



## Catalog of State Actions Cross-Cutting (CC) Issues Technical Work Group (TWG) (Consolidated)

A catalog of state-level, greenhouse gas (GHG)-reducing actions and policy options prepared by the Center for Climate Strategies (CCS), Arkansas Governor's Commission on Global Warming, and others based on actions undertaken or considered by Arkansas and other states, including regional, state, local, and private actions.

***Important Note: The state actions are numbered in this catalog solely for convenience in referencing them. Their numbers do NOT reflect a ranking or prioritization of the actions.***

Notation regarding options:

**Options marked with an asterisk (\*) indicate options that are at least partly “base case” policies—i.e., that have been considered or undertaken at some level in Arkansas.**

Notation regarding options:

**Definition of “Suggested Priorities for Analysis”:**

- **High:** High-priority options will be analyzed first.
- **Medium:** Medium-priority options will be analyzed next, time and resources permitting.
- **Low:** Low-priority options will be analyzed last, time and resources permitting.

Option No.	GHG Reduction Policy Option	Priority for Consideration	Feasibility Considerations	Notes
<b>CC-1</b>	<b>GREENHOUSE GAS INVENTORIES AND FORECASTS (H)</b>			
1.1	Establish and fund a state greenhouse gas (GHG) emission inventory function.			This function typically resides with the state environmental agency where it can be integrated with similar programs for criteria air pollutants. (Need to ensure that adequate authority to address CO <sub>2</sub> /GHGs exists.)
1.2	Establish and maintain a state GHG emission forecasting function.			This function typically resides with the state environmental agency where it can be integrated with similar programs for criteria air pollutants. (Need to ensure that adequate authority to address CO <sub>2</sub> /GHGs exists.)
<b>CC-2</b>	<b>STATE GREENHOUSE GAS REPORTING AND REGISTRY (H)</b>			<b>Consolidate CC-2 and CC-3 into one option</b>
2.1	Establish or adopt a GHG emissions reporting program.			Applicable to sources of GHG emissions and sinks. (Need to ensure that adequate authority to address CO <sub>2</sub> /GHGs exists.)
2.2	Provide assistance in reporting GHG emissions.			Try to create a clearinghouse of protocols for quantifying GHG emissions (direct and indirect) for Arkansas sources. (Need to ensure that adequate authority to address CO <sub>2</sub> /GHGs exists.)
2.3 (3.1)	Participate in the development of a multistate GHG emission reduction registry.			Moved from 3.1 Applicable to sources of GHG emissions and sinks. (Need to ensure that adequate authority to address CO <sub>2</sub> /GHGs exists.)
2.4 (3.2)	Provide assistance in registering GHG emissions.			Moved from 3.2

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<b>CC-3</b>	<b>STATE GREENHOUSE GAS REGISTRY</b>			
<b>CC-4</b>	<b>STATEWIDE GREENHOUSE GAS REDUCTION GOALS OR TARGETS (H)</b>			
4.1	Establish goals or targets for statewide GHG emission reductions.*			Act 696 requires the Governor's Commission on Global Warming (GCGW) to recommend a global warming pollutant reduction goal based on its assessment of and the availability of global warming pollutant reduction strategies.
4.2	Institute an accountability program to measure and report progress in reducing GHG emissions.			Purpose is to ensure that overall implementation of the GCGW's comprehensive strategic plan proceeds toward its targets.  Implementation accountability for individual policy options should be included in policy option straw proposals developed by the Technical Work Groups.
<b>CC-5</b>	<b>THE STATE'S OWN GREENHOUSE GAS EMISSIONS (LEAD BY EXAMPLE) (H)</b>			
5.1	Lead by example by establishing targets for reductions in state GHG emissions.			Under current state law, CO <sub>2</sub> is specifically excluded from pollutant status. (Need to ensure that adequate authority to address CO <sub>2</sub> /GHGs exists.)
5.2	Create a multi-agency body to oversee ongoing state climate efforts.			
5.3	Disaggregate the state's GHG emissions to the agency level, and require annual agency-specific reports on GHG reduction progress.			
5.4	Institute an accountability program to measure and report progress in reducing GHG emissions.			
5.5	Require climate-neutral bonding.			

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5.6	Require evaluation of GHG emissions in environmental impact statements and similar environmental studies.			
5.7	Review sources of renewable energy.*			Arkansas Biomass Resource Assessment—prepared by Arkansas Energy Office, Department of Environmental Quality, and Forestry Commission. <a href="http://www.arkansasedc.com/business_development/energy/index.cfm?page=bioenergy">http://www.arkansasedc.com/business_development/energy/index.cfm?page=bioenergy</a> )
5.8	Apply pollution prevention principles to GHG emission reductions.			
5.9	Promote Carpooling by State Employees			
5.10	Target lower-GHG product preferences in State procurement and through buying cooperatives			Apply the State’s purchasing power through bid preferences, cooperative purchasing arrangements, etc. (May be considered under CC-9, Creative Financial Mechanisms.)
<b>CC-6</b>	<b>COMPREHENSIVE LOCAL GOVERNMENT CLIMATE ACTION PLANS (H)</b>			
6.1	Through education and training efforts, encourage and assist in the development of local government planning efforts to reduce GHG emissions, establish targets, etc.			Education is to be emphasized, not new programs.
<b>CC-7</b>	<b>STATE CLIMATE PUBLIC EDUCATION AND OUTREACH (SEE APPENDIX A FOR DETAILS FOR EACH AUDIENCE CATEGORY) (H)</b>			
7.1	State Government Education and Outreach Actions Lead by example (i.e., walk the talk) regarding education and outreach.			

Option No.	GHG Reduction Policy Option	Priority for Consideration	Feasibility Considerations	Notes
7.2	Target Audience: Policy Makers (legislators, regulators, executive branch, agencies) Implementation of climate actions hinges on policy makers' approval.			
7.3	Target Audience: Future Generations Integrate climate change into educational curricula, post-secondary degree programs, and professional licensing.			
7.4	Target Audience: Community Leaders and Community-Based Organizations (e.g., institutions, municipalities, service clubs, social and affinity groups, nongovernmental organizations) Recognize leadership; share success stories and role models; expand involvement and participation within civic society.			
7.5	Target Audience: General Public Increase awareness and engage in climate actions in personal and professional lives.			
7.6	Target Audience: Industrial and Economic Sectors Sector-specific climate change education and outreach.			
<b>CC-8</b>	<b>OPTIMIZING BEST-SCALE OF REDUCTION POLICIES (H) MARKET-BASED GREENHOUSE GAS REDUCTION POLICES</b>			<b>Consolidate CC-8, CC-11, and CC-15 into one option</b>
8.1	Establish or adopt an emissions cap-and-trade program.			
8.2	Establish or adopt carbon tax incentives and disincentives.			
8.3	Explore other regional opportunities, both public and private.			
8.4 (11.1)	Identify opportunities for the state to join with other state or regional GHG reduction efforts.			Moved from 11.1
8.5 (11.2)	Implement regional climate reduction initiatives.			Moved from 11.2

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8.6 (15.1)	Purchase carbon credits associated with state activities, function as a purveyor of credits to others, or act as a certification entity of others' carbon exchanges.			Moved from 15.1
8.7 (15.2)	Consider establishing a "Market Advisory Group" consisting of experts to provide guidance to the state on the design of market-based compliance programs to manage GHG emissions. Look at the California system as a potential model.			Moved from 15.2
<b>CC-9</b>	<b>CREATIVE FINANCIAL MECHANISMS (H)</b>			
9.1	Establish and promote creative financing mechanisms for projects and products that reduce GHGs.			Examples: State Revolving Loan Fund.
9.2	Establish and utilize creative financial mechanisms.			Examples: "Green product" procurement preferences; greener buying cooperatives, etc. (Invite suggestions from AGFA (Arkansas Government Finance Authority)).
<b>CC-10</b>	<b>ADAPTATION AND VULNERABILITY (H)</b>			
10.1	Undertake a comprehensive planning effort to assess and address the state's vulnerability to climate change and adaptation opportunities.			<b>Consolidate CC-10, CC-14, CC-17, and CC-18 into one option</b>

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10.2 (14.1)	Consider formation of a state climate data and analysis center to develop and provide objective, state-specific information regarding climate data.			Moved from 14.1 Such efforts as long term monitoring could dovetail with NSF efforts and possibly help in securing “core site” funding for AR researchers.
10.3 (17.1)	Establish a climate change analogue to the Arkansas Biosciences Institute.			Moved from 17.1 – Through such an institute, Arkansas should be able to attract more researchers and scientists to the state, stimulate industry partnerships for new economic development, and work faster and harder to improve the well-being of Arkansans. – Include a planning and prioritization component to identify likely future opportunities to secure and impacts and risks to prepare for.
10.4 (18.1)	Evaluate climate change policy options to determine potential risks, costs, and benefits to public health and environmental justice.			Moved from 18.1 Create a State Climate Change Environmental Health and Protection and Environmental Justice Advisory Council to review and evaluate all proposed climate change and energy-related policies and legislation.
<b>CC-11</b>	<b><del>PARTICIPATE IN REGIONAL AND MULTISTATE GREENHOUSE GAS REDUCTION EFFORTS (H)</del></b>			<b>Consolidate CC-8, CC-11, and CC-15 into one option</b>
<b>CC-12</b>	<b><del>CLIMATE-CHANGE RELATED ECONOMIC DEVELOPMENT (H) CREATE A CLEARINGHOUSE TO FACILITATE INVESTMENT IN CLIMATE-RELATED BUSINESS OPPORTUNITIES</del></b>			<b>Consolidate CC-12 and CC-13 into one option</b>
12.1	Create an entity to promote business development opportunities in climate protection			(Investigate whether the Arkansas Environmental Federation would be a good home for such an effort.)

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12.2 (13.1)	Support development of a business-oriented entity to help promote and recognize business efforts to reduce GHG emissions.			Moved from 13.1 (Investigate whether the Arkansas Environmental Federation would be a good home for such an effort.)
<b>CC-13</b>	<b>ENCOURAGE THE CREATION OF A BUSINESS-ORIENTED ORGANIZATION TO SHARE INFORMATION AND STRATEGIES, RECOGNIZE SUCCESSES, AND SUPPORT AGGRESSIVE GHG REDUCTION GOALS</b>			<b>Consolidate CC-12 and CC-13 into one option</b>
<b>CC-14</b>	<b>DEDICATE GREATER PUBLIC INVESTMENT TO CLIMATE DATA AND ANALYSIS</b>			<b>Consolidate CC-10, CC-14, CC-17, and CC-18 into one option</b>
<b>CC-15</b>	<b>FACILITATE THE DEVELOPMENT OF AN EFFECTIVE CARBON CREDIT SYSTEM</b>			<b>Consolidate CC-8, CC-11, and CC-15 into one option</b>
<b>CC-16</b>	<b>REGULATORY REALIGNMENT IN GOVERNMENT TO ENCOURAGE CONSTRUCTIVE CLIMATE ACTION (H)</b>			
16.1	Identify and realign government policies and regulations to remove impediments to climate-friendly options.			<ul style="list-style-type: none"> <li>– A possible Lead by Example option.</li> <li>– In the vein of “performance-based” regulation.</li> <li>– Identify ways to reduce or eliminate “throughput incentives” so that regulated utilities are compensated for demand-side reductions, not just supply-side activities.</li> <li>– Reduce costs and/or time lag for greener permits.</li> <li>– Ensure coordination and alignment between state agencies’ policies and programs.</li> </ul>
<b>CC-17</b>	<b>ESTABLISH A CLIMATE ANALOGUE TO THE ARKANSAS BIOSCIENCES INSTITUTE</b>			<b>Consolidate CC-10, CC-14, CC-17, and CC-18 into one option</b>
<b>CC-18</b>	<b>EVALUATE CLIMATE CHANGE POLICY OPTIONS TO DETERMINE IMPACTS (POTENTIAL RISKS, COSTS, AND BENEFITS) TO PUBLIC HEALTH, ENVIRONMENTAL JUSTICE, AND LOW-INCOME RESIDENTS</b>			<b>Consolidate CC-10, CC-14, CC-17, and CC-18 into one option</b>

## Appendix A. Public Education and Outreach Third-Level Sub-Options by Audience for Option 7 of Catalog

Option No.	GHG Reduction Policy Option	Priority for Consideration	Feasibility Considerations	Notes
<b>CC-7</b>	<b>PUBLIC EDUCATION AND OUTREACH</b>			
7.1	<b>State Government Education and Outreach Actions</b> Lead by example (i.e., walk the talk) regarding education and outreach.			
7.1.1.	Establish an education and outreach committee to educate audiences regarding climate plan policies and to oversee those relating to education.*			The Arkansas Energy Office provides educational materials and resources for students, teachers, and facility managers. ( <a href="http://arkansasedc.com/business_development/energy/index.cfm?page=education">http://arkansasedc.com/business_development/energy/index.cfm?page=education</a> )
7.1.2.	Include state public education and higher education officials in the committee established above.			
7.1.3.	Create and maintain one or more “outreach coordinator” positions specifically tasked with climate outreach and coordination among state agencies and outside entities.			
7.1.4.	Educate state employees across the board, and assign “point persons” to do so on an ongoing basis.			
7.1.5.	Institute annual Governor’s Awards to recognize climate actions of several types/categories.			

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7.2	<b>Target Audience: Policymakers (legislators, regulators, executive branch, agencies)</b> Implementation of climate actions hinges on policymakers' approval.			
7.2.1.	Educate policy makers on climate action plan policy recommendations, climate change in general, scientific and technological advances, and progress toward state goals through regular briefings, to promote acceptance and implementation of mitigation and adaptation policies.			
7.2.2.	Provide continuing outreach and assistance to the Governor's office, state legislature, and implementing agencies on a regular basis.			
7.3	<b>Target Audience: Future Generations</b> Integrate climate change into educational curricula, post-secondary degree programs, and professional licensing.			
7.3.1.	Add climate change to public education performance standards for science and social studies; identify (1) gaps in climate change education and (2) specific curricula to fill any gaps.			
7.3.2.	Organize groups of educators to identify, assemble, and employ climate change curricula appropriate to specific age groups.			
7.3.3.	Integrate "best practices" into public school design and construction to educate students (and parents) first-hand in their communities and colleges (i.e., walk the talk).			

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7.3.4.	Integrate climate change into core college curricula.			
7.3.5.	Promote research into climate change and solutions at state universities; develop university “Centers of Excellence” on climate issues, new approaches, and technologies.			
7.3.6.	Integrate climate change into existing and/or new educational competition programs.			
7.3.7.	Work with science centers, zoos, and museums to include a climate science focus appropriate to their core mission.			
7.3.8.	Introduce core competencies on climate change into professional licensing programs (energy efficiency in building design and construction, use of recycled materials, etc.).			
7.4	<b>Target Audience: Community Leaders and Community-Based Organizations</b> (institutions, municipalities, service clubs, social and affinity groups, nongovernmental organizations, etc.) Recognize leadership; share success stories and role models; expand involvement and participation within civic society.			
7.4.1.	Educate community planning and zoning officials about climate change, impacts, and opportunities.			
7.4.2.	Identify individual community leaders who are acting effectively on climate change; showcase and share their successes.			

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7.4.3.	Identify individual community leaders who are not yet acting on climate change, and make a special effort to educate and encourage them to act.			
7.4.4.	Engage associations and attend their periodic meetings to reach out on climate change, impacts, sector-specific mitigation actions, and adaptation opportunities.			
7.4.5.	Identify, assist, and leverage community-based organizations that have expertise or interest in climate-related issues.			
7.4.6.	Work with community-based organizations to identify and build upon climate issues related to their core mission.			
7.4.7.	Develop and coordinate a network of community-based organizations acting on climate change, so they can link up, organize joint events, etc.			
7.4.8.	Support and facilitate outreach and education within community-based organization regarding climate change issues and actions.			
7.4.9.	Develop and provide concrete information on co-benefits to entities to use in boosting their climate efforts.			
7.4.10.	Help communities statewide implement local Climate Wise programs.			

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7.4.11.	Organize and host events that focus on leading by example, sharing “how-to,” illuminating financial risks and opportunities, co-benefits, etc.			
7.4.12.	Encourage municipal leaders to join ICLEI’s <sup>1</sup> Cities for Climate Protection program and/or the U.S. Mayors Climate Protection Agreement. <sup>2</sup>			
<b>7.5</b>	<b>Target Audience: General Public</b> Increase awareness and engage in climate actions in personal and professional lives.			
7.5.1.	Educate broadcasters, reporters, editorial boards, etc., about climate change, the risks it imposes, and solutions.			
7.5.2.	Work with state broadcasters and print media associations to develop and run climate change public service announcements.			
7.5.3.	Conduct public polling to benchmark the strength and depth of climate understanding.			
7.5.4.	Keep a high profile on climate change issues and actions through regular public mention by the Governor and other public leaders.			
7.5.5.	Develop and use a state-based “brand” on climate awareness and action.			

<sup>1</sup> ICLEI is the International Council for Local Environmental Initiatives. See [www.iclei.org](http://www.iclei.org).

<sup>2</sup> See <http://www.ci.seattle.wa.us/mayor/climate/>.

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7.5.6.	Develop and maintain a state climate change Web site for the public, including a clearinghouse of climate change information and resources.			
7.5.7.	Work with existing company outreach efforts to customers to enhance awareness of climate change issues and opportunities.			
7.5.8.	Undertake a concerted planning effort to identify and address climate adaptation issues and needs in the state.			
7.5.9.	Work to educate consumers—and home designers, builders, and contractors—to ensure they are aware of the different choices they have for space heating and cooling (e.g., evaporative vs. refrigerative) and the impacts of those choices.			
7.5.10.	Develop a statewide voluntary program to structure and assist individuals in undertaking actions to reduce GHG emissions.			
7.6	<b>Target Audience: Industrial and Economic Sectors</b> Sector-specific climate change education and outreach.			
7.6.1.	Residential, Commercial, and Industrial*			The Arkansas Energy Office provides educational materials and resources for students, teachers, and facility managers ( <a href="http://arkansasedc.com/business_development/energy/index.cfm?page=education">http://arkansasedc.com/business_development/energy/index.cfm?page=education</a> ).
7.6.2.	Transportation and Land Use			

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7.6.3.	Energy Supply and Use			
7.6.4.	Agriculture and Forestry			
7.6.5.	Implement a state program of voluntary business actions to reduce GHG emissions.			
7.6.6.	Institute a “business incubator” program to attract and support new business development relating to the new energy economy.			
7.6.7.	Address out-of-state audiences as well.			