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The Role of Illinois and the Midwest in Responding to the Challenges of Climate Change

*Douglas Scott**

In July and September 2007, the Illinois Climate Change Advisory Group (ICCAG) with a diverse membership of thirty-nine, voted to recommend twenty-four strategies that professional air modeling had indicated would achieve a goal of reducing greenhouse gas (GHG) emissions in Illinois to 1990 levels by 2020. The votes followed several months of policy discussions by subgroups. That work and process became a benchmark for Illinois' participation as one of the six heartland states¹—along with the Canadian province of Manitoba—to sign the Midwestern Greenhouse Gas Accord (MGA) on November 15, 2007.

Many of the principles and strategies evaluated by the ICCAG were similar to those included in the multistate Midwestern accord. Unlike the process in Illinois, the MGA did not set initial GHG target reductions and timeframes but rather said they should be “consistent with states’ targets.” MGA also established work groups and a policy evaluation process very similar to what Illinois had worked through earlier, including hiring the same global energy and consulting firm, ICF International, to model the impact of various potential reduction strategies. Thus, in many ways the transition from a state focus to a regional one was quite seamless for Illinois.

Prior and subsequent to the work of the ICCAG and the MGA, Illinois had also been participating in the climate change policy discussions of the Environmental Council of the States (ECOS), which represents state environmental agencies and whose Air Committee I chaired the past two years, as well as other national and regional groups. In addition, the Illinois state

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1. States participating in the Midwest Accord include Illinois, Iowa, Kansas, Michigan, Minnesota and Wisconsin, with Indiana, Ohio and South Dakota as observers.

government was only the second, after New Mexico, to join the Chicago Climate Exchange and pledge GHG emission reductions from state buildings and vehicle fleets. Illinois was also one of the founding members of the Climate Registry, of which I am Vice President, which now includes forty-one states, twelve Canadian provinces, six Mexican states and four Native American tribes, in establishing a framework for reporting on and establishing an inventory of GHG emissions from both the public and private sector. More recently, in November 2008, Illinois participated in the Governor's Global Climate Summit hosted by Governor Schwarzenegger of California, and previously, in a summit of states hosted by Yale University.

The collaborative efforts also build upon and complement a number of steps that Illinois has already taken on the state level to reduce GHGs. They include a comprehensive energy plan that included adoption of a renewable energy portfolio in 2007 that requires utilities to supply at least 25 percent of their power from wind and other renewable energy sources by 2025, additional investments in biodiesel production and delivery, and expansion of wind power through tools such as a model agreement to purchase wind power credits sufficient to provide electricity to more than 150 state facilities.

One of the more innovative strategies is a proposal for a pipeline to help capture carbon dioxide emissions from new coal gasification plants. My agency, the Illinois Environmental Protection Agency, permitted one of the first carbon sequestration efforts for an industrial facility in the nation, an underground injection well that is currently being drilled, and has previously permitted a coal gasification plant that has carbon sequestration capabilities. The State has also been a leader on the FutureGen project, a US Department of Energy endeavor to build a near-zero-emission coal plant. Illinois was chosen as the preferred site, and it is hoped that money in the federal stimulus plan will be used to revive and continue the project.

In addition, in January 2006, the Illinois Climate Change Initiative was launched in partnership with the Chicago Climate Exchange and the Delta Institute. Farmers and other landowners were recruited to adopt conservation practices, such as no-till, forestation and using methane digesters in livestock operations to help reduce carbon dioxide (CO₂) and methane. These carbon offset credits were then aggregated by the Delta Institute for sale on the Chicago Climate Exchange to large companies, municipal-

ities and other institutions that have made a voluntary commitment to reduce GHG emissions. The Association of Illinois Soil and Water Conservation Districts was also instrumental in recruiting participants and verifying the GHG reduction actions had taken place. The conservation practices store carbon in the soil and plants that would otherwise form carbon dioxide in the atmosphere. Through late February, 875 landowners with 170,000 acres have participated in the program, receiving more than \$1 million in payments. The price for carbon credits for the program has ranged as high as \$7.30 per metric ton but as of February 2009 was in the \$1.95 range.

At the urging of Governor Pat Quinn, the University of Illinois system recently signed a compact to implement a variety of sustainable practices to reduce its carbon footprint. Governor Quinn has also pledged that Illinois will emphasize low-carbon green practices whenever possible in infrastructure projects funded through the state's share of the federal stimulus program. Governor Quinn also recently announced a Director of Sustainability as a key senior staff person responsible for implementing green initiatives.

The starkly changed economic environment, even since the final ICCAG recommendations, will also pose additional challenges and planning variables. In some areas, carbon emissions are already being reduced as a result of production shutdowns. For example, one of Illinois' larger steel producers has decided to idle most of its plant for the rest of 2009, reducing emissions but also severely impacting the lives of employees and the local community.

One of the key findings of the modeling done by ICFI for IC-CAG was that the recommended strategies would actually result in a benefit to the Illinois economy, compared to taking no action to address climate change. According to ICFI, the benefits include cutting electricity costs by more than \$3 billion by 2020 as well as boosting the gross state product and personal disposable income by billions of dollars while creating tens of thousands of new jobs. In addition, a cap-and-trade program would likely generate hundreds of millions of dollars per year for energy efficiency and other carbon reduction projects. This modeling was also done using an Illinois-only cap-and-trade system, which should provide fewer economic benefits than the regional plan we are now pursuing through the MGA.

The ICCAG process was intended to be as inclusive and transparent as possible. I was appointed by the Governor to be the chair. State AFL-CIO President Michael Carrigan, Baxter Healthcare executive Arthur Gibson and Environmental Law and Policy Center head Howard Learner were appointed as cochairs. Additional representatives from business, labor and environmental organizations, as well as local government officials, consumers, scientists, faith-based groups, agriculture, utilities, power generators, auto manufacturing, construction equipment, oil, insurance and waste management, provided the inclusive nature of the process. The transparency included posting documents and comments generated by the contractors and members of ICCAG on a website on a timely basis.²

Besides ICFI, which focused on modeling emissions and economic impacts, ICCAG retained another leading consultant on climate change, the Washington D.C.-based World Resources Institute (WRI), to prepare an inventory of Illinois GHG emissions and projections for future emissions as well as facilitate the discussion of various policy options.

In July 2007, ICCAG members voted unanimously in support of nineteen strategies. The Advisory Group's authority was limited to making recommendations on GHG reduction strategies to the Governor and did not have any binding implementation authority. They included several relatively noncontroversial but not always easy to implement approaches. The ICCAG unanimously supported several of the Transportation Subgroup recommendations, including: (1) implementing smart growth incentives and expanding mass transit, (2) passenger and freight rail upgrades, (3) providing incentives for fuel-efficient vehicles, (4) a low-carbon fuels standard, and (5) fuel efficiency and low-carbon fuel requirements for all government vehicles.

The Power/Energy Subgroup's strategies supported by the full ICCAG included (1) legislation and incentives to encourage small renewable distributed electricity generation, (2) tighter energy efficiency standards for appliances and equipment, (3) enhanced residential and commercial energy efficiency construction codes, (4) a phase-in of energy efficiency standards for light bulbs, (5) energy conservation for existing state facilities, (6) the renewable energy portfolio standard of 25 percent by 2025, and

2. Illinois Environmental Protection Agency, Illinois Climate Change Advisory Group, <http://www.epa.state.il.us/air/climatechange>.

(7) enhanced energy efficiency with a 2 percent demand reduction by 2015.

The Commercial, Industrial, Agriculture Subgroup's recommendations that were unanimously endorsed by ICCAG included (1) programs to encourage reforestation, tree and grass-planting; (2) energy efficiency incentives, assistance and standards for commercial/industrial generators and boilers; (3) expanded use of no-till farming; (4) programs to encourage methane capture from coal mines, landfills, livestock farms and wastewater treatment plants; (5) increased recycling diversion rate with municipal goals and by stimulating demand for recycled materials; (6) a land-use development offset requirement; and (7) encouraging or requiring reductions in emissions of high global warming potential (GWP) gases such as nitrous oxides, hydrofluorocarbons, perfluorocarbons, hydrochlorofluorocarbons and sulfur hexafluoride.

Some of the strategies have already been implemented, such as increased energy efficiency standards for light bulbs and appliances in the 2007 federal Energy Independence and Security Act, as well as the state renewable energy and energy efficiency standards, and a carbon capture and sequestration portfolio standard for coal plants.

Five of the strategies recommended by the subgroups were more controversial. A cap-and-trade program for power generators and relatively large industrial sources, preferably linked with other states, specifically the Regional Greenhouse Gas Initiative (RGGI) in the northeast states, received twenty-one votes in favor, ten opposed and three abstaining. The next most controversial measure called for GHG emission standards for cars sold in Illinois, which had twenty votes in favor, eight opposed and three abstaining. State legislation to link Illinois to "California car" standards has been introduced, but it is unclear whether it will advance in the near future. Since ICCAG made this recommendation, the US Congress has increased the mileage standards for vehicles, and the US Environmental Protection Agency (US EPA) is reconsidering California's request for a waiver that would allow both California and the other states that have adopted the California standards to implement them.

The other proposals garnering some degree of opposition from ICCAG members—primarily industrial, business and some labor representatives—included a 20 percent carbon offset requirement for new fossil fuel power plants, a carbon capture and stor-

age portfolio standard (which, as set out above, has since been adopted), and CO₂ emission performance standards for electricity generation at new power plants.

The modelers projected that all of the strategies in tandem would be needed to achieve the target of reducing Illinois GHG to 1990 levels by 2020. They calculated the 1990 emissions level at 231 million metric tons of CO₂ equivalent, with a projected increase to 312 million metric tons of CO₂ equivalent by 2020 if nothing were done under a "business as usual" scenario.

Illinois' focus is now on the regional collaborative approach, with a close eye on the actions by the federal government. An early aggressive timetable calling for a model MGA cap-and-trade proposal by November 2008 proved to be overly optimistic and has been pushed back to May or June of 2009 as we await modeling results. The basic principles were established in the Accord in November 2007. They included linkage to other regional systems to create economies of scale, market efficiencies, diversity and liquidity. Linkage could also reduce costs, maximize economic and employment benefits, reduce the shifting of generation and emissions to nonparticipating states, credit past and present actions to reduce GHG emissions and address potential interaction or integration with a future federal cap-and-trade program.

Illinois and other Midwestern states have closely watched the progress and successful initial carbon cap-and-trade program implemented by the RGGI, which sold nearly 50 million allowances during its first auctions in September and December. As the Midwestern states continue to work on the potential parameters of a cap-and-trade system of allowances for our region, it will be an advantage to continue observing how the RGGI auction performs; in particular, how the initial allowance price of \$3.07 to \$3.38 per metric ton of carbon changed at the most recent auction in March 2009, and how that change compares to what has been happening with the European Union carbon markets during the severe economic downturn. The starkly changed economic environment, even since the final ICCAG recommendations, will also pose additional challenges and planning variables.

The current target is for the Midwestern cap-and-trade program to go to market by 2012, with reporting beginning a year before. At this point in time, the potential for regional and cross-regional cooperation on targets and a cap-and-trade program ap-

pears more symmetrical between MGA and the Western Climate Initiative states, as both are looking toward a more economywide approach than the power sector-only program of RGGI. We share many of the same major sources of GHGs and many of the same potential resources for expanded renewable, greener energy and fields. They include significant numbers of coal-fired power plants and in the case of Illinois and some of the Western states, significant proven coal reserves, major petroleum refineries, and oil and natural gas pipelines.

The Midwestern cap-and-trade program, potentially within a framework set at the national level, ideally will allow states to allocate carbon allowances based on the critical needs of their own economic situations and the degree to which technological solutions are available to change industrial processes to reduce carbon emissions. For example, Wisconsin likely will want flexibility for its significant paper industry while Illinois is strongly advocating coal gasification and other clean coal technology, including a renewed hope for the proposed FutureGen project in Mattoon, Illinois, under reconsideration by the Obama administration after having been shelved during the last year of the Bush administration. Thus, it will be a critical issue for Illinois and the Midwest as to whether, for example, states can buy credits and retire them and have a fulcrum role in a carbon cap-and-trade program.

The MGA, at its Joint Advisory Group meeting in Indianapolis in January, also focused on several cross-cutting issues including low-carbon fuel standards, plug-in hybrids and their implications, federal regulatory issues, coal and biomass synergies, workforce development to create more "green jobs," the technology commercialization and investment that will be needed to reach the Accord's targets, and how the financial value represented by the carbon allowances would be allocated or auctioned. The current framework would allow individual states to make the auction/allocation decision based on their needs.

A guiding principle of Illinois' participation in these ongoing collaborative efforts is that while reducing GHGs is ultimately a national and international challenge, in this issue, as in others, states can be a laboratory for solutions that also are adaptable to their own economic and geographical characteristics. Indeed, an impetus for state action was the inaction on this issue by the previous national administration in Washington.

We have already seen early indications of the sea change at the federal level through statements by President Obama and other key policymakers in the new administration. They are reevaluating some of the previous administration's regulatory actions through US EPA, such as the refusal to define GHGs as potentially harmful to human health and subject to federal emission limits and the denial of a waiver to California for more stringent auto emission standards.

President Obama's administration has provided new optimism that not only will there now be a serious national policy to address climate change, but there will also be a significant role and flexibility for the states.

Illinois hopes to continue to play a major role in collaborating with other states to shape the federal debate on the recently introduced Waxman-Markey legislation or through other proposed legislation, as we move toward a possible federal cap and trade system. Even if such a system is adopted, as we hope it is, states will need to continue to play a significant role in its implementation. Our work with ICCAG, the Climate Registry, and the MGA, as well as the other groups, will provide valuable information and a basis for moving forward.