A window of opportunity is open for the Midwest to address climate change. Public awareness, political will, and corporate interest are higher than ever before. Those who don’t find climate change arguments convincing can be persuaded to adopt the same measures to achieve energy security and economic prosperity.

Julia Parzen and Adele Simmons

It will take a multi-stakeholder partnership of government, business, unions and civil society to find the common ground and focus regional efforts in time to avoid devastating global impacts. Midwest actors—public and private—must work in unison to consolidate many scattered initiatives into a solid regional front that can connect with similar national and international efforts.

To influence the course of climate change policy—and to be positioned to benefit from it—the Midwest must take its place at the table in the national discussion now.

A lmost five percent of the world’s greenhouse gas (GHG) emissions originate in the American Midwest, a significant contribution to the global warming problem.

The response to the current crisis must be global, and the Midwest must and can make a significant contribution to GHG reductions. Steps to mitigate climate change would contribute to warding off the regional consequences of higher temperatures—falling Great Lakes levels, more violent storms, hotter summers—and simultaneously enhance the regional economy. The Midwest is a leading manufacturer of engines, cars, trucks, buses, farm equipment, controls, and appliances and is also a key source of coal, biofuels, wind energy, and agricultural and wood products. In each of those industries, “green” market opportunities abound. Uniting now behind a broad agenda would ensure a share of those new markets and strengthen the Midwest voice in the national debate on addressing climate change.

A marked increase in awareness of climate change and energy security occurred in 2006, a byproduct of high fuel prices and media attention. In response, and foreseeing potential “green” revenues, elected officials throughout the Midwest began developing energy plans, encouraging efforts to develop renewable energy, and committing to measurable emissions reductions. Corporations are inventorying their GHG emissions and implementing plans to lower them. Many are calling for federal caps on emissions.

Environmental organizations are working with companies to design reduction strategies and with legislators to design new policies. Leaders of the new U.S. Congress have plans for action on cli-
Climate change and renewable energy that will benefit the Midwest. Environmental groups such as Fresh Energy, the Michigan Environmental Council, and the Environmental Law and Policy Center of the Midwest (ELPC) are partnering with companies such as British Petroleum, Baxter, NiSource and Exelon to find common ground that will lead to mutually beneficial energy policies. In addition, investors are pouring billions into new energy technologies that should bring more renewable energy on line in the next decade.

The Midwest has much to lose through climate change inaction and much to gain if it seizes the initiative. Until now, the regional response has been relatively disorganized and muted.

Yet this is nowhere near enough to reduce global warming emissions to the targeted goal of 80 percent below 1990 levels by 2050, the level needed to avoid catastrophic impacts. While some regions, notably the West Coast and the Northeast, have taken aggressive collaborative action on climate change, this has not happened in the Midwest, where a regional scorecard for progress in reducing emissions, a basic benchmarking tool, does not exist.

The Midwest has much to lose through climate change inaction and much to gain if it seizes the initiative. Until now, the regional response has been relatively disorganized and muted. Yet awareness has grown of the serious environmental and economic consequences to the Midwest if climate change is allowed to proceed unchecked. While reducing GHG emissions will have its costs, the region also stands to benefit greatly. Renewable fuels, energy efficiency, and new coal technologies are potential sources of new jobs and economic
development. Reducing reliance on imported fossil fuels, which at current prices cost the Midwest states $100 billion every year, will keep potential investment dollars in the region. And there is so much more that could be accomplished in the region through organized action.

The many Midwest initiatives that could contribute to completing a Socolow wedge (see What’s a Wedge? above) are outlined in our report, “Meeting the Challenge: Opportunities for Midwest Action on Climate Change.” A number of public officials who want to advance these initiatives are now in leadership positions as a result of the November 2006 elections. Still, it is far from clear that the scale and speed of reforms to come will be enough for the Midwest to contribute its share of emissions reductions and avoid the worst impacts of climate change. This is why it is critical to:

• Clarify the scale of action the Midwest needs to take to stabilize emissions.
• Update the assessment of the regional impact of failing to act.
• Ensure information sharing and broad-based collaboration on Midwest initiatives organized around each of the wedges.
• Support multi-stakeholder coalitions to work on policy at the state and federal levels to exploit opportunities in 2007 and beyond.

What’s a wedge?
Climate scientists Stephen Pacala and Robert Socolow have popularized the concept of “climate wedges,” first outlined in their 2004 Science article on the “stabilization triangle.” Pacala and Socolow refer to each billion-ton saving of CO$_2$ emissions as a “wedge.” Seven wedges represent a good first step toward stabilizing global carbon emissions. For example, increasing automotive fuel efficiency is a potential wedge. Doubling the mileage of all cars projected to be operating worldwide in 2055 from 30 to 60 miles per gallon will save one billion tons of CO$_2$ annually.
## Summary of Midwest Opportunities

### Document the Extent of the Climate Challenge in Clear and Precise Terms
- Complete the Midwest Socolow Wedge Analysis
- Update analysis of Midwest climate impacts

### Adopt Standards of Accounting for GHG Emissions Reductions and Offsets
- Encourage Midwest states to join the Multi-State Climate Registry
- Agree on accounting for reductions and offsets across states and trading systems
- Give the public better tools to guide action

### Commit to Emission Reductions
- Secure state commitments to limiting GHG emissions
- Engage more mayors to commit to reduce emissions
- Organize Midwest support for federal cap and trade
- Demonstrate the costs of climate change by legislative district

### Establish Renewable Energy and Fuel Standards
- Enact high state renewable portfolio standards
- Pass a national renewable portfolio standard and support biofuels legislation
- Build support for a regional market for renewable energy certificates
- Accelerate the research on and use of cellulosic ethanol
- Facilitate joint purchasing initiatives to drive market transformation

### Encourage Energy Efficiency and Conservation
- Expand rate-payer funding for energy efficiency
- Move closer to best practice state energy efficiency standards and codes
- Foster joint purchasing initiatives for energy efficiency
- Create new vehicles for investment in public building energy efficiency
- Decouple utility sales and profits
- Find the levers to promote energy efficiency through Independent Transmission System Operators (ISOs)
- Pass carbon performance standards

### Increase Transportation Efficiency and Conservation
- Pass clean car and fuel economy standards in Illinois
- Aggregate purchasing power for fleets and fueling
- Get smart growth and transportation demand on the GHG agenda
- Find a way to help the U.S. auto companies to improve fuel economy

### Reduce Carbon Emissions from Coal Production
- Educate stakeholders about the financial risk of pulverized coal plants
- Reduce the pollution from existing coal-fired power plants
- Jointly address the barriers to integrated gasification combined cycle (IGCC) with carbon sequestration
- Broker agreements for long-term IGCC contracts

### Mobilize Support for Terrestrial and Geological Sequestration
- Support a coordinated terrestrial sequestration initiative
All of the wedge opportunities have gaps in research and development, and financial incentives to promote marketable solutions also are lacking. The region’s greatest opportunity lies in areas suffering from great neglect: energy efficiency, vehicle fuel economy, and transportation demand management. The top priorities, detailed in our report, are to:

Document the Extent of the Climate Challenge in Clear and Precise Terms

Foundations and government can step forward to fund the Midwest Socolow Wedge analysis, which the World Resource Institute (WRI) and other researchers are ready to complete. They also can fund research on regional climate impacts and support for local and state governments to plan for climate change, which organizations such as the International Council for Local Environmental Initiatives (ICLEI) and the Great Lakes and St. Lawrence Cities Initiative are prepared to commission.

Adopt Standards of Accounting for GHG Emissions Reductions and Offsets

Companies and states can sign on now to the Multi-State Climate Registry, and as of early May, 31 states across the nation have done so, including Michigan, Ohio, Illinois, Wisconsin and Minnesota. Midwest companies, governments and civil society groups can come together now to clarify standards and additional requirements for future carbon regulation. The more all these actors can agree upon accounting standards, the more likely it is that states will have consistent standards and the easier it will be to move federal legislation forward.

Commit to State-Level Emissions Reductions

All stakeholders can support or work toward state-level caps on GHG emissions and commitments by mayors to reduce emissions. The entire region must call on the leaders of governors’ task forces in Illinois, Minnesota, and Wisconsin and city task forces in Chicago and other Midwest cities to recommend solutions at a scale that can address the challenge. Here are a few examples:

- In February 2007, Gov. Rod Blagojevich of Illinois announced a statewide goal to slash the production of heat-trapping GHGs to 1990 levels by 2020 and 60% below 1990 levels by 2050.
• In January 2007, Gov. Jim Doyle of Wisconsin announced plans to appoint a global warming task force and create an energy independence office to coordinate an effort to dramatically expand the state’s use of renewable energy by 2025. Doyle said Wisconsin would use renewable energy for 25% of its electricity and 25% of its transportation fuels by 2025.

• Gov. Tim Pawlenty of Minnesota introduced the Next Generation Energy Initiative in December 2006. The initiative includes strategies to increase renewable energy use to 25% by 2025, increase energy conservation, and decrease carbon emissions from Minnesota.

Support Federal Legislation on Emissions Reductions

Midwest business executives, elected officials, and other prominent leaders can speed the process of adoption of a federal climate policy by declaring their support for a national cap and trade system or carbon tax. When 65 large pension funds and companies recently asked Congress to pass legislation restricting carbon emissions, it was front-page news.

The mayors of Chicago, Gary, Rochester, Minneapolis, Duluth, Ann Arbor, Grand Rapids, Cincinnati, Dayton, and Toledo are already signatories of the U.S. Mayors Climate Protection Agreement. Others already on board include evangelical Christian leaders who are urging action to cut carbon dioxide emissions and numerous faith coalitions concerned about climate change.

In January 2007, ten major corporations, including Caterpillar, BP America, Duke Energy, and GE, joined four national environmental groups to form the United States Climate Action Partnership, which is calling upon the federal government to mandate emissions reductions and permit the trading of GHG credits. Midwest companies already on record as welcoming or accepting mandatory caps on their GHG emissions include the Boeing Co. in Chicago; American Electric Power Co. in Columbus, Ohio; Maytag Corp. in Newton, Iowa; 3M Co. in Saint Paul, Minnesota; Whirlpool Corp. in Benton Harbor, Michigan; Wisconsin Energy Corp.; SC Johnson in Racine, Wisconsin; and Cummins Inc. in Columbus, Indiana. All of these companies are Midwest corporate members of the Pew Center on Global Climate Change.

The Midwest also is home of the Chicago Climate Exchange (CCX), which has pioneered trading in greenhouse gases. The CCX has set up a legally binding, rules-based system in all six GHGs, but because there is no cap on GHG emissions in the U.S., the carbon trades at $4 a ton here, compared to $30 a ton in Europe, where there is a mandatory cap. Even at this low price, CCX has members actively trading GHGs, but a federal cap would increase the market price of GHGs and expand the market. CCX members include the State of Illinois, City of Chicago, Ford Motor Company, the Iowa Farm Bureau and Baxter Laboratories, to name a few.

While the idea of a cap-and-trade system may be gaining support, the challenge is to define the standards and rules for the system. Whatever rules and standards are chosen are likely to serve the interests of one industry more than another. To the extent that Midwest stakeholders can reach an agreement about what these standards should be, they will have a greater chance of having these

“What was considered left a year ago is now center, and in six months will be conservative—that is how quickly the debate about climate change is moving here. It is being led by young people around the dinner table with their parents, and the CEOs and politicians are all playing catch-up.”

—Michael Roux, chairman of Melbourne-based RI Capital, quoted in The New York Times
standards incorporated in federal policy and they will greatly facilitate passage of federal legislation.

This is an opportune moment for the formation of a Midwest task force on climate change and energy policy. Climate change legislation limiting GHGs is considered highly likely between 2008 and 2010. It almost certainly will be a broad policy proposal that factors in energy security and economic concerns. A Midwest task force of leaders in business, government, unions, and civil society could guide and stimulate Midwest policymakers, tie individual state conversations together, and build a regional consensus that could have significant impact on federal policy.

A multi-stakeholder and issue initiative could build upon the many efforts already underway to support a cap-and-trade system. The Council of Midwest Governors is preparing for a 2008 policy debate about global warming, renewable energy, energy efficiency, and clean coal, among other topics. Energy Transition 2050, a biannual conference facilitated by the Wisconsin Energy Center, will provide a 2007 forum for advocates, utilities, businesses, and policymakers to address energy transition issues, including buildings and transportation. Powering the Plains, an initiative of the Great Plains Institute, has been bringing together “odd bedfellows” to develop policy, demonstrate promising technologies, identify research aimed at commercialization, educate key audiences, and transform climate change and other environmental concerns into economic development opportunities. The Renewable Energy Alignment Mapping Project is a six-state collaboration involving 30 non-profits and eight foundations that uses systems analysis to align global warming solutions for electric power in the Upper Midwest. The goal is Midwest leadership in 21st century clean energy, resulting in an 80 percent decrease of electricity sector global warming emissions by 2030.

**Establish Renewable Energy and Fuel Standards**

Several Midwest states could enact strong state renewable portfolio and fuel standards in 2007 if there are broad coalitions in place and public support is forthcoming. If all of the Midwest states act, it also will be possible to work on the regional market for renewable energy certificates, making it easier to pass a national renewable portfolio standard. This will require business leadership and funding for NGOs to produce supporting analysis, such as impacts on jobs and economic development, and to organize public support.

The biggest opportunity to support renewable energy in the next two years is the reauthorization of the federal Farm Bill, which in many ways will be an energy bill. A strong showing by energy, rural development, and conservation advocates will determine how strongly the bill supports biofuels, cellulosic ethanol, rural wind and solar power, and biobased products.

While the rush today is to produce corn-based ethanol, CO₂ benefits will come mainly from cellu-
losic sources of ethanol. As pointed out at a recent national conference, an intense cooperative effort is needed to move the cellulosic industry forward and hasten the shift from corn-based ethanol. This can happen with funding support and leadership from the federal and state governments, industry, and the NGO community.

The desire to invest in the Midwest renewable energy sector is growing, but market barriers remain. Cities, states, and companies should be able to purchase and coordinate purchases of renewable energy and buy energy-efficient products. WRI’s Green Power Market Development Group and its Climate Midwest Partnership are helping to set up the systems to facilitate this work, as is the Clinton Foundation, whose Large Cities Leadership Group, assembled most recently in May 2007, aims to pool the purchasing power of participating cities. (Chicago is one of them.)

Encourage Energy Efficiency and Conservation

Energy efficiency continues to be the biggest missed opportunity for achieving low-cost and easy-to-implement emissions reductions. Business and government support for energy efficiency investments and new building codes and standards for space heating and cooling, water heating, lighting, and appliances is not yet as strong as it needs to be.

As the Midwest states contemplate new energy plans in 2007, advocacy groups and the public should all join Iowa, Minnesota, and Wisconsin in aggressively investing in energy efficiency and in passing best practice building codes and standards. The 2007 state legislative sessions will provide a window for new commitments. Given the short payback on many energy efficiency investments, capital should not be a barrier. WRI’s Climate Partnership and the MEEA are helping companies that are prepared to provide leadership.

Public utility commissions and Independent Transmission System Operators (ISOs) in all Midwest states must do their part to promote energy efficiency. In states that have not deregulated, “decoupling” utility sales and profits would allow regulated utilities to increase rates if they help customers cut energy use. In deregulated states, adoption of loading orders could unleash investment in energy efficiency.

Increase Transportation Efficiency and Conservation

California-level clean car standards may be politically achievable in Illinois, paving the way to

Maps produced by the Center for Neighborhood Technology in Chicago show that while the City of Chicago has higher GHG emissions (left) than its suburbs, its more compact land usage produces lower transportation-related GHG emissions per household.
advance these standards in other auto industry states. Groups such as the Apollo Alliance and ELPC are building support for these changes. A recent ELPC white paper argues that increasing fuel efficiency by 25 percent would save Illinois’ economy more than $3 billion annually and create 21,000 net new jobs.

States and cities that are purchasing biofuel, flex-fuel, and efficient vehicles deserve support. By pooling their purchasing power, governments could stimulate market development and lower prices.

Technology changes alone will not be sufficient to achieve the levels of GHG emissions reductions required to avoid dire impacts. Regional GHG emissions from miles traveled must be reduced, but it can only happen if states, municipalities, and special service agencies work together to reduce sprawl, promote transit and rail, and prioritize development in existing communities. Avoiding climate change has added to the already strong arguments of groups pursuing transportation reform and smart growth.

“The most efficient and environmentally responsible plant you can build is the one that you don’t build.”

—James Rogers, chief executive, Duke Energy

Eliminate Carbon Emissions from Coal Production

The biggest threat to efforts to reduce GHG emissions is the planned construction of dozens of new coal-fired power plants. Environmental advocacy organizations and networks, especially the members of the Renewable Energy Alignment Mapping Project (Re-AMP), can help identify the best opportunities to repeat recent successes with closing high-polluting coal-fired plants.

Environmental groups, together with Midwestern investors and regulators who are concerned about risk, could help push energy companies to switch some of the billions of dollars in planned investments in coal-fired power plants to cleaner facilities. The recent decision of Texas Pacific and KKR to drop eight of the 11 planned new TXU plants is a start. Equally important are the efforts of NGOs to work with coal and utility executives and regulators to promote alternatives to conventional coal technology.

Mobilize Support for Terrestrial and Geological Sequestration

Various Midwestern research groups already are studying ways to use terrestrial and geological sequestration of carbon to reduce emissions. Coordinating carbon sequestration efforts, aggregation mechanisms, and research and experimentation would benefit all of the Midwest states.

In Illinois, through the state’s Conservation and Climate Initiative, farmers can obtain credits that can be traded on the Chicago Carbon Exchange in return for using agricultural and conservation methods that store carbon in soil, trees and grass.

The Global Philanthropy Partnership’s Midwest Climate Change Project was created to clarify near- and mid-term opportunities to accelerate Midwest climate action. In its report, “Meeting the Challenge: Opportunities for Midwest Action on Climate Change,” we have identified the stakeholders who support and resist the approaches. The report describes not only what is happening in the Midwest but also how these efforts could be strengthened within the next decade.

The findings were drawn from a companion report, “Midwest Climate Change Leadership Inventory,” a summary of government, business, and civil society projects addressing climate change and energy transformation.

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Copies of the inventory and opportunities report are available from www.global-philanthropy.org. For more information, contact the Global Philanthropy Partnership, 643 W. Arlington Place, Chicago, Illinois 60614; 312.332.8161 (voice); 312.332.2626 (fax); or info@global-philanthropy.org (email).