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# A Change of Climate

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*Despite a lack of leadership from the federal government, a ground swell of activity to cut emissions of greenhouse gases is emerging throughout the United States.*

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Although the signs of global warming are becoming ever more prominent, casual observers of the media in the United States or Europe might easily conclude that U.S. citizens are in denial about climate change, refusing to take responsibility for controlling their emissions of carbon dioxide (CO<sub>2</sub>) and the other greenhouse gases (GHGs) that cause global warming. Although it is true that the federal government remains stalemated on how to deal with climate change, the notion that no climate action is taking place in this country is erroneous. The most intriguing story is what has been happening in state legislatures, at city council meetings, and in corporate boardrooms, as well as on college campuses, in community groups, and in a range of other local settings. Across the nation, numerous climate action programs are moving aggressively to reduce emissions of GHGs.

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It is rare that a week goes by without the announcement of a new initiative. Among recent clippings, New York Governor George Pataki, a Republican, announced that his state aims to get 25 percent of its electricity from carbon-free renewable energy resources within a decade. Ford and General Motors declared their intent to follow Toyota's lead and manufacture hybrid electric cars and trucks that are more fuel-efficient and less polluting. New Hampshire adopted emissions

controls for three aging power plants. American Electric Power, the largest single source of GHGs in the western world, launched an effort to reduce its emissions by 4 percent by 2006. Students at Zach Elementary School in Ft. Collins, Colorado, choose to purchase wind energy instead of coal power, thus keeping 420,000 pounds of CO<sub>2</sub>, the leading GHG, out of the atmosphere. How many millions of tons of CO<sub>2</sub> have been saved by the activities of states, cities, corporations, and citizens has not yet been calculated, but the number is growing rapidly.

What is the significance of this nascent grassroots movement? In the past, major shifts in societal values have originated at the local level. Popular

movements to abolish slavery, allow women to vote, extend civil rights to African Americans, and curb secondhand smoke started small and then spread nationally. The nation now seems to be witnessing a similar snowball effect, where one successful climate action program inspires two or three more. These early efforts are demonstrating that climate protection is possible, affordable, and increasingly viewed as desirable by many political, corporate, and civic leaders. Widespread activities to reduce emissions of GHGs demonstrate that despite the partisan wrangling in Washington, ordinary citizens can begin addressing climate change now. The challenge will be for federal “leaders” to catch up.

### **Temperatures rising**

Although Swedish scientist Svante Arrhenius first suggested in 1896 that CO<sub>2</sub> emitted from the burning of fossil fuel would lead to global warming, the issue did not receive sustained political attention until the 1980s. In 1992, the United Nations Framework Convention on Climate Change set a goal of stabilizing atmospheric concentrations of GHGs at a level that would prevent dangerous interference with the climate system. In 1997, the world’s nations gathered in Kyoto, Japan, to negotiate how to accomplish this goal. The resulting agreement—the Kyoto Protocol—has now been signed by 100 nations and, if ratified by Russia, will go into effect later in 2003.

The protocol, which would require the United States to reduce its GHG emissions to a level that is 7 percent below 1990 levels, met a frosty reception in Washington. One senator pronounced it “dead on arrival.” During his presidential campaign, George W. Bush pledged to reduce CO<sub>2</sub> emissions, but shortly after taking office reneged on this pledge. All rhetoric aside, it will be nearly impossible to stabilize global CO<sub>2</sub> concentrations without the full and active cooperation of the United States. U.S. citizens are 4 percent of the world’s people but produce 25 percent of all GHGs. U.S. emissions are larger than the combined emissions of 150 less developed countries. Texas alone produces more CO<sub>2</sub> than the combined emissions of 100 countries, and the utility American Electric Power produces more than Turkey.

Several developments are driving the ground swell in climate action programs. For one thing, scientific understanding of climate change has advanced

significantly. In 1992, the National Academy of Sciences cautiously concluded, “Increases in atmospheric GHG concentrations probably will be followed by increases in average atmospheric temperatures.” By 2001, the academy was much more definitive: “Greenhouse gases are accumulating in Earth’s atmosphere as a result of human activities, causing surface air temperatures to rise. Temperatures are, in fact, rising . . . There is general agreement that the observed warming is real and particularly strong within the past 20 years.”

Reports issued by the Intergovernmental Panel on Climate Change, an interdisciplinary group of more than 2,000 scientists, show a similar evolution. In 1990, the panel stated that the “unequivocal detection of the enhanced greenhouse effect from observations is not likely for a decade or more.” In 1995, it said that “the balance of evidence suggests a discernible human influence on global climate.” In 2001, the panel concluded that “there is new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities.”

Another factor fueling the growth of climate action programs is that climate change is becoming evident, even to lay people. New England gardeners notice that spring arrives about two weeks earlier than it used to, Inuit hunters confirm the rapid melting of Arctic sea ice, and rangers in Glacier National Park document rapidly vanishing ice fields. According to the National Oceanic and Atmospheric Administration, the 10 warmest years in the historical record have occurred since 1980; 1998 was the warmest year and 2002 was the second warmest. It has now been 17 years since the world has experienced a cooler-than-normal month. This sort of unending heat wave has not gone unnoticed.

The human role in climate change is no longer a controversial theory to be debated on talk radio; increasingly, the public views it as a fact. And surveys show that people are concerned. For example, a recent poll revealed that 75 percent of registered voters (including 65 percent of Republican voters) believe that doing nothing about global warming is “irresponsible and shortsighted.” The business community’s perception of climate change also has changed. In the face of the accumulating body of scientific evidence, denying the problem is no longer a credible corporate strategy. Many powerful corporations that once

lobbied against climate action have performed an about-face. Ford, for example, recently ran an ad that read: “Global Warming. There, we said it.” In public policy as in corporate affairs, once a problem is acknowledged, the discussion turns to possible solutions. It is against this evolving scientific and political backdrop that politicians, corporate executives, and citizens are beginning to act.

### States lead the charge

Many states are large emitters of GHGs. For example, 30 states emit more CO<sub>2</sub> than Denmark, 10 states emit more than the Netherlands, and Texas and California together emit more than all the nations of Africa combined. Efforts by states to reduce their emissions thus have global ramifications. And states have important regulatory power over many activities that are relevant to the issue of GHGs.

Some of the most significant activity has occurred in California. In 2001, the legislature passed an \$800 million energy conservation bill aimed at reducing the state’s electricity use by 10 percent. Although primarily intended to address the state’s electricity crisis, the law also will lead to strong reductions in GHG emissions. In 2002, the legislature took aim at motor vehicles, which account for 40 percent of the state’s CO<sub>2</sub> emissions, directing the California Air Resources Board to develop a plan for the “maximum feasible reduction” in CO<sub>2</sub> emissions. Since burning a gallon of gasoline produces 20 pounds of CO<sub>2</sub>, the obvious way to reduce emissions is to improve fuel efficiency. Today, a typical car produces nearly 12,000 pounds of CO<sub>2</sub> each year—roughly one pound per mile driven. Sport utility vehicles and light trucks pollute more. Noting that federal fuel efficiency standards have barely budged in two decades, California’s governor, Gray Davis, said, “I would prefer to have Washington take the lead, but in the absence of that we have no choice but to do our part.” The auto industry has objected that the proposed changes, to take effect in 2009, cannot be accomplished and would not be acceptable to consumers. (Automakers raised similar objections to previous

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fuel economy targets, emissions limits, seatbelts, and other advances). However, because 10 percent of cars sold in the United States are purchased in California, the state’s law (if it survives legal challenges) may become a de facto national standard, since automakers are unlikely to build a separate line of cars solely for that market.

Electric utilities produce 38 percent of the nation’s GHGs and are an obvious target for reductions. New Hampshire passed a precedent-setting bill that requires Public Service Company of New

Hampshire, the state’s largest utility, to reduce CO<sub>2</sub> emissions to 1990 levels by 2007. The bill was supported by a bipartisan coalition that included environmental groups and the utility itself. “We knew that there would be new legislation,” said company spokesperson Martin Murray, “and we also knew that if we were involved in developing it, it would be more likely to emerge in a form we could support; collaboration achieves better results than fighting.”

Oregon and Massachusetts also have passed laws requiring cuts in CO<sub>2</sub> emissions from power plants. A 1997 Oregon law required new power plants to emit 17 percent less CO<sub>2</sub> than existing ones. Developers can offset plant emissions by contributing to energy conservation efforts, developing renewable energy projects, planting trees, or using the plant’s waste heat in nearby buildings. Generators that violate the standard are allowed to purchase credits from those who reduce emissions more than required. In Massachusetts, the six power plants in the state that produce the most CO<sub>2</sub> are now required to reduce their emissions by 10 percent by 2006–2008. Plants that fail to meet the deadline must purchase emissions credits.

New Jersey has committed to reduce GHG emissions by 2005 to a level that is 3.5 percent below 1990 levels. Under the state’s comprehensive plan, one-third of the reductions will come from efficiency improvements in buildings, one-third from greater use of clean energy technologies, and one-third from improvements in transportation efficiency, waste management, and resource conservation. New York is providing \$25 million in tax credits to building own-

ers and tenants who increase energy efficiency. Maryland is waiving its sales tax on efficient refrigerators, room air conditioners, and clothes washers. In Oregon, appliances that are 25 percent more efficient than federal standards qualify for a tax credit.

States also are addressing climate change by promoting carbon-free renewable energy sources, such as wind and solar power. In 1999, George W. Bush, then governor of Texas, signed a bill requiring the state's electricity providers to develop 2,000 megawatts of renewable capacity by 2009—and this goal has already been achieved. Under this renewable portfolio standard (RPS), energy providers can develop the capacity themselves or purchase credits from solar, wind, hydro, biomass, and landfill gas projects. A surge in wind power development was spurred by the synergistic effect of the RPS and a federal tax credit for wind energy production. (The federal credit is set to expire at the end of 2003, unless extended by Congress.) Maine, California, Wisconsin, Arizona, Minnesota, Iowa, Connecticut, Nevada, New Jersey, New Mexico, Pennsylvania, and Massachusetts also have adopted RPSs. These programs will collectively produce enough carbon-free electricity to power 7.5 million homes, according to calculations by the Union of Concerned Scientists. This is the equivalent of taking 5.3 million cars off the road or planting 1.6 billion trees. The annual CO<sub>2</sub> savings equal about one-half of 1 percent of the nation's total emissions.

Some states are enhancing their impact by banding together to address climate change. Six New England governors joined premiers of eastern Canadian provinces in pledging to lower, by the year 2020, greenhouse emissions to a level that is 10 percent below 1990 levels. The pact calls for reducing electricity emissions by using more clean-burning natural gas, increasing renewable energy sources, and promoting energy efficiency. Signed in 2001 by three Republican governors, two Democrats, and an Independent, the pact demonstrates strong bipartisan support for curbing global warming. "This agreement sends a powerful message to the rest of the nation about the importance of working cooperatively to cut pollution," said Jeanne Shaheen, then the governor of New Hampshire. "If we're going to be successful, it means not just working on it in New Hampshire."

The attorneys general of seven states, New York, Massachusetts, Maine, New Jersey, Rhode Island,

Washington, and Connecticut, recently notified the U.S. Environmental Protection Agency of their intent to sue the agency for failing to regulate CO<sub>2</sub> emissions under the federal Clear Air Act. The attorneys general of 11 states wrote to urge President Bush to cap power plant CO<sub>2</sub> emissions and increase automobile fuel efficiency. The chief legal officers of Massachusetts, Alaska, Maine, New Hampshire, Rhode Island, Vermont, California, New York, Connecticut, New Jersey, and Maryland wrote, "Far from proposing solutions to the climate change problem, the administration has been adopting energy policies that would actually increase greenhouse gas emissions." The authors urged the president to "adopt a comprehensive policy that would protect both our citizens and our economy."

This coin has another side, however. A number of states, including Wyoming, West Virginia, Pennsylvania, North Dakota, Colorado, and Alabama, have passed resolutions barring state action to reduce GHG emissions or urging Congress to reject the Kyoto Protocol, or both. It is probably no coincidence that these states are among the nation's largest coal producers. In states where coal provides the bulk of the electricity, a family's \$100 electric bill represents the mining of 1,400 pounds of coal, whose burning creates nearly 3,000 pounds of CO<sub>2</sub>, most of which will still be in the atmosphere a century from now. But in a sign of the times, some of these same states are now developing climate action plans.

### **Cities at work**

More than 100 cities already have pledged to cut their GHG emissions. For example, the San Francisco Board of Supervisors in early 2002 unanimously passed Mayor Willie Brown's bold resolution to cut the city's emissions over the next 10 years to a level that is 20 percent below 1990 levels (a 13 percent greater reduction than would have been required under the Kyoto Protocol). "When Washington isn't providing leadership, it's critical for local governments to step in," Brown said, adding that the goal "is as much about protecting our national security as it is about protecting our quality of life."

Since city governments own buildings, operate motor vehicle fleets, and regulate such things as utility rates, energy codes, mass transit, highway construction, outdoor lighting codes, waste management,

land use, and other activities that have large climate effects, there are many policies they can adopt to reduce GHG emissions. A brief sampling of measures that have been incorporated into climate action plans includes the integration of transportation and land use policies in Portland, Oregon; altering the commuting behavior of municipal employees in Los Angeles; and purchasing hybrid electric vehicles for municipal fleets in Denver. Aspen, Colorado, now levies the world's highest carbon tax on profligate energy use in high-end homes, raising \$1.9 million that has been used to install solar hot water systems, buy wind power, fund rebates for energy-efficient appliances, and retrofit public buildings.

The International Council for Local Environmental Initiatives offers guidance to cities through its Cities for Climate Protection campaign, in which municipalities commit to inventory their GHG emissions, set a target for future reductions, develop a local action plan, and verify its results. More than 500 cities worldwide (including 125 U.S. cities), representing 8 percent of global GHG emissions, are participating in the program. Cities have found dozens of ways to reduce or offset emissions, including tree planting, mass transit, renewable energy, lighting retrofits, mechanical upgrades of public buildings, installing light-emitting-diode bulbs in stoplights, stronger energy codes for new buildings, carpooling, and bike lanes.

Complementing public actions, individuals and private organizations are getting into the CO<sub>2</sub> reduction act. Students at the University of Colorado increased their student fees to purchase the entire output of a large wind turbine, thus saving 2,000 tons of CO<sub>2</sub>. In Pennsylvania, 25 colleges are purchasing wind power. A religious group called Episcopal Power and Light is recruiting churches on the East Coast and in the San Francisco Bay area to buy wind energy. Families have an important role to play. The typical U.S. household produces more than 43,000 pounds of CO<sub>2</sub> per year, or 120 pounds per day. Half of these emissions come from heating, cooling, and operat-

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*Providing a great deal more federal funding for the development of tomorrow's clean energy technologies is crucial.*

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ing the family home, while half come from driving cars. Not only are many families cutting back on use of fossil fuels, they are taking other steps as well. The federal Office of Energy Efficiency and Renewable Energy estimates that nationwide about 400,000 households are buying carbon-free electricity from their utility companies. In Colorado, 26,000 families and hundreds of businesses are participating in a "green pricing" program that has helped fund two \$30-million wind farms. This program, which has counterparts in many states, keeps 180,000 tons

of CO<sub>2</sub> out of the air each year. By spending \$5 per month on wind power, a Colorado family can save 4,800 pounds of CO<sub>2</sub> each year—an 11 percent reduction in its climate impact for less than 20 cents per day. Driving a more efficient car, weatherizing their home, and installing compact fluorescent lights in place of incandescents can double these savings.

### **Corporate clout**

A growing list of prominent corporations, including automakers, oil companies, and electric utilities, have voluntarily committed to reducing their GHG emissions. By their public pronouncements, these corporations seem to have concluded that climate change can no longer be ignored and that responsible companies must engage the problem. Among Fortune 500 companies, there is an increasing belief that it is only a matter of time before GHGs are regulated, so beginning now to reduce emissions and factor climate change into long-range planning is a smart strategy. Some corporations have concluded that climate action presents an attractive business opportunity. For others, including electric utilities, the uncertainties of future climate policy cast a huge shadow over investment decisions, including whether to build new coal plants or retrofit aging ones. This risk of uncertainty, of not knowing what federal regulators may ultimately require, has begun to seem more financially hazardous than does resolving the matter.

The notion that cutting CO<sub>2</sub> emissions will devastate the U.S. economy is not borne out by experi-

ence. As manufacturers evaluate their energy use, they are discovering that many reductions are profitable and thus enhance their competitive position. For example, IBM reduced its total energy use by almost 7 percent in 2001, saving \$22.6 million and 220,100 tons of CO<sub>2</sub> emissions. Corporations also are discovering that they can increase productivity while simultaneously reducing emissions, further challenging the belief that economic growth and CO<sub>2</sub> reductions are incompatible. DuPont has reduced its GHG emissions to 63 percent below 1990 levels (primarily by reducing nitrous oxide emissions and other byproducts of fluorocarbon manufacture) and has held energy consumption flat since 1990, despite a 36 percent increase in company output. The company views its climate change activities as a way to prepare “for the market place of 20 to 50 years from now—which will demand less emissions and a markedly smaller ‘environmental footprint’ from human activity.”

Among other corporate actions, Alcoa has pledged to reduce GHG emissions by the year 2010 to a level that is 25 percent less than 1990 levels. Dow has committed to reduce energy use per pound of product by 20 percent. In 1997, BP was the first major oil company to declare that action to reduce climate change was justified. The company, which supplies approximately 3 percent of the world’s oil, pledged a 10 percent reduction in its own emissions (not those produced by the fuels it sells), and reached that goal in 2002, eight years ahead of target. By using less fuel to produce its products and by burning off (“flaring”) less natural gas at oil wells, the company saved an estimated \$650 million. According to the company’s chief executive, John Browne: “People expect successful companies to take on challenges, to apply skills and technology and to give them better choices. Well, we are ready to do our part—to reinvent the energy business, to stabilize our emissions—and, in doing so, to make a contribution to the challenge facing the world.” BP is betting that, in the long term, its solar subsidiary will profit from exponential growth in photovoltaics, a market that is doubling every three years. The idea that climate change represents a new business opportunity also is taking hold among automakers. The commercial success of hybrid electric cars from Toyota and Honda has pushed Ford, Daimler-Chrysler, and General Motors

to announce that this fuel-saving option will soon be available in their vehicles.

Nongovernmental organizations are helping corporations address the climate challenge. The Pew Center on Global Climate Change (with 38 companies on its Business Environmental Leadership Council) and Environmental Defense’s Partnership for Climate Action help corporations identify cost-effective strategies for reducing their GHG emissions. Participating companies share lessons they have learned in order to piggyback on each other’s success. Most companies begin by reducing their lighting loads and upgrading their factories’ heating, cooling, and pumping equipment. Some of the resulting savings are then often spent to buy clean power, further reducing emissions. Prominent companies buying wind energy include Kinko’s, Lowe’s Home Warehouse, Advanced Micro Devices, Patagonia, and Toyota.

### **The road ahead**

A skeptic might fairly point out that CO<sub>2</sub> emissions in the United States are still rising, and that by 2010 emissions are likely to be about 25 percent higher than they were in 1990. Two important reasons for this rise are immigration and lifestyle choices. The nation has added more than 30 million people and 25 million motor vehicles since 1990, roughly equivalent to grafting on another California. At the same time, consumers are using 10 percent more energy per capita than two decades ago as people drive more and choose larger homes and automobiles. A typical U.S. citizen now produces about a million pounds of CO<sub>2</sub> in his or her lifetime.

Against this picture, is it really possible to forge at the grassroots level a climate action plan that will be sufficient to the challenge? Probably not. To achieve the goal of stabilizing GHG concentrations in the atmosphere, emissions will need to eventually fall to nearly zero. It is difficult to see how this can occur without federal action. In this light, the news is mixed. Most of the federal government seems at loggerheads over issues related to global warming, and the Bush administration remains firm in its opposition to the Kyoto Protocol. However, a number of federal agencies are quietly conducting voluntary programs to reduce CO<sub>2</sub> emissions. In addition, Sen. John McCain (R-Ariz.) and Sen. Joseph Lieberman (D-Conn.) recently introduced a bill to cap CO<sub>2</sub> emissions and

launch a market for economy-wide trading in them. This type of system has been successful in reducing sulfur dioxide emissions. The cap would be adjusted over time as needed to achieve climate goals, and large polluters would be required to purchase emission allowances in a CO<sub>2</sub> marketplace. It also has been suggested that the federal government should place a tax on CO<sub>2</sub> emissions. With either a cap-and-trade system or a tax, putting CO<sub>2</sub> into the atmosphere would no longer be free, something economists say is critical to addressing the climate challenge in an economically efficient manner.

States may play an important catalytic role in promoting national action. "If several large states, such as California, New York, and Pennsylvania, were all to pass similar legislation, it might be possible to actually begin to develop a national carbon emissions trading regime before any formal action is taken at the federal level," according to Granger Morgan of Carnegie Mellon University. This is roughly how the trading of nitrogen oxides among the states of the Northeast developed. But unlike with nitrogen oxides, states would not have to be located next to each other for CO<sub>2</sub> trading to make sense, because CO<sub>2</sub> mixes globally, and a ton saved anywhere has value anywhere else.

Given the clear need for a national solution, are states and cities in danger of overreaching as they begin to regulate emissions? Again, probably not. Congress recently rejected proposals to adopt a national RPS and to set stricter federal automotive fuel efficiency standards. Therefore, states are doing the right thing to push the debate on these issues. In addition, these programs provide a laboratory for learning what approaches work best, so that as the programs expand, eventually to the national level, there will be a variety of lessons to draw on in structuring the most workable and cost-effective strategy.

People working to reduce emissions around the country recognize that state efforts are no panacea, and they would eagerly applaud a more active federal role. As the group of attorneys general wrote to President Bush in 2002: "State-by-state action is not our preferred option . . . It may increase the uncer-

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tainty facing the business community, thus potentially making the most cost-effective solutions more difficult." They also pointed to a recent Department of Energy report that concluded that the United States "could address carbon dioxide emissions issues with minimal disruption of energy supply and at modest cost, but only with fully integrated planning. Such integrated planning would be best promoted by the regulatory certainty that would result from comprehensive regulatory action at the national level." Such statements illustrate that by failing to provide leadership, the federal government is instigating a proliferation of varying state standards, on everything from cars to utility regulation, that will be more difficult for businesses and more expensive for consumers.

An economy-wide cap-and-trade system or CO<sub>2</sub> tax would result in wide-ranging market-driven changes that would supplant the need for the many other federal emissions reduction programs. But short of such a comprehensive strategy, there is still a great deal that Washington could and should be doing. The Bush administration currently favors a voluntary approach that recognizes corporations that offer to meet certain reduction goals. But the scale of the climate challenge ordains that a voluntary approach will not suffice. To gradually but thoroughly reengineer the nation's energy systems to be free of CO<sub>2</sub> emissions, new energy technologies will be required. R&D is urgently needed for advanced vehicles, less expensive and more efficient photovoltaic cells, advanced bio-fuels, a hydrogen infrastructure, methods to capture and sequester carbon dioxide, and other vital technologies.

Providing a great deal more federal funding for the development of tomorrow's clean energy technologies is thus crucial. Maintaining or expanding federal support for today's renewable energy resources, such as the production tax credit for wind power, is also imperative. Federal economic encouragement will have synergistic effects with state programs as well, in getting new technologies into the marketplace and increasing their volume enough for economies of scale to drive down their costs. In ad-

dition, setting more aggressive federal efficiency standards for energy-consuming equipment from air conditioners to automobiles would help (as opposed to the recent rollback of air conditioner standards and the miniscule suggested increase in fuel economy for automobiles). And it is essential that Washington reengage in the evolving international response to climate change.

To say that Washington should do more does not mean that the surging tide of subfederal activities is not moving the political debate. These activities are demonstrating that there is a political appetite for carbon reductions, that such reductions are often profitable (though as reductions proceed, their cost is expected to rise but still be affordable), and that many climate initiatives have numerous economic and environmental benefits. The Bush administration rejects mandatory GHG reductions on the grounds that they would harm the nation's economy, yet many states taking climate action are doing so partly because it benefits their economies and leads to greater energy independence. Improving energy efficiency that improves the bottom line and developing renewable energy sources that reduce costs, pollution, and dependence on foreign oil are just the kinds of steps that the federal government could be taking to address both economic and security concerns at the national level.

Thus, many U.S. citizens are, indeed, taking responsibility for climate change—and are demonstrating in countless ways their willingness to invest in solutions. Although the scale of the challenge is

daunting, eliminating a billion tons of CO<sub>2</sub> begins with the first ton. Each of the activities at the grassroots level reduces emissions, provides lessons about how to reduce them further, and perhaps most important, brings pressure to bear on the federal government to initiate the comprehensive strategy that is urgently needed. How long will it take for Washington to feel the heat?

*Recommended reading*

- Cities for Climate Protection ([www.iclei.org/co2/](http://www.iclei.org/co2/)).
- Council of New England Governors and Eastern Canadian Premiers, "Resolution Concerning Climate Change" ([www.cmp.ca/reports\\_08\\_2002/27-7\\_climate\\_change\\_e.pdf](http://www.cmp.ca/reports_08_2002/27-7_climate_change_e.pdf)).
- Pew Center on Global Climate Change ([www.pewclimate.org](http://www.pewclimate.org)).
- State legislative actions on climate change (<http://yosemite.epa.gov/globalwarming/ghg.nsf/actions/legislativeinitiatives>).
- Union of Concerned Scientists ([www.ucsusa.org](http://www.ucsusa.org)).
- U.S. Environmental Protection Agency (EPA), States Guidance Document: Policy Planning to Reduce Greenhouse Gas Emissions, Second Edition, EPA Office of Policy, Planning and Evaluation, May 1998 ([http://yosemite.epa.gov/oar/globalwarming.nsf/UniqueKeyLookup/SHSU5BUMXF/\\$File/guid\\_doc.pdf](http://yosemite.epa.gov/oar/globalwarming.nsf/UniqueKeyLookup/SHSU5BUMXF/$File/guid_doc.pdf)).
- EPA state climate action plans (<http://yosemite.epa.gov/globalwarming/ghg.nsf/actions/StateActionPlans>).