to help them with reforms and innovations needed to reach beyond city limits.

The cities aren't alone. As of the beginning of 2008, 18 U.S. states, representing almost 50 percent of the population, have established their own greenhouse gas reduction targets. California and Florida have set some of the most ambitious goals, aiming, like the mayors, to reduce emissions 80 percent below 1990 levels by 2050. States in the West, Northeast, and Midwest have teamed up to form regional climate-protection alliances. More than half of all states plan to boost their use of energy from wind turbines, solar panels, and geothermal sources, with several committed to using at least 20 percent renewable energy by 2020. California, a longtime leader in air-quality protection, is going further by both requiring electric

The 12th-century town of Freiburg transformed itself into the epicenter of German energy efficiency after the 1986 Chernobyl nuclear disaster. The city installed thousands of photovoltaic panels to go with its bike lanes and pedestrian-friendly downtown. Over a third of the 217,000 residents do without a car, and per capita CO₂ emissions have fallen 10 percent in the past decade.



Denmark's tiny island of Samsø is one of the few communities on Earth with almost no carbon footprint. In 1997 the Danish government challenged citizens to strive for energy self-sufficiency. Today 11 wind turbines provide electricity for the island's roughly 4,000 residents; 10 more produce power to sell to the mainland. Other communities are following suit in England, Sweden, and elsewhere.

utilities to adopt efficiency measures and rewarding the companies that do so, placing the profit motives of the utilities in line with the environmental goals of the state. The Golden State is also battling the federal Environmental Protection Agency for the right to regulate greenhouse gas emissions from new cars and trucks—putting automakers on notice that the state considers carbon dioxide a pollutant just as noxious as any other exhaust fume.

This patchwork of local, state, and regional efforts has caught the attention of another large and influential community: U.S. businesses. After years of denial—and, in some cases, deliberate obfuscation and misrepresentation of climate science—many large and small American corporations are now taking climate change very seriously.

Some companies got the message from thawing Arctic tundra or shrinking Rocky Mountain snowpacks. Others noted the growing consumer interest in environmentally friendly products or the clean-energy leanings of investment funds and venture capitalists. Many see the work of cities and states as a harbinger of national greenhouse gas regulations and want to be prepared. "There's a sense that market transformation is inevitable, because mandatory regulation of greenhouse gases is inevitable," says Truman Semans of the Pew Center on Global Climate Change, a Virginia-based environmental think tank.

Corporate climate action breeds its share of bombast. When Fiji Water announced its plans to go “carbon negative,” critics said the U.S. company—which imports boutique bottled water from the South Pacific at considerable energy cost—was a dubious climate-protection leader. The British ad standards agency recently reprimanded Royal Dutch Shell for an advertisement claiming, “We use our waste CO₂ to grow flowers,” after environmentalists pointed out that the company sent only a minuscule percentage of its carbon dioxide emissions to greenhouses.

Yet Shell and other large corporations, such as Hewlett-Packard and DuPont, have set and attained various emissions-reduction goals for their own company practices, getting rid of inefficiencies and realizing profits in the process. Other companies are scrutinizing their global supply chains. Wal-Mart, whose market influence—and carbon footprint—knows few rivals, has begun a program to reduce the energy used in making and transporting toothpaste, soap, and a handful of its other basic items.

Some businesses, such as Whirlpool, are building more energy-efficient products, while others are creating new carbon-thrifty technologies. DuPont and BP, for instance, are working to overcome technical barriers to biobutanol, a renewable fuel with a higher energy content than ethanol. Shell is betting that algae-based biofuel may power the future, and Google has announced plans to invest hundreds of millions of dollars in the development of cheap, renewable energy from the sun, wind, and other sources.

Cities and corporations, despite their laudable efforts, continue to dump plenty of carbon dioxide and other greenhouse gases into the atmosphere, which will alter the climate for decades, if not centuries, to come. After all, this is still a world where Peabody Coal sells seven or eight tons of fossil carbon each second. Bigger changes, say many in the business community, won’t happen unless the U.S. government puts a price on carbon, whether through a tax or a cap-and-trade system for greenhouse gas emissions. “Voluntary efforts alone will not solve the problem,” DuPont CEO Chad Holliday told a Senate committee last year.

Just before the latest round of international climate talks in Bali, leaders of more than 150 multinational companies issued a communiqué calling for “strong, early action” on climate change, including ambitious, legally binding international emissions restrictions and an expanded carbon market. “We believe that tackling climate change is the pro-growth strategy,” they wrote. “Ignoring it will ultimately undermine economic growth.”

For corporate America, which once ferociously opposed any form of carbon regulation, such talk is revolutionary. Though Seattle Mayor Greg Nickels is delighted by the audacity of cities, states, and corporations, he knows their efforts won’t suffice. “This is an issue that’s going to require a sense of national purpose, a sense that we’re all in it together,” he says. In other words, leadership from the top. But until Congress—and the President—answers the clamor for change, action will have to keep trickling up from below.

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ing one in four Americans.**

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