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Meeting #8 Summary
Governor's Commission on Global Warming

Little Rock, Arkansas
July 31, 2008

Attendees:

GCGW: Nick Brown, Rep. Joan Cash, Steve Cousins, Jerry Farris, PhD, Rob Fisher, Richard Ford, PhD, Miles Goggans, Art Hobson, PhD, Kevan Inboden, Christopher Ladner, Elizabeth Martin, PhD, Robert McAfee, PhD, Hugh McDonald, Bill Reed, Jeffrey Short, Kevin Smith, Rep. Kathy Webb and by phone Aubra Anthony, Annette Pagan

Advisory Body: Jane Anderson, Adrian Baber, Karen Bassett, Lawrence Bengal, Chris Bensen, Alice Wright and Lori Burrows (for John Bethel), Jenny Ahlen (for Maria Haley), Nancy Ledbetter, Teresa Marks, Grace Ellen Rice, John Shannon, Terry Tucker, Ed Swaim (for Randy Young)

Governor's Office: Jillian Hicks

Arkansas Bureau of Legislative Research: Gina Mercer

Center for Climate Strategies: Tom Peterson, Lewison Lem, Joe Pryor, Randy Strait, Joan O'Callaghan, and by phone, Hal Nelson

Others: See Attachment for Members of the Public Who Attended GCGW Meeting #8.

Background Documents: (*all posted at www.arclimatechange.us*)

1. Notice and Agenda
2. PowerPoint Presentation
3. Draft Summary of GCGW Meeting #7
4. CCS Memo to GCGW on Preparation for Meeting #8
5. Policy Option Descriptions for Analysis

Discussion and Conclusions:

1. **Welcome and Introductions and Review of Day's Agenda**

   The Governor's Commission on Global Warming (GCGW) Co-chair Kevin Smith opened the meeting and asked the members of the GCGW Advisory Body to identify themselves. He also noted that in the interest of time, the public comment session was moved to the end of the meeting agenda, but would still allow each commenter a 5-minute time slot.

   Tom Peterson of the Center for Climate Strategies (CCS) briefly reviewed the agenda for the meeting.

2. Approval of Draft Summary of GCGW Meeting #7

The GCGW agreed to e-mail any revisions to the draft summary of GCGW Meeting #7 by COB August 1, 2008. [Note: No comments were received after the GCGW meeting.]

3. Dates and Times for Next GCGW Meetings

The next GCGW meeting will be held on September 9, 2008, and the final will be held on September 25, 2008.

4. Review of GCGW Stepwise Planning Process

Peterson briefly reviewed where the GCGW is in the 10-step planning process. He noted the statewide greenhouse gas (GHG) reduction goals and targets, explaining gross versus net emissions, production- versus consumption-based emissions, and the desired levels and timing of GHG reductions. A base, or index, year is identified to compare the percentage of future growth in emissions against that year.

Some commissioners asked if they could be informed of all remaining Technical Work Group (TWG) meetings and be provided the phone codes so that commissioners who are not a member of a TWG may participate. The GCGW agreed with this request without objection. CCS will instruct its facilitators to include all commissioners on e-mail notification of future TWG meetings for the duration of the process.

5. Review of Approaches to GHG Reduction Goals/Targets

Peterson next presented other states' 1990–2020 forecasted growth in GHG emissions under a business-as-usual (BAU) scenario. The 2050 timeline is based on findings by the Intergovernmental Panel on Climate Change in terms of attaining levels that avoid dangerous GHG emissions from human activities. Peterson noted that the GHG reduction goals of many states with projected high GHG growth rates aren't necessarily less aggressive than those of others. States with high population growth rates are working on how to configure the projected new growth more efficiently.

Peterson discussed supply curves, which show the costs and cost savings of various policy options. Some have the potential to save money, while others require spending money. By 2020, emissions in 12 states that have established GHG reduction action plans will be reduced by one-third the level that would have resulted under a BAU scenario. Peterson showed the potential GHG reductions in 2020 from individual sectors, and how Minnesota is taking actions that will exceed its 2025 GHG reduction targets.

The GHG emission reduction targets set in a number of recent federal bills correspond roughly to the goals states have set. Peterson noted that the U.S. Environmental Protection Agency released on July 11 an advance notice of proposed rulemaking requesting public comment on approaches for “Regulating Greenhouse Gas Emissions under the Clean Air Act” (see: http://www.epa.gov/climatechange/anpr.html).

6. Review and Approval of the Policy Designs for Quantification

CROSS-CUTTING (CC) ISSUES

Randy Strait (CCS) explained that the CC TWG has approved CC-4, CC-5, CC-6, and CC-9 for review and final approval by the GCGW. Strait provided a brief overview of these four CC options and CC TWG members provided additional information in responding to the GCGW's questions and comments.

Summary of Comments and Responses to Questions:

CC-4 (The State's Own Greenhouse Gas Emissions [Lead by Example])—A GCGW member noted that universities aren't included in the Policy Design. Strait explained that universities are a subset of state government operations, but will be specifically added to the text to make this clear.

Another GCGW member asked if this policy option overlaps with RCI-3b (Reduced Energy Use in Existing State-Owned Buildings), and suggested that the TWG look at the cost of implementing the option with respect to conducting energy audits. It was noted that this is being addressed under RCI-3b, and the TWG expects a substantial cost avoidance associated with identifying opportunities to reduce energy consumption. An Advisory Body member replied that the Arkansas Department of Environmental Quality (ADEQ) doesn't know what the requirements will be, and anticipates starting out on a small scale and gradually expanding it. A GCGW member suggested inserting under the Feasibility Issues section the uncertainty about this option's foreseeable costs.

CC-5 (Comprehensive Local Government Climate Action Plans)—This policy option focuses on encouraging local leaders to develop and implement plans for reducing GHG emissions at the local level. A GCGW member asked who's responsible for developing and implementing the educational materials and other features, and expressed concern about who will decide what is appropriate information for the educational materials. A GCGW member responded that several agencies will be involved in tracking progress and highlighting the most successful efforts, including ADEQ, the Arkansas Energy Office, and the Arkansas Agriculture and Forestry Commission. They further explained that this is an initiative, not a mandate.

Another GCGW member suggested looking into what other state and local agencies are doing, finding out what educational materials have been approved, and sharing that information with the public.

CC-6 (State Climate Public Education and Outreach)—

A GCGW member expressed concern about not being able to reevaluate a recommendation about something that may change in the future. A GCGW member responded that the GCGW's responsibility is to provide direction and scope for education and outreach efforts. Schools are already addressing climate change. The question is whether to expand educational outreach efforts throughout the state.

CC-9 (Adaptation and Vulnerability)—The TWG is recommending establishing an Arkansas Climate Change Institute to help the state collect data from other agencies on the effects of climate change, evaluate the data, and develop a plan on how Arkansas

might best adapt to those effects. Other agencies would report to the institute, which would serve as a central repository for the data, attract scientists, and create green jobs.

A GCGW member noted that the proposed name of the institute may be too limiting. A GCGW member suggested keeping the currently proposed name (i.e., Arkansas Climate Change Institute) if the institute is to be housed within another state government agency, but making the title broader if it's to be a separate organization.

A GCGW member asked why the TWG isn't recommending incorporating the institute under an existing state agency. A GCGW member responded that the TWG recommends creating a public-sector nongovernmental organization.

A GCGW member asked whether the institute would be a 501(c)(3) stand-alone organization. The TWG recommends leaving the implementation of this organization as broad as possible, and letting the GCGW decide whether the implementation should be highly prescriptive or broad.

A GCGW member asked about the cost and scope of setting up a new organization and noted the difficulties of keeping it funded. They also noted that ADEQ is already collecting emissions data and asked whether the institute could be housed within an already funded state organization. An Advisory Body member responded that ADEQ will be instituting emission reporting, collecting emissions data, and ensuring that reporting is proceeding as planned. Also, it was noted that this policy option and CC-2 (State Greenhouse Gas Reporting and Registry) pose a different set of issues. CC-9 is concerned with collecting data on the effects of climate change on Arkansas, which is broader in scope than just emissions. The idea is to create one umbrella organization, perhaps with funding from the National Academy of Scientists and the National Institutes of Health.

At the next GCGW meeting, the TWG will present recommendations for the title of the institute.

CC Voting:

CC-4 (The State's Own Greenhouse Gas Emissions [Lead by Example])—Approved as a final recommendation without objections, with the revisions noted above.

CC-5 (Comprehensive Local Government Climate Action Plans)—Approved as a final recommendation with one objection. One member objected on the grounds that this policy recommendation does not identify the basis and content of the educational resources and materials that will be developed.

CC-6 (State Climate Public Education and Outreach)—Approved as a final recommendation with one objection. One member objected on the grounds that this policy recommendation does not identify the basis and content of the educational resources and materials that will be developed.

CC-9 (Adaptation and Vulnerability)—Approved as a final recommendation with one objection. A member objected on the grounds that the size, scope, and funding for the institute have not been determined.

TRANSPORTATION AND LAND USE (TLU)

Lewison Lem (CCS) provided a brief overview of the TLU options, and TLU TWG members) provided additional information in responding to the GCGW's questions and comments. Lem noted that the quantification of several options is incomplete. In the interest of time, the GCGW agreed to discuss TLU-3a, TLU-3b, TLU-7, TLU-11a, and TLU-11b, and review the other options at the next GCGW meeting.

A GCGW member noted that it would be helpful between GCGW Meeting #8 and Meeting #9 for the commissioners to have an opportunity to understand the modeling, so the next meeting can be more productive. Peterson suggested making some reference documents available, so the commissioners can understand the key assumptions, mathematics, and economic issues underlying the various policy options.

Summary of Comments and Responses to Questions:

TLU-3a (Advanced Biofuels Development and Expansion—10% Displacement)— Lem noted that the estimate of the cost-effectiveness of this option (–$11 per ton of carbon dioxide equivalent [tCO_2e]) is more conservative than McKinsey's estimate for cellulosic biofuels (–$20/$tCO_2e$). The CCS estimates for this option and TLU-3b are derived from the Argonne National Laboratory's (ANL's) GREET model estimate for alternative-fuel feedstocks for transportation fuels ("The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation Model," available at: http://www.transportation.anl.gov/software/GREET/).

There is some uncertainty regarding whether using corn ethanol would reduce GHG emissions. A GCGW member thinks this option is very unrealistic and unachievable, noting that the Department of Energy's Energy Information Administration (EIA) estimates that 3.9% is the greatest achievable level of gasoline displacement by advanced biofuels. He added that this goal is four times higher than the federal standard; this number represents 9 billion gallons, versus zero gallons today; by law, Arkansas will have 14.5% ethanol (almost all corn-based) by 2015; and the federal standard on alternative fuels is considered to be very aggressive. He asked commissioners to provide any available information on cellulosic fuels being developed faster than the EIA estimate.

Lem explained that the TWG members wanted to examine options that exceed the federal standard, and some states in the Midwest have a 10% ethanol blend as a goal, which is intended to be consistent with what's expected from federal renewable fuel standards.

TLU-3b (Advanced Biofuels Development and Expansion—12% Displacement)— This policy option is similar to TLU-3a, except that it would create a federal standard for renewable fuels to replace 12% of gas with ethanol or other biofuels.

TLU-7 (Promote and Facilitate Freight Efficiency)—Some GCGW members expressed concern about this option because increasing the weight of trucks could affect the condition of the roads, and increasing their length would exacerbate already dangerous driving conditions, especially at night. A GCGW member agreed, noting that the focus of this policy option should be to encourage mode switching from shipping freight by train rather than by truck.

Lem said that trucking companies support anti-idling and truck stop electrification strategies. He added that although the TWG discussed telecommuting, it isn't included in this option. A GCGW member suggested including incentives for increasing truck efficiencies.

A GCGW member suggested sending the entire policy option to the AHC (Arkansas Highway Commission) for review, and looking into a 4-day work week, possibly on a regional basis. Another GCGW member noted that telecommuting might have a home in one of the RCI options. A third GCGW member suggested that the TWG look into shipping freight via barge and other waterway means of transport, and added that the Arkansas Waterways Commission has extensive data that could be very useful.

TLU-11a (Lower Speed Limits and Enforcement—60-mph Limit)—Lem noted that the cost-effectiveness of this policy option should be –$45/t$CO_2$e, instead of the $45/t$CO_2$e that is in the summary table at the front of the TLU document. A GCGW member said they are concerned about the estimated cost savings of this policy option and TLU-11b, because the number doesn't include the cost or value of time on the road, which he said is $225 million. He also expressed doubt about the public's acceptance of this policy, noting that it was unpopular 20 years ago. A GCGW member commented that this policy option could produce compelling benefits.

TLU-11b (Lower Speed Limits and Enforcement—55-mph Limit)—This policy option is similar to TLU-11a, except that it would set the speed limit on highways at 55 miles per hour.

TLU Voting:

TLU-3a (Advanced Biofuels Development and Expansion—10% Displacement)— Return to TWG for further development.

TLU-3b (Advanced Biofuels Development and Expansion—12% Displacement)— Return to TWG for further development.

TLU-7 (Promote and Facilitate Freight Efficiency)— Return to TWG for further development.

TLU-11a (Lower Speed Limits and Enforcement—60 mph Limit)— Return to TWG for further development.

TLU-11b (Lower Speed Limits and Enforcement—55-mph Limit)— Return to TWG for further development.

ENERGY SUPPLY (ES)

Peterson explained that the ES TWG unanimously agreed that the assumptions underlying the forecast for the ES sector that affects quantification of the ES policy options. As a result, CCS is requantifying the options and will present the results at GCGW Meeting #9.

AGRICULTURE, FORESTRY, AND WASTE MANAGEMENT (AFW)

Joe Pryor (CCS) provided a brief overview of the AFW options, and AFW TWG members provided additional information in responding to the GCGW's questions and comments. Pryor noted that the TWG is comfortable with the methodology being used for the quantification of the options, but needs to continue working with state agencies to obtain Arkansas-specific data. Pryor wrapped up his introduction by saying that AFW-1, AFW-8, and AFW-9 are potentially ready for the GCGW's approval.

Summary of Comments and Responses to Questions:

AFW-1 (Manure Management)—The text under the Key Uncertainties section describes the complexities surrounding manure management. The TWG worked closely with ADEQ and the Arkansas Natural Resources Commission (ANRC) and believes the impact on methane and nitrous oxide emissions from manure management practices is uncertain. While GHG benefits from improved manure management practices are likely, the costs are too complex to estimate at this time.

AFW-2 (Promotion of Farming Practices That Achieve GHG Benefits)—The analysis could be improved by using Arkansas-specific data. CCS will continue to work with the TWG, state agencies, and others to identify and locate Arkansas data.

AFW-3 (Improved Water Management and Use)—The TWG is working with ANRC to make this analysis more robust.

AFW-4 (Expanded Use of Agriculture and Forestry Biomass Feedstocks for Electricity, Heat, or Steam Production)—This policy option has three different components: energy from biomass, energy from livestock manure and poultry litter, and capture of waste heat from biomass plants. The main outstanding issue is the large marginal cropland area assumed to be suitable for energy crops (10% of the land classified as marginal agricultural land (out of a total of 16 million acres). The TWG is having problems obtaining data for the marginal land component. The TWG will also add text about hydrogen gas from wastewater as a potential energy feedstock option.

AFW-5 (Expanded Use of Advanced Biofuels)—Since the last GCGW meeting, the TWG added advanced biofuels to this policy option in response to the GCGW's request. Establishing the cost of this option is difficult because there is no advanced biofuels industry in the state. A GCGW member suggested adding text here and under TLU on work being done by Marty Matlock at the University of Arkansas on collecting biodiesel from algae.

AFW-6 (Expanded Use of Locally Produced Farm and Forest Products)—This policy option's goals have been rephrased to focus on local produce and wood products to clarify what the goals are trying to achieve. A GCGW member will provide additional text regarding the benefits of durable wood products, along with statistical information about the environmental value of manufactured wood products versus other products. The TWG needs to look at the goal to understand using something locally grown saves transportation costs and reduces GHG emissions. But using wood products generally, even if they come from out of state, could be a GHG benefit for Arkansas.

Pryor noted that the benefits of durable wood products are incorporated in AFW-7. A GCGW member suggested that the TWG consider including incentives for buying products made from recycled materials.

AFW-7 (Forest Management and Establishment for Carbon Sequestration)—The goal of this policy option has been revised from planting 600,000 additional trees each year trees to 100,000 trees, to reflect the TWG's determination that the former goal isn't achievable. The GCGW approved the revised goal.

The TWG needs to fine-tune the cost aspects. The increased yield in carbon sequestration from sustainable forestry practices is significant. A GCGW member asked how the TWG defines sustainably managed forests and where the wood comes from. An Advisory Body member will provide a definition. A GCGW member observed that certifying sustainability involves effort and cost. A GCGW member added that there should be at least a minimum standardization within the industry.

AFW-8 (Advanced Recovery and Recycling)—The TWG will incorporate in the Implementation Mechanisms section of this option the GHG reduction benefits of a bottle bill. A GCGW member noted that in addition to not having to manufacture additional bottles and the reduction in the waste stream, the TWG needs to ensure that the analysis incorporates the full life-cycle cost of turning the recycled product into a new product.

AFW-9 (End-of-Use Waste Management Practices)—The emission reductions from this policy option look modest, because 4 of the 24 landfills in the state are already using landfill-gas-to-energy technology, and 2 are already capturing the methane. A GCGW member noted that his company has been putting off installing this technology because it's still very expensive. It was suggested that it could be mandated that all landfills are required to examine the current costs and value of collecting landfill gas. Another suggestion was to provide incentives for industries to move close to sources of energy.

AFW Voting:

AFW-1 (Manure Management)—Approved as a final recommendation without any objections.

AFW-6 (Expanded Use of Locally Produced Farm and Forest Products)— Return to TWG for further development.

AFW-7 (Forest Management and Establishment for Carbon Sequestration)—Return to TWG for further development.

AFW-8 (Advanced Recovery and Recycling)— Return to TWG for further development.

AFW-9 (End-of-Use Waste Management Practices)—No objections to moving forward as a final recommendation with revisions to the Implementation Mechanisms section.

RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL (RCI)

Hal Nelson (CCS) provided a brief overview of the RCI options and RCI TWG members provided additional information in responding to the GCGW's questions and comments.

A GCGW member noted that the text in the policy option descriptions for RCI-3 and RCI-4 is old language that needs to be updated.

In the interest of looking at the big picture, before discussing the individual policy options, Nelson explained that RCI -1 and RCI-2 have the most potential for GHG reductions. A member added that RCI-3, RCI-4, RCI-6, and RCI-9 will also have significant potential for reducing GHG emissions.

Summary of Comments and Responses to Questions:

RCI-1 (Improved Building Codes)—A GCGW member suggested changing "Codes" in the title of this policy option to "Standards." A GCGW member suggested inserting the following language: "The code would encourage the direct use of natural gas in compelling situations where it has a distinct advantage over electrical resistance heat." Another GCGW member noted that in some instances electricity can be cheaper than natural gas, and baseload nuclear power plants can be cleaner. His utility's customers could see a 30%–50% increase in water heating costs using natural gas.

A third GCGW member thinks that an incentive should be provided, and that the main focus of this option should be enforcement of the current codes. A concern was raised about the ability of Arkansas to set codes for manufactured housing which is typically regulated by the U.S. Department of Housing and Urban Development. The GCGW agreed that this issues should be reviewed by the TWG and possibly moved to RCI-6.

A GCGW member noted that input from Arkansas Energy Office on the manufactured home issue would be useful. An Advisory Body member noted that Arkansas Energy Office could advocate minimum standards in mobile homes, and that it should be against the law to put electrical resistance heaters in mobile homes.

RCI-2a (Utility and Non-Utility DSM for Peak-Use Electricity)—The intent of this option is to provide incentives to utilities to educate users about energy efficiency, noting that if they save energy the power company gets reimbursed. Energy efficiency is the cheapest source of new power supply. The TWG still has more work to do on the implementation side of this policy option.

A GCGW member recommended creating a standard reporting mechanism so people can judge whether municipal utilities (which aren't regulated by the Arkansas Public Service Commission [APSC]) are meeting their energy conservation targets. A GCGW member noted that most utilities are looking at energy efficiency measures because they make good business sense.

RCI-2b (Utility and Non-Utility DSM and Energy Efficiency for Electricity)—This is a big-ticket item regarding its GHG reduction potential. The goal would be to meet all new demand in Arkansas with energy efficiency by 2015. Though this policy option was ready for presentation, the GCGW agreed to postpone discussion until the September 9 meeting because two commissioners with expertise in this area were not present.

RCI-3a (Reduced Energy Use in New and Retrofitted State-Owned Buildings)— This policy option was not presented for discussion by the GCGW.

RCI-3b (Reduced Energy Use in Existing State-Owned Buildings)—This policy option was not presented for discussion by the GCGW.

RCI-4a (Promotion and Incentives for Improved New Building Design and Construction)—This policy option was not presented for discussion by the GCGW.

RCI-4b (Promotion and Incentives for Improved Existing Buildings)—This policy option was not presented for discussion by the GCGW.

RCI-5 (Education for Consumers, Industry Trades, and Professions)—This policy option was not presented for discussion by the GCGW.

RCI-6 (Incentives and Funds To Promote Renewable Energy and Energy Efficiency)—A GCGW member asked whether the TWG has promoted or provided incentives for heat pumps anywhere. A GCGW member responded that roughly half of residential energy use is for heating and air conditioning, and moving heat instead of generating heat makes sense. He noted that heat pumps may fit best under RCI-6, and added that the TWG is proposing rebates for high-efficiency heat pumps.

RCI-7 (Green Power Purchasing for Consumers)—This policy option overlaps with the ES options. It was not presented for discussion by the GCGW.

RCI-8 (Nonresidential Energy Efficiency)—This policy option focuses on combined heat and power in new boilers. The TWG is considering expanding it to retrofitted and existing boilers, because it could be a significant source of GHG emission reductions. A GCGW member recommended using 10% of existing boilers as a goal for a starting place for analysis. Another GCGW member commented that the recommendations in this policy option should be consistent with Leadership in Energy and Environmental Design™ (LEED) and other green building standards and should cite the various alternatives that builders and architects need to consult to learn how to apply them properly. He offered to research applicable references and e-mail them to the commissioners.

RCI-9 (Support for Energy-Efficient Communities, Including Smart Growth)—This policy option targets reductions in fossil fuel consumption. A GCGW member noted that a 4-day work week and telecommuting need to be discussed further.

RCI-10 (Energy-Savings Sales Tax)—This policy option would provide a tax credit for purchasing energy-efficient equipment.

RCI Voting:

The RCI policy options were not ready for the GCGW's approval.

7. Public Input and Announcements

Several members of the public commented on the issues the GCGW is addressing, including placing a moratorium on building unsequestered coal plants, requiring LEED™ certification, using natural gas for electricity generation, and expanding the use of renewable fuels.

Ludwig (American Community Action Agencies Association) pointed to the need to expand the federal Weatherization Assistance Program to provide funding for no-cost green loans to low-income households to heat their homes.

Ken Smith (Audobon Arkansas) commented that each of the four planned power plants will cost $1.5–$2 billion, and together they will contribute 32% of the carbon emitted in the state. He recommended investing in energy conservation, energy efficiency, and renewable energy as aggressively as possible before constructing the new plants. He also commended the seven utilities that are participating in APSC's energy efficiency programs, and recommended that they be rewarded with perhaps performance-based incentives. He concluded, however, that these energy efficiency initiatives may not be sufficient to meet the state's future energy demand, and suggested that the GCGW consider providing a source of revenue to fund a reinvigorated Arkansas Energy Office to make the necessary energy efficiency improvements.

Bill Lord (Program Director, Northwest Arkansas Regional Solid Waste Management District, and President, Arkansas Association of Regional Solid Waste Management Districts) suggested that the GCGW look into providing carbon credits to assist landfills with collecting methane. He also recommended providing incentives to companies to convert high energy-consuming diesel solid waste collection vehicles to energy-efficient vehicles that run on biofuels. He believes that Arkansas can substantially improve its recycling rates, noting that more than 60% of all solid waste generated can be recycled or composted. He recommended the state pass container deposit legislation, noting that some states with "bottle bills" are recycling 70%–95% of all plastic, glass, and aluminum containers. Increased recycling of containers would create many green jobs in Arkansas, save landfill space, provide a giant step toward recycling goals, and significantly reduce GHG emissions and use of electricity, oil, and gasoline.

Reagan Sutterfield (business consultant and farmer) suggested that the GCGW look at the positive and negative economic development impacts and macroeconomic effects of the four planned coal plants. He pointed to the state's brain drain of younger people who are leaving the state for technology centers, and suspects the plants won't cause them to stay in or return to Arkansas.

Danny Traylor informed the GCGW that 100 stakeholders in the Anthracite Coal Company are developing the Scranton Coal Company close to Morrison Bluff and Scranton. He said that semi-anthracite coal is a good candidate for integrated gasification combined cycle (IGCC) technology. The economics appear promising for dusting off the old River Mountain hydroelectric project and developing an underground gasification facility. The critical enabling technology is CO_2 storage. Arkansas is blessed with good opportunities for enhanced natural gas recovery, sitting at the top of natural gas-producing reservoirs and coal seams (enhanced coalbed methane). Deep-well injection has the potential to sequester 3–6 million tCO_2/year. He suggested that the GCGW look at the Massachusetts Institute of Technology study *The Future of Coal* (http://web.mit.edu/coal/The_Future_of_Coal.pdf). The stakeholders are going to try to develop a 21st-century project on a scale that hasn't been achieved. All the infrastructure is in place in the Arkansas River Valley.

Andrew Endicott (Social Sustenance Organization) supports four items for addressing global warming that could create thousands of green jobs and reduce GHG emissions: (1) demand-side management can align the interests of utilities and the environment with energy-efficient devices and appliances; (2) stricter building codes for new construction can reduce the energy use of and CO_2 emissions from future buildings; (3) implementation of commercial-scale renewable energy feed-in tariffs can reduce risk and increase returns on investment in renewable energy; and (4) a carbon capture and storage requirement in the state can preclude future investment in dirty coal toward renewable energy and environmentally friendly energy options. He concluded that avoiding the catastrophic impacts of climate change will require tremendous investment and work.

8. Next Steps for GCGW Meeting #9

During the September 9 meeting, the GCGW will approve as many proposed policy options as possible. At the last meeting, the GCGW will vote on the remaining options. Peterson emphasized the importance of attendance at the TWG meetings leading up to these meetings. The final report and recommendations to the Governor are due on October 31, 2008.

9. Adjourn

Co-chair Smith adjourned the meeting.

Attachment

Members of the Public Attending Arkansas GCGW Meeting #8
Little Rock, Arkansas
July 31, 2008

Name	Organization
Ron Bank	Justco, Inc.
Seth Bromley	Arkansas Democrat Gazette
Sen. David Bisbee	Arkansas Senate
Sen. Steve Bryles	Arkansas Senate
Herschel Cleveland	Arkansas Department of Education, Department of Information Systems
Sammie Cox	AEP–Southwestern Electric Power Company
Andrew Endicott	Social Sustenance Organization
Bill Grant	W.H. Grant and Associates, Inc.
Rep. Clark Hall	Arkansas House of Representatives
J.D. Harper	Arkansas Manufacturing Housing
John Harriman	Mitchell Williams
Mark Hicks	Zachary D. Wilson, P.A.
Terry Horton	FTN Associates, Ltd.
David Kane	Former legislator
Emily Leathers	Global Strategy Group
Bill Lord	Northwest Arkansas Regional Solid Waste Management District
Debbie Martin	Arkansas Department of Education, Department of Information Systems
Lisa Mays	Lennox International
Paul Means	Entergy
Jasmin Moore	Metroplan
Dina Nash	Commercial Wind Task Group
Bradley Phillips	PMCS
Ron Robinette	Justco, Inc.
Neil Sealy	Arkansas ACORN
Jim Shirrell	FTN Associates, Ltd.
John Suskie	AAPA Political Action Committee
Harryette Shuc	The Nature Conservancy
Ken Smith	Audobon Arkansas
Reagan Sutterfield	Business consultant and farmer
Randy Thurman	Arkansas Environmental Federation
Danny Traylor	Arkansas Valley Energy
Robert Traylor	Arkansas Valley Energy
Nathan Tucker	
Jimmy Wallace	Arkansas Municipal League