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Meeting #6 Summary
Governor's Commission on Global Warming
Little Rock, Arkansas
May 19, 2008

[Note: This summary incorporates comments that the GCGW provided on pages 2, 4, and 12 of this summary during GCGW Meeting #7.]

Attendees:

GCGW: Aubra Anthony, Nick Brown, Rep. Joan Cash, Steve Cousins, Jerry Farris, PhD, Rob Fisher, Richard Ford, PhD, Miles Goggin, Art Hobson, PhD, Kevan Inboden, Christopher Ladner, Elizabeth Martin, PhD, Robert McAfee, Hugh McDonald, Pearlie Reed, Cindy Sagers, PhD, Jeffrey Short, Kevin Smith, Gary Voigt, Rep. Kathy Webb

Advisory Body: Karen Bassett, Lawrence Bengal, John Bethel, Jenny Ahlen (for Maria Haley), Nancy Ledbetter, Teresa Marks, John Shannon

Governor's Office: Jillian Hicks, Andrew Parker

Arkansas Bureau of Legislative Research: Gina Mercer, Carol Stapleton

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

Others: See Attachment for Members of the Public Who Attended GCGW Meeting #6.

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

1. Notice and Agenda
2. PowerPoint Presentation
3. Draft Summary of GCGW Meeting #5
4. CCS Memo to GCGW on Preparation for Meeting #6
5. CCS Memo to GCGW on Quantification Methods
6. 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 Kathy Webb opened the meeting.

Tom Peterson of CCS reviewed the agenda for the meeting. A key milestone for the day will be for the GCGW to review and approve the draft "straw proposals" suggested by the Technical Work Groups (TWGs) for each of the draft priority policy options identified in our meeting on April 4. We also will review progress and any recommended updates to the statewide draft inventory and forecast of emissions.

2. Public Input and Announcements

Several members of the public commented on the issues the GCGW is addressing.

Venita McClellan-Allen (President and Chief Executive Officer of Southwestern Electric Power Company [SWEPCO]), presented a case for supporting the new Hempstead coal plant recently approved by the Arkansas Public Service Commission (APSC). Recognizing the need to balance the goals of environmental protection and affordable electricity, she contended that rejecting the state's abundant coal resources would significantly raise the cost of electricity to consumers and would be harmful to the state's economy. She proposed that Arkansas adopt a portfolio of options that includes advanced coal technology, renewable energy, demand-side management, new nuclear plants, and new transmission and distribution (T&D) infrastructure. The Hempstead plant will contain the most energy-efficient technology available, including ultra-supercritical technology.

Leah Arnold (American Coalition for Clean Coal Electricity) commented that coal is a major factor in keeping the price of electricity affordable. Farmers making less than \$50,000 spend 22% of their after-tax income on electricity, and people making less than \$10,000 a year spend 50% of their after-tax income on electricity. She contended that an advanced ultra-super coal-fired power plant will be an important factor in achieving the goal of emission-free electricity generation.

Kenny Henderson (Assistant General Counsel, CenterPoint Energy, Inc.) said using natural gas for electricity generation is a cost-effective approach to reducing GHG emissions. He contended that increasing the use of natural gas for space and water heating can offset the need for new power plants. A Black & Vetch study has found that emissions from natural gas-fueled space and water heaters produce 40% less carbon dioxide (CO₂) emissions than do space and water heaters powered by electricity generated from fossil fuels, when considering emissions from the power plant. The industry believes that establishing a goal for direct use of natural gas will provide benefits to all consumers.

Glen Schwarz (Little Rock Environmental Action) believes a carbon tax on gasoline is a simple solution to global warming. The United States has the lowest gasoline tax of all oil-importing nations. The highest GHG-producing fuels—fossil fuels, such as diesel and coal—could be taxed the highest; followed by a mid-level tax on less polluting fuels, such as natural gas; and perhaps no tax on very low-GHG-emitting fuels. The United States must prepare for a world without oil. The tax money could be used toward smart growth, mass transit, and other GHG-reducing initiatives.

Glen Hooks (Sierra Club) commended the GCGW on its work. He noted the Sierra Club's concern about coal-fired power plants and its support for carbon sequestration recommended under policy option ES-7, citing the technology's potential to trap pollutants and prevent them from entering the air and water.

Van Warren (WOV, formerly of the National Aeronautic and Space Administration's Jet Propulsion Laboratory) believes the state's "addiction to dirty coal" is not serving

Arkansans well. He supports the GCGW's recommendations for wind, photovoltaic, and solar cell technologies. He added that natural gas could be used as a transition fuel, solar concentrators are being overlooked, and the potential for biodiesel fuel technologies is untapped. He pointed to the need to educate Arkansas students on climate forces and issues, and suggested that the University of Arkansas at Little Rock's Energy Institute could provide support toward this effort.

Eddy Moore (Arkansas Public Policy Panel) also commended the GCGW on its work, particularly regarding the feed-in tariff recommended under policy option RCI-2, which places Arkansas in a leadership position by taking this initiative. However, he noted that energy efficiency experts recommend a 6% per year reduction in natural gas use, rather than the 1% target under RCI-2. Also, he believes the target addresses only a small part of the problem, and recommended broadening its focus to include reductions in total sales.

William Ball (Arkansas Renewable Energy Office) recommended that Arkansas adopt a feed-in tariff for electricity use. As opposed to net metering, a feed-in tariff would enable the state to pay farmers above-market rates. The more electricity consumed, the more it would cost. The revenue generated could help the state finance its energy efficiency targets.

Doug Barton (Arkansas Coalition for Peace and Justice) expressed the urgency of the need to address global warming, and recommended that Arkansas aggressively increase its energy efficiency through improvements in building design and increased use of renewable energy technologies. He noted that while a healthy economy is dependent on a healthy environment, the reverse doesn't apply. He concluded that if the world continues to burn fossil fuels at the current rates, we won't have a world to worry about the economy.

3. Approval of Draft Summary of GCGW Meeting #5

The GCGW approved the draft summary of GCGW Meeting #5.

4. Dates and Times for Next GCGW Meetings

Co-chair Webb noted that the remaining GCGW meetings that have been scheduled will be held from 9:30 am to 4:30 pm as follows: Meeting #7 on June 17, 2008; Meeting #8 on July 31, 2008; and the final meeting on September 25, 2008

The GCGW agreed on the need for an additional meeting before the final meeting on September 25, and expressed its preference to add a single-day meeting, rather than extending future meetings by a half day. CCS will coordinate with the Governor's office and the GCGW to find a date for an additional a 1-day meeting during the last week of August or early September.

5. Review of GCGW Process Status and Next Steps

Co-chair Webb noted that the co-chairs and the Governor's office consulted with the Attorney General's office on the question raised at the last meeting about voting procedures. It was decided that since CCS' proposal includes voting procedures to be followed in the GCGW process, and the GCGW voted to accept CCS' proposal, that these are the procedures the GCGW must follow. The procedures used by the State Legislature (i.e., Roberts Rules of Order) would only apply if CCS' proposal did not include any voting procedures. Voigt raised an objection to this interpretation noting there was some disagreement over the action taken, suggesting the approval of CCS as consultant did not approve the voting procedure or all processes recommended and that commissioners could not abdicate their responsibilities in this manner. Voigt requested that his objection be noted in the minutes.

Tom Peterson briefly reviewed the 10-step process noting that after today the TWGs will begin to work on quantifying the GHG emissions reductions and costs or cost savings for the pending priority policy options for which the GCGW approves the policy designs. The TWGs will also work to fill in the remaining elements of the template for each of the options including development of the section on implementation mechanisms and, if applicable, identification and evaluation of externalities or feasibility issues. The TWGs' recommendations on these elements going forward will be reviewed by the GCGW for approval. The GCGW and TWGs will work to develop alternatives to address barriers as needed and iterate to final agreements on policy recommendations.

From a general viewpoint, a GCGW member asked about specific language the TWGs should use to draft their proposed policy options—i.e., whether to specify "consider" or "shall." Peterson responded that the Policy Design section typically says "the state should do the following," and the Implementation Mechanisms section recommends how it should be done.

Another GCGW member asked whether CCS will provide the TWGs information on the benefits, as well as the costs or cost savings. Peterson responded that the cost-effectiveness analysis includes engineering costs and savings associated with avoided costs of, for example, energy use relative to the business-as-usual baseline established by the TWGs for each of the priority policy options for analysis. The cost-effectiveness analysis used for this process follows guidelines set forth by the Intergovernmental Panel on Climate Change (IPCC) and the U.S. Environmental Protection Agency (EPA). The analysis does not include cost savings associated with improved public health, for example, when an option reduces pollutant emissions and thus human exposure to pollutants. The GCGW member noted that the Copenhagen Convention specifies analyzing both costs and benefits, and added that cost-effectiveness is a secondary-order consideration, not the primary criterion. They recommended that CCS look into this.

6. Review and Approval of the Policy Designs for Quantification

Peterson briefly updated the GCGW on the work that the TWGs have completed between Meeting #5 and Meeting #6. A portfolio of straw proposals has been developed for presentation at Meeting #6. For each of the policy options, the GCGW will focus on the

review and approval of the policy description, policy design, and related policies/programs in place in Arkansas (for defining baselines) elements of the policy template. The TWGs' draft recommendations for these elements of the template are provided in the "Handout" for today's meeting. The TWGs will revise these elements of the template to address the GCGW's comments.

Once the GCGW approves the TWGs' recommendations (as revised by the GCGW) for these elements of the template, the TWGs will then proceed with developing methods for quantifying the greenhouse gas (GHG) emission reductions and costs or cost savings for the pending priority policy options. Peterson referred the GCGW to a memo prepared for today's meeting on "Quantification of Climate Mitigation Policy Options" that provides a framework for the quantification analysis. The TWGs will refine the methods for quantification of individual options within this framework. The GCGW should ask any questions it has on this quantification memo.

TRANSPORTATION AND LAND USE

For each of the Transportation and Land Use (TLU) policy options, Lewison Lem of CCS provided a brief summary of the TWG's recommended descriptions, designs, and related policies and programs in place for each of the pending priority policy options. TLU TWG members provided additional information and assisted Lem in responding to the GCGW's questions and comments.

Summary of Comments and Responses to Questions:

TLU-1 (Infrastructure for Plug-In Vehicles)—This is a study option. For example, to thoroughly analyze it requires a lot of specific data, such as whether the vehicle is plugged in during the day or night. A GCGW member pointed out that the second bullet of the design addresses time-of-day pricing.

TLU-2 (Research and Development for Renewable Transportation Fuels)—Two GCGW members noted that "low-carbon fuels" should be replaced with "low-carbon-intensity fuels," to reflect a lower-carbon footprint. A GCGW member commented that the text should state that this policy option is to be based on life-cycle analysis.

Another GCGW member explained that a state biofuel bill coming out (Act To Create an Alternative Fuels Development Program) is the source of the proposed annual funding amount of \$4,254,708 as the basis for initial quantification of this option. The GCGW approved the TWG's use of this figure for its initial quantification of this option.

In response to a GCGW member's questions, Lem explained that TLU-8 (Alternative-Fuel Development and Expansion) addresses non-foodstock fuels. The GCGW approved incorporating the GHG emission reduction estimates into TLU-8. Peterson suggested discussing in the "Additional Benefits and Costs" section of the policy template the co-benefits and co-costs of moving toward foodstocks versus non-foodstocks. The TWG will change the order of the TLU policy options to reflect important synergies between TLU-2 and TLU-8.

A GCGW member recommended providing incentives for people to produce their own fuels, for example, by exempting them from fuel taxes.

TLU-3 (Smart Growth, Pedestrian, and Bicycle)—This policy option consists of several programs that were bundled together. A GCGW member suggested reviewing the current state of affairs for smart growth in Arkansas to clearly establish the baseline for future analysis. Peterson noted that the TWG will need input from people familiar with smart growth laws and practices in Arkansas. Lem added that the analysis will include reductions in both the amount of energy consumed and GHG emissions. CCS needs the TWG to specify the level of GHG reduction it wants to achieve by a specific year.

A GCGW member noted that cities differ in their use of gas. They suggested that the TWG compare the potential for reductions in vehicle miles traveled (VMT), energy consumption, and GHG emissions in peer group cities and use an analytical method for Little Rock and other Arkansas cities and jurisdictions consistent the methods used for these peer groups.

A GCGW member pointed out that the investment in the infrastructure necessitated by this policy option may not pay back until 2025, and suggested that the TWG distinguish between the policy's near- and long-term costs and benefits. Another GCGW member said they would like to see numbers on the benefits of having one less car on the road, and noted the important synergies between TLU-3 and TLU-6. Lem recommended reordering the TLU options to reflect these synergies.

TLU-4 (Procurement of Efficient Fleet Vehicles (Passenger and Freight))—Lem recommended reordering the TLU options to reflect the synergies between this policy option and TLU-10. A GCGW member recommended adjusting the timing of this option to reflect the Arkansas requirement to wait for legislative approval of proposed fleet changes. Co-chair Webb offered to look into whether the Arkansas 2007 mile-per-gallon legislation for new vehicles applies to two-wheel vehicles. A GCGW member recommended that the TWG consider the School Bus Safety Act as a good vehicle for funding this policy option.

TLU-5 (Promote and Facilitate Freight Efficiency)—No questions or comments.

TLU-6 (Improve and Expand Transit Service and Infrastructure)—The TLU options will be reordered to reflect the synergies between this policy option and TLU-3.

TLU-7 (School and University Transportation Bundle)—A GCGW member pointed out that the design of this policy focuses on reducing GHG emissions from K–12 schools, but only asks colleges and universities to study and report on the emission reductions and costs or cost savings. Co-chair Reed noted that community colleges are typically located in areas different from other 4-year colleges. Along these lines, a GCGW member added that the TWG should consider the GHG emission reductions and costs or cost savings associated with offering courses online.

TLU-8 (Alternative-Fuel Development and Expansion)—Lem explained that the goals and timing of the design for this policy option reflects how other states are proceeding in this arena. A GCGW member noted that the policy needs to address marketing alternatives. A GCGW member recommended deleting the 50–100-mile radius recommendation and clarifying that the intent is to minimize emissions from transportation to market.

A GCGW member objected to limiting the policy option to non-food sources, pointing out that people consume seaweed, which shows promise as a biofuel source. Another GCGW member agreed and pointed out that the same piece of land can be used to produce different things. The question is how we give up something we're not producing by producing something else.

Peterson recommended that the TWG move the Policy Design language that addresses implementation to the Implementation Mechanisms section, and look at the North Carolina State University program for efficiency issues.

TLU-9 (Public Education)—A GCGW member pointed out that ridesharing in schools is an important GHG reduction strategy that should be included in the first bullet of the Policy Design section. Another GCGW member recommended inserting in the Implementation Mechanisms section a recommendation for the TWG to work with the Department of Education to make science standards part of the curriculum.

TLU-10 (New Vehicle Standards: Tailpipe GHG and Fuel Economy)—Lem noted that this policy option's 6% goal is relatively mild, compared to other states' goals, which are set at 15% or higher.

A GCGW member pointed out that this policy option may have the unintended consequence of bringing into Arkansas slightly used sport utility vehicles from border states. Another GCGW member commented that most Arkansans drive used cars, but state requirements for maintaining the vehicles aren't being enforced. They suggested that the TWG recommend enforcing laws requiring regular maintenance of vehicles without increasing the cost to consumers, and providing training and education of officers enforcing these laws. They also noted that in accordance with the Welfare Reform Act, Arkansas provides used vehicles to citizens who are not working because of their lack of access to public transportation. They recommended that the TWG look into providing passes for these people to use for public transit in lieu of used vehicles.

Another GCGW member suggested that the TWG consider more stringent vehicle standards for large metro areas versus rural areas.

A GCGW member recommended making light-duty *working* trucks a separate class from cars and sport utility vehicles for the purpose of tax write-offs. Lem responded that determining whether vehicles are being used for business or personal travel purposes is difficult. The TWG will further investigate these issues.

Objections/Modifications from the GCGW:

All TLU policy descriptions and designs were approved to proceed with analysis and quantification as a group. The TWG will address the GCGW's comments and provide additional clarity for some policy options, as requested.

TLU-1 (Infrastructure for Plug-In Vehicles)—Approved without objection.

TLU-2 (Research and Development for Renewable Transportation Fuels)—Approved without objection, with the modifications noted above.

TLU-3 (Smart Growth, Pedestrian, and Bicycle)—Approved without objection, with the modifications noted above.

TLU-4 (Procurement of Efficient Fleet Vehicles (Passenger and Freight))—Approved without objection, with the modifications noted above.

TLU-5 (Promote and Facilitate Freight Efficiency)—Approved without objection.

TLU-6 (Improve and Expand Transit Service and Infrastructure)—Approved without objection, with the modifications noted above.

TLU-7 (School and University Transportation Bundle)—Approved without objection.

TLU-8 (Alternative-Fuel Development and Expansion)—Approved without objection, with the modifications noted above.

TLU-9 (Public Education)—Approved without objection, with the modifications noted above.

TLU-10 (New Vehicle Standards: Tailpipe GHG and Fuel Economy)—Approved without objection, with the modifications noted above.

AGRICULTURE, FORESTRY, AND WASTE MANAGEMENT

For each of the Agriculture, Forestry, and Waste Management (AFW) policy options, Joe Pryor of CCS provided a brief summary of the TWG's recommended descriptions, designs, and related policies and programs in place for each of the pending priority policy options. AFW TWG members provided additional information and assisted Pryor in responding to the GCGW's questions and comments.

Summary of Comments and Responses to Questions:

AFW-1 (Manure Management)—In the Related Policies/Programs in Place section, Arkansas Soil and Water Conservation Commission will be changed to Arkansas Natural Resources Commission.

AFW-2 (Promotion of Farming Practices That Achieve GHG Benefits)—Co-chair Reed noted that this policy option will be further developed by the TWG by the next GCGW meeting.

AFW-3 (Improved Water Management and Use)—No questions or comments.

AFW-4 (Expanded Use of Agriculture and Forestry Biomass Feedstocks for Electricity, Heat, or Steam Production)—Pryor noted the need to define Arkansas "marginal land" under the third bullet of the Goals section, and confirmed that poultry litter is included in the inventory and forecast (I&F). A GCGW member pointed out that poultry and fowl should be treated differently from livestock as a category. Another GCGW member recommended that fish farming be included in the I&F.

A GCGW member recommended changing "Methane" to "Energy" in the fourth bullet of Goals section, which would allow for the inclusion of gasification and the use of hydrogen as part of this option's implementation technologies.

Another GCGW member expressed concern about the rising price of food. They recommended that the TWG determine if this option has the potential to increase the price of food. If so, the third bullet of the Goals section will be clarified to emphasize that the policy is not intended to increase the price of food.

Pryor was asked to confirm that the text under the Related Policies/Programs in Place section is taken from Act 755 (HB 2812), which created the Arkansas Clean Energy Development Act.

AFW-5 (Expanded Use of In-State Liquid Biofuels)—A GCGW member recommended deleting "in-state" from the policy option's title, given that using fuels in border states may result in GHG benefits. An Advisory Body member's assistant suggested replacing "ethanol and/or biodiesel" with "biofuels," and "fossil diesel" with "conventional petroleum-based fuels," in the first two lines of the Policy Description. A GCGW member noted the Act 87 language under Related Policies/Programs in Place should be deleted because the act has expired, and its funding has been repealed. Finally, another GCGW member recommended that the AFW TWG coordinate with the TLU TWG regarding life-cycle GHG analysis under TLU-2 and TLU-8.

AFW-6 (Expanded Use of Locally Produced Farm and Forest Products)—A GCGW member thinks that whether products are locally produced isn't necessarily less GHG intensive, noting that driving 30 miles may produce more GHG emissions than transporting products by other modes. Peterson responded that studies conducted in Iowa show that using locally produced products can reduce GHG emissions by 10%. Another GCGW member commented that this policy can have meaningful results when considered in light of institutional food purchases, such as for schools and prison systems. They added that emissions from transportation and refrigeration should be included in the calculation of this option.

A GCGW member thinks the 10% goals are too conservative. Co-chair Reed recommended deleting the percentage figures from the Goals section until the TWG calculates the current baseline. If the baseline is high, the TWG should set high goals.

Another GCGW member recommended including composite lumber and its recycled content in the third bullet of the Goals section, explicitly stating the benefits of recycling plastic, sawdust, etc.

AFW-7 (Forest Management and Establishment for Carbon Sequestration)—This policy option's design has gaps, particularly the quantifiable goals. In the first bullet of the Goals section, a GCGW member recommended replacing "the number of urban trees" with "urban canopy," to reflect the feasibility of counting trees versus estimating the canopy cover via aerial photography. In the second bullet of the Goals section, they suggested that the TWG work with the Arkansas Forestry Commission to determine whether the 50% target on private lands is feasible.

A GCGW member noted that carbon is sequestered faster through groundcover (such as tallgrass prairie) than through forests. A GCGW member responded that groundcover was included in earlier options, but the TWG decided the greatest payoff would come

from not losing more forestland. The consensus was that the TWG should consider adding to this option a goal of sustaining groundcover to enhance carbon sequestration.

AFW-8 (Advanced Recovery and Recycling)—This policy option does not have quantifiable goals. Co-chair Webb clarified that the state cannot pass legislation requiring cities and local jurisdictions to recycle their waste. A representative from the Arkansas Department of Environmental Protection offered to provide the TWG data on (1) the amount of solid waste generated, recycled, and landfilled and (2) the cost differential between Little Rock and Fayetteville collecting recyclables by category.

A GCGW member asked how life-cycle costing works. Peterson explained that from an accounting viewpoint, actions taken within state borders can be counted. Life-cycle analysis focuses on direct effects, not indirect effects. To quantify this policy option, CCS needs better data on the level of effort required.

AFW-9 (End-of-Use Waste Management Practices)—This policy option does not have quantifiable goals. A GCGW member expressed concern about the policy's potential to hurt his landfill company's customers financially. The landfill is in a middle territory, where flaring isn't economically viable. His company is in the process of studying these issues. A GCGW member suggested that the TWG recommend establishing a monitoring system to determine when the gap is closed between when landfill gas-to-energy and anaerobic digester projects are and are not economically viable.

Three landfills in Arkansas are currently capturing methane, and EPA has identified six municipal solid waste landfills as a candidates or having potential for capturing methane. The TWG will examine the EPA candidates and look into what other jurisdictions are doing in this area. For example, North Little Rock is buying electricity from landfill gasification systems. Pryor added that the Arkansas Department of Environmental Protection has valuable information and expertise that would be useful to the TWG's further analysis.

Objections/Modifications from the GCGW:

All AFW policy descriptions and designs were approved to proceed with analysis and quantification as a group (noting that options AFW-7, AFW-8 and AFW-9 require numerical goals to be developed). Additional clarity and revisions were sought for some policy options. The TWG will clarify in all AFW goal statements when the percentage increases or decreases are relative to a business-as-usual scenario.

AFW-1 (Manure Management)—Approved without objection, with the modifications noted above.

AFW-2 (Promotion of Farming Practices That Achieve GHG Benefits)—Approved without objection.

AFW-3 (Improved Water Management and Use)—Approved without objection.

AFW-4 (Expanded Use of Agriculture and Forestry Biomass Feedstocks for Electricity, Heat, or Steam Production)—Approved without objection, with the modifications noted above.

AFW-5 (Expanded Use of In-State Liquid Biofuels)—Approved without objection, with the modifications noted above.

AFW-6 (Expanded Use of Locally Produced Farm and Forest Products)—Approved without objection, with the modifications noted above.

AFW-7 (Forest Management and Establishment for Carbon Sequestration)—Approved without objection, with the modifications noted above and noting that numerical goals need to be refined/developed.

AFW-8 (Advanced Recovery and Recycling)—Approved without objection, noting that numerical goals need to be developed.

AFW-9 (End-of-Use Waste Management Practices)—Approved without objection, noting that numerical goals need to be developed.

ENERGY SUPPLY

For each of the Energy Supply (ES) policy options, Donna Boysen of CCS provided a brief summary of the TWG’s recommended descriptions, designs, and related policies and programs in place for each of the pending priority policy options. ES TWG members provided additional information and assisted Boysen in responding to the GCGW’s questions and comments.

Summary of Comments and Responses to Questions:

ES-1 (Green Power Purchases and Marketing)—The TWG proposed moving this policy option to RCI-7, to reflect the overlap between the two options.

ES-2 (Technology Research & Development)—The TWG will use a nonquantifiable approach, and will continue to flesh out the policy design's goals and timing.

ES-3 (Renewable and/or Environmental Portfolio Standard [RPS/EPS])—The TWG has revised this policy option's title to reflect two variations on policy to pull renewable energy into the mix: 3A “Renewable Portfolio Standard (RPS)” (the TWG recommends rejection of EPS as discussed in the 3A policy description) and 3B “Renewable Energy Feed-In Tariff (REFIT).” A GCGW member asked whether 3A and 3B are mutually exclusive. Another GCGW member noted that while you could have both, a mandate would be too costly, and renewable electricity based on feed-in tariffs would be a more economical way to get renewables into the market.

A discussion followed on how feed-in tariffs work. A GCGW member noted that there needs to be a cap on the percentage rate increase to minimize consumer exposure. They also recommended using the definition of renewable in the net metering law for the definition of renewable in this policy option.

A GCGW member asked why nuclear power isn't included in the RPS, since it produces no GHGs. A GCGW member responded that nuclear power is addressed in ES-9. It was clarified that the federal government issues a license for a new nuclear facility, and the state issues a certificate for rate recovery from the facility. The same GCGW member noted that using more natural gas and less coal would reduce GHGs significantly. Boysen

explained that this is explored under the residential, industrial, and commercial (RCI) policy options.

ES-4 (Grid-Based Renewable Energy Incentives and/or Barrier Removal)—This policy option's design has gaps, particularly the timing. By the next meeting, the TWG will present numerical goals.

ES-5 (Approaches Benefiting From Regional Application)—This is a nonquantifiable option for preparing the state to participate in a regional or national cap-and-trade program. A GCGW member commented that the challenge of the GCGW is to put Arkansas in a leadership position whenever and wherever possible. Having the best case for what benefits Arkansans is where the GCGW should be heading.

The GCGW approved the following next steps: (1) get one or more briefings on multistate and national cap-and-trade systems to determine how to best focus this issue; (2) identify and make recommendations about the key issues needed for AR to best position itself to participate in a multistate and/or national cap and trade program; (3) consider planning a joint ES and Cross Cutting (CC) TWG conference call.

ES-6 (Combined Heat and Power)—The TWG set an initial efficiency improvement goal of 10%. It will reevaluate this goal as it quantifies the costs and benefits of this option.

ES-7 (Geological Underground Sequestration for New Plants)—A GCGW member warned that restricting the planned Hempstead coal plant will significantly increase energy costs. Arkansas is currently relying on natural gas—those reserves are declining and prices are rising. The only reliable sources of energy are coal and nuclear power, and new nuclear capacity won't come online until about 2020.

Another GCGW member noted that the Hempstead and Plum Point plants will increase CO₂ emissions by 16%. While a compromise might be found in carbon sequestration, this technology won't be available until 2018–2020. Therefore, they recommended not opening Hempstead until its CO₂ emissions can be sequestered. Another GCGW stated that it's inappropriate to consider retroactive requirements on permitted power plants; another GCGW member concurred that the industry needs certainty for assessing investments in new plants.

A GCGW member noted that Arkansas and its surrounding states have the lowest regional energy costs in North America. If the state increases energy costs, it will drive industrial jobs and production overseas to countries that don't restrict GHG emissions. They recommended the state adopt a balanced portfolio approach and work on a large-scale demonstration project for carbon sequestration. An ES Advisory Body member stated that Arkansas sites for geologic sequestration haven't been assessed.

A GCGW member asked how much power generated in Arkansas will be used by the state and how much will be exported. An Advisory Body member responded that even with the new Hempstead plant, the state will need to continue to import power to satisfy demand. Energy efficiency and conservation measures along with renewable energy will not be sufficient to eliminate the need for baseload generation in the near term. The Hempstead and Plum Point coal plants have not received air permits, and the APSC isn't authorized to put a moratorium on them. Some percentage of energy generated by the

Turk plant will be exported, and some of the output of the new plant will serve SWEPCO's customers in other states. Another GCGW member warned that the new plant could undermine all of the GCGW's work, and added that if Arkansas is a net importer, it should adopt aggressive conservation measures. A GCGW member (Gary Voigt) offered to provide the GCGW information on the degree to which Arkansas is a net importer of energy for electricity.

A GCGW member expressed sympathy for the industry, which followed the required process for obtaining approval of the new plants. They think the GCGW is overstepping its bounds, and recommended that the courts resolve this controversy. A GCGW member countered that: the GCGW has a duty to make a statement about the new plant, other states have delayed these plants until they have obtained reliable information.

The GCGW approved the following next steps: (1) set the priorities for analysis of a series of scenarios that involve an understanding of the baseline and the interactive effects of energy efficiency, renewable energy, natural gas, geologic sequestration, etc.; (2) run the numbers on the priorities, and bring the information back to the next GCGW meeting for a more objective, fact-based discussion; and (3) determine the costs and benefits of not building the Hempstead coal plant—rolling blackouts, etc.

ES-8 (Transmission System Upgrades)—The GCGW approved the following revisions: (1) under the Policy Description section, note that 66% of electrical power is lost during its T&D; and (2) under the Goals section, clarify that the energy efficiency improvements result in a 5% reduction in T&D system losses.

ES-9 (Nuclear Power)—A GCGW member pointed out the policy design's timing needs to be revised to reflect the fact that a new nuclear plant will come on line by 2022 at the earliest. A discussion followed about the need for incentives for purchasing nuclear power. Some questioned the need, noting that nuclear power must be economically viable at this point. A GCGW member responded that no new plants have been built in several years because environmental problems have priced nuclear power out of competition. Another GCGW member noted the uncertainty about the capital costs of building a plant.

The GCGW approved the following next steps: (1) analyze the cost of new nuclear power to determine the need for incentives to encourage its purchase; (2) examine the feasibility of incentives for Arkansas participation in regional nuclear projects; and (3) in the Implementation Mechanisms section, address the uncertainty about the capital costs of building a plant.

ES-10 (Carbon Tax)—The TWG needs more input to develop this policy's design.

ES-11 (Efficiency Improvements and Repowering of Existing Plants)—No questions or comments.

Objections/Modifications from the GCGW:

The ES policy descriptions and designs were approved to proceed with analysis and quantification, with the exception of ES-10, which was not presented for GCGW approval. The TWG will address the GCGW's comments and provide additional clarity for some policy options, as requested.

ES-1 (Green Power Purchases and Marketing)—Approved without objection to move ES-1 to RCI-7.

ES-2 (Technology Research & Development)—Approved without objection.

ES-3 (Renewable and/or Environmental Portfolio Standard [RPS/EPS])—Approved without objection, with the modifications noted above.

ES-4 (Grid-Based Renewable Energy Incentives and/or Barrier Removal)—Not presented for GCGW approval at Meeting #6.

ES-5 (Approaches Benefiting From Regional Application)—Approved without objection, with the modifications noted above.

ES-6 (Combined Heat and Power)—Approved without objection.

ES-7 (Geological Underground Sequestration for New Plants)—There were four objections to this policy option. The above-noted modifications were approved without objection.

ES-8 (Transmission System Upgrades)—Approved without objection, with the modifications noted above.

ES-9 (Nuclear Power)—Approved without objection, with the modifications noted above.

ES-10 (Carbon Tax)—This policy option's design was not presented for GCGW approval.

ES-11 (Efficiency Improvements and Repowering of Existing Plants)—Approved without objection.

RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL

For each of the Residential, Commercial, and Industrial (RCI) policy options, Donna Boysen of CCS provided a brief summary of the TWG's recommended descriptions, designs, and related policies and programs in place for each of the pending priority policy options. RCI TWG members provided additional information and assisted Boysen in responding to the GCGW's questions and comments.

Summary of Comments and Responses to Questions:

RCI-1 (Improved Building Codes)—A GCGW member clarified that the U.S. Department of Housing and Urban Development (HUD) sets efficiency standards, not the state of Arkansas. The GCGW approved the following revisions: (1) move the second bullet of the Timing section to the Implementation Mechanisms section; (2) reword the bullet to reflect the fact that the HUD regulates new mobile homes; and (3) add manufactured homes to the bullet.

RCI-2 (Utility and Non-Utility DSM for Electricity and Natural Gas)—Several GCGW members recommended replacing "electric peak demand" with "total electricity use" under the Goals section.

A GCGW member observed that in North Carolina, utilities are implementing energy efficiency measures at their own expense and are being compensated by their customers. As a result, they're selling efficiency, rather than power. They recommended that Arkansas conduct cost-benefit analyses, give away light bulbs, etc. A GCGW member responded that the information in the Related Policies/Programs in Place section addresses some of these concerns. Boysen concluded that the TWG will work on implementation issues, and will run the results of the 10% per year goal and adjust the goal if the analysis shows a more or less aggressive target is warranted.

Boysen explained that this policy option focuses on targets for electricity, not for natural gas. An Advisory Body member added that the three natural gas utilities in the state have declining numbers of customers and consumption per customer. Other programs under way won't have as great an effect as they would for electricity.

A GCGW member proposed adding a policy option to create a role for natural gas to provide energy-efficient space and water heating. Another GCGW member responded that natural gas supplies only 20% of Arkansas' energy demanded, making requirements difficult to meet if the additional supply isn't available. Another GCGW member added that in some cases, heating water and space with electricity is more economical than with natural gas. Boysen responded that the TWG will determine how to incorporate solar hot-water heating in the RCI analysis.

RCI-3 (Reduced Energy Use in State-Owned Buildings: Government “Lead by Example”)—Boysen noted that the TWG needs to set a baseline for its quantification. A GCGW member asked whether the TWG has considered combining RCI-3 and CC-4. Boysen responded that it has, and will determine how to best address the overlap between this option and CC-4. She added that there are several other opportunities for similar combinations and, unlike the other TWG policy options, the CC policy options are more enabling and aren't quantified.

RCI-4 (Promotion and Incentives for Improved Building Design and Construction)—It was clarified that the goals represent incentives and targets, rather than mandates.

RCI-5 (Consumer Education for Consumers and Industry Trades, Professions)—To minimize overlap, this policy option focuses more on the industry trades and professions, and less on consumers. At the next GCGW meeting, the TWG will specify the mechanisms for executing the proposed education courses and outreach programs. An Advisory Body member noted that the Arkansas Energy Office and APSC are assisting with implementation mechanisms.

RCI-6 (Incentives and Funds To Promote Energy Efficiency)—The TWG will complete development of its recommendations on the policy design for this option, particularly the goals and timing, by the next GCGW meeting.

RCI-7 (Green Power Purchasing for Consumers)—A GCGW member expressed concern that the goal is an RPS type of goal, requiring electric utilities to purchase green power to cover 25% of their power needs by 2020. They assumed the policy was supposed to support consumer choice strategies. Another GCGW member responded that this assumption was correct, but the edits weren't made in time for GCGW Meeting #6.

The text will be reworded to clarify that this is a consumer-driven policy option, rather than a utility mandate.

RCI-8 (Nonresidential Energy Efficiency)—A GCGW member recommended clarifying the language to encourage, rather than require, the recommended improvements. Also, the TWG will keep in mind the need to avoid the unintended consequences from diesel emissions.

RCI-9 (Support for Energy-Efficient Communities, Including Smart Growth)—This policy focuses on improvements in energy efficiency. If the analysis shows that the targets are too high, the TWG will replace them with more realistic goals.

RCI-10 (Energy-Savings Sales Tax)—No questions or comments.

Objections/Modifications from the GCGW:

All RCI policy descriptions and designs were approved to proceed with analysis and quantification as a group. The TWG will address the GCGW's comments and provide additional clarity for some policy options, as requested.

RCI-1 (Improved Building Codes)—Approved without objection, with the modifications noted above.

RCI-2 (Utility and Non-Utility DSM for Electricity and Natural Gas)—Approved without objection, with the modifications noted above.

RCI-3 (Reduced Energy Use in State-Owned Buildings: Government "Lead by Example")—Approved without objection.

RCI-4 (Promotion and Incentives for Improved Building Design and Construction)—Approved without objection.

RCI-5 (Consumer Education for Consumers and Industry Trades, Professions)—Approved without objection.

RCI-6 (Incentives and Funds To Promote Energy Efficiency)—Approved without objection.

RCI-7 (Green Power Purchasing for Consumers)—Approved without objection, with the modifications noted above.

RCI-8 (Nonresidential Energy Efficiency)—Approved without objection, with the modifications noted above.

RCI-9 (Support for Energy-Efficient Communities, Including Smart Growth)—Approved without objection.

RCI-10 (Energy-Savings Sales Tax)—Approved without objection.

CROSS-CUTTING ISSUES

For each of the Cross-Cutting (CC) policy options, Randy Strait of CCS provided a brief summary of the TWG's recommended descriptions, designs, and related policies and programs in place for each of the pending priority policy options. CC TWG members

provided additional information and assisted Strait in responding to the GCGW's questions and comments.

Summary of Comments and Responses to Questions:

CC-1 (Greenhouse Gas Inventories and Forecasts)—No questions or comments.

CC-2 (State Greenhouse Gas Reporting and Registry)—No questions or comments.

CC-3 (Statewide Greenhouse Gas Reduction Goals or Targets)—The TWG recommends that work on this option be delayed until later in the process in order to consider (relative to the GHG forecast) the cumulative GHG emission reductions the TWGs prepare for the priority policy options. A GCGW member requested that the TWG look into setting goals for 2020 and 2050.

Based on the I&F analysis, a GCGW member suggested setting a target to reduce the current estimated annual growth in GHG emissions from the business-as-usual growth rate to 1% annually. A GCGW member responded that they would rather compare the target to the baseline, which is what other states are doing. Peterson explained that CCS typically provides a briefing on what other states are doing, and suggested that the TWG may want to consider that information before it decides how to proceed.

CC-4 (The State's Own Greenhouse Gas Emissions [Lead by Example])—The specifics of this option will be determined later in the process, after the recommendations for CC-3 are developed. A GCGW member asked who will be responsible for the required data collection and analysis. Strait responded that the Arkansas Department of Environmental Quality and Arkansas Energy Office have significant expertise. A GCGW member added that the Climate Change Institute may also provide support.

CC-5 (Comprehensive Local Government Climate Action Plans)—No questions or comments.

CC-6 (State Climate Public Education and Outreach)—Strait noted that the CC TWG is sensitive to the potential overlap of this option with TLU-9 (Public Education) and RCI-5 (Consumer Education for Consumers and Industry Trades, Professions) and has excluded items related to TLU-9 and RCI-5 from CC-6.

A GCGW member suggested consulting the U.S. Department of Education to see to what extent it has been incorporating global climate change into national curriculum requirements. A member also recommended adding additional target audiences to the policy design.

CC-7 (Optimizing Best-Scale of Reduction Policies)—No questions or comments. The TWG needs to further develop its recommendations for the design of this option.

CC-8 (Creative Financial Mechanisms)—A GCGW member suggested looking into the Arkansas Technology Equipment Revolving Loan Fund Committee as a model for this option.

CC-9 (Adaptation and Vulnerability)—No questions or comments. Strait noted that for this option the TWG is recommending the creation of an "Arkansas Climate Change Institute." The TWG is also recommending in the policy designs for CC-7, CC-8, and

CC-11 that the GCGW consider coordination or implementation of these options through the Arkansas Climate Change Institute.

CC-10 (Climate Change-Related Economic Development)—The TWG has not completed its work on the policy design for this option.

CC-11 (Regulatory Realignment in Government To Encourage Constructive Climate Action)—Strait noted that elements of this option compliment CC-4. A GCGW member asked who will be conducting the audits. A GCGW member suggested developing a self-audit module. It was noted that this would probably be the responsibility of state government agencies who would decide how best to procure audit services. Potential overlap with RCI-3 was noted and the CC and RCI TWGs should coordinate to ensure consistency in how audits are considered under these two options.

Objections/Modifications from the GCGW:

The CC policy descriptions and designs were approved to proceed with analysis and quantification, with the exception of CC-3 and CC-10, which were not presented for GCGW approval. The TWG will address the GCGW's comments and provide additional clarity for some policy options, as requested.

CC-1 (Greenhouse Gas Inventories and Forecasts)—Approved without objection.

CC-2 (State Greenhouse Gas Reporting and Registry)—Approved without objection.

CC-3 (Statewide Greenhouse Gas Reduction Goals or Targets)—Approved without objection, with the modifications noted above.

CC-4 (The State's Own Greenhouse Gas Emissions [Lead by Example])—Approved without objection.

CC-5 (Comprehensive Local Government Climate Action Plans)—Approved without objection.

CC-6 (State Climate Public Education and Outreach)—Approved without objection, with the modifications noted above.

CC-7 (Optimizing Best-Scale of Reduction Policies)—Not presented for GCGW approval at Meeting #6.

CC-8 (Creative Financial Mechanisms)—Approved without objection, with the modifications noted above.

CC-9 (Adaptation and Vulnerability)—Approved without objection.

CC-10 (Climate Change-Related Economic Development)—Not presented for GCGW approval at Meeting #6.

CC-11 (Regulatory Realignment in Government To Encourage Constructive Climate Action)—Approved without objection.

7. Update on Status Of Arkansas' Draft GHG Inventory and Forecast

It was noted a report documenting the draft inventory and forecast has been posted to the project website. This includes an Executive Summary and Summary of Findings sections

followed by appendices that provide the detailed methods, data sources, results, and uncertainties for each of the sectors. The TWGs are reviewing the inventory and forecast and will be providing recommendations for revisions for review and approval by the GCGW at future GCGW meetings.

8. Next Steps for Commission and Technical Work Groups and Agenda for GCGW Meeting #7

The TWGs will revise the straw proposals to address the comments that the GCGW provided on them today. For the options for which the GCGW provided approval of the straw proposals, the TWGs will proceed with developing the quantification approach for review and approval by the GCGW at its next meeting. The quantification methods, assumptions, and results will be recorded in the “Estimated GHG Reductions and Costs or Cost Savings” and “Type(s) of GHG Reductions” sections of the template. For the options for which the policy design needs more work, the TWGs will continue developing their recommendations for review and approval by the GCGW at its next meeting. The TWGs will also work on developing draft language for the remaining elements of the template including implementation mechanisms, key uncertainties, additional benefits and costs, and feasibility issues.

9. Adjourn

Co-chair Webb adjourned the meeting.

Attachment

Members of the Public Attending Arkansas GCGW Meeting #6
Little Rock, Arkansas
May 19, 2008

Name	Organization
Mark Allison	Dover Dixon Horner
Leah Arnold	American Coalition for Clean Coal Electricity
William Ball	Arkansas Renewable Energy Office
Doug Barton	Arkansas Coalition for Peace and Justice
James Burke	ECO
Sammie Cox	Southwestern Electric Power Company
Kenny Henderson	Assistant General Counsel, CenterPoint Energy, Inc.
Mark Hicks	Zachary D. Wilson, P.A.
Glen Hooks	Sierra Club
Stephanie Jones	Sierra Club
J.D. Lowery	GSG
Venita McClellan-Allen	Southwestern Electric Power Company
Eddy Moore	Arkansas Public Policy Panel
Kay Mueller	L'Oreal USA
Crystal Phelps	Arkansas Natural Resources Commission
Glen Schwarz	Little Rock Environmental Action
Van Warren	WOV