Catalog of State Actions
Residential, Commercial, and Industrial (RCI) Technical Work Group

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 no 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.

Key to Future Rankings of Options in the Tables That Follow

Potential GHG Emission Reductions*	Potential Cost or Cost Savings*,†
High (H): At least 1.0 million metric tons (MMt) carbon dioxide equivalent (CO_2e) per year by 2020	**High (H)**: \$40/tCO_2e or above
Medium (M): From 0.1 to 1.0 MMtCO_2e per year by 2020	**Medium (M):** \$15–\$40/tCO_2e
Low (L): Less than 0.1 MMtCO_2e per year by 2020, or 1 MMtCO_2e by 2050	**Low (L):** Less than \$15/tCO_2e
Uncertain (U): Not able to estimate at this time	**Uncertain (U):** Not able to estimate at this time
	Negative (Neg): Net cost savings

*Several measures may overlap in terms of emissions reductions and/or cost impacts. Estimates assume measures would be implemented independently from other measures.

† Costs are denoted by a positive number. Cost savings (i.e., "negative costs") are denoted by a negative number.

Definition of "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

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Option No.	GHG Reduction Policy Option	Potential GHG Emissions Reduction	Cost per Ton	Externalities, Feasibility Considerations	Priority for Analysis	Notes / Related Actions in AR
RCI-1	**ENERGY EFFICIENCY PROGRAMS, FUNDS, AND GOALS**					
1.1	Utility Demand-Side Management (DSM) for Electricity (including expansion of same)					Consider separating utility revenue from generation to remove disincentive for DSM; AR has some EE programs in place; importance of training
1.2	Utility Demand-Side Management (DSM) for Natural Gas, Propane, and Fuel Oil					
1.3	Non-Utility Demand-Side Management (DSM) Programs for Electricity					
1.4	Energy Efficiency Funds (e.g., public benefits funds) administered by state agency, utility, or third party (e.g., Energy Trust)					AR doesn't have a public benefit fund per se, but does have a program to address weatherization, especially in low-income homes
1.5	Regional Market Transformation Alliance					Similar to objectives of the Applied Sustainability Center at Univ. of AR
1.6	Reduced cost or free residential energy audits					
1.7	Reduced cost energy audits for businesses					
1.8	Low-cost Loans for Energy Efficiency improvements					

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1.9	Saving energy, savings sales tax					
1.10	Reduce energy use by 10% in state-owned buildings					Percentage target will need to be evaluated more fully
RCI-2	**BUILDINGS**					
2.1	Improved Building Codes for Energy Efficiency					Enforcement is very important
2.2	Training of building code and other officials in energy code enforcement"					Enforcement very important
2.3	Improved Design and Construction, "Government Lead-by-Example"					Legislative task force for sustainable building and design is looking at this for government buildings and schools
2.4	Increased Use of Blended Cement (substituting fly ash or other pozzolans for clinker)					Similar to affirmative procurement program at EPA
2.5	Support for Energy Efficient Communities Planning, "Smart Growth"					Examples exist at various levels in AR: municipal, RPOs
2.6	Promotion and Incentives for Improved Design and Construction (e.g., LEED, green buildings) in the Private Sector					
2.6.1	Emphasis on new buildings					

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2.6.2	Emphasis on existing buildings					
2.7	Feebate program to encourage energy efficiency in building design					
2.8	Incentives for retrofit of existing residential buildings					
2.9	Training and Education for Builders and Contractors (e.g., heating, ventilation, and air conditioning [HVAC], sizing, duct sealing)					
2.10	Energy Management Training/Training of Building Operators					
RCI-3	**APPLIANCE STANDARDS**					
3.1	Expansion of State-level Appliance Efficiency Standards					Ref EPA Energy Star for specific targets/approaches
3.2	Support for Federal-level Appliance Efficiency Standards					
3.3	Require high-efficiency appliances in new construction and retrofits					
RCI-4	**EDUCATION AND OUTREACH**					
4.1	Consumer Education Programs					

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4.2	Energy Efficiency School Curriculum					Should include not only primary and secondary schools but also university curricula
4.3	Truth-in-Advertising Campaign					
4.4	In-home energy displays					
RCI-5	**PRICING AND PURCHASING**					
5.1	Green Power Purchasing for Consumers					
5.2	Net-metering for Distributed Generation					AR has a net metering law
5.3	Time of use rates					More effective with sophisticated metering technologies
5.4	Tiered (increasing block) rates for electricity and natural gas use					
5.5	Bulk Purchasing Programs for Energy Efficiency or Other Equipment					
RCI-6	**CUSTOMER-SITED DISTRIBUTED ENERGY AND COMBINED HEAT AND POWER**					
6.1	Incentives to Promote Implementation of Renewable Energy Systems					
6.2	Incentives and Resources to Promote Combined Heat and Power (a.k.a. cogen)					

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6.3	Efficient transformers on the customer side of the meter					
6.4	Incentives for passive solar heating					
6.5	White Roofs, Rooftop Gardens, and Landscaping (including Shade Tree Programs)					
6.6	Focus on specific end-uses/technologies					
6.7	Passive solar heating design					
6.8	Solar hot water heating					
6.9	Appliance Recycling/Pick-Up Programs					
6.10	Property tax initiative					To encourage purchases of RE options with LT benefits
RCI-7	**NON-ENERGY EMISSIONS (HFCs, PFCs, SF_6, CO_2 PROCESS EMISSIONS)**					
7.1	Voluntary Industry-Government Partnerships					

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7.2	Promotion and funding for Leak Reduction/Capture, Recovery and Recycling of Process Gases					Some refrigerants that are phased out per the requirements of the Montreal Protocol significantly reduce energy use by the equipment in which they are used. Consideration of these refrigerants impact on energy use should be evaluated.
7.3	Promotion and funding for Process Changes/Optimization					
7.4	Use of alternative gases (other HFCs. Hydrocarbon coolants/refrigerants, etc.)					
RCI-8	**GHG EMISSIONS—SPECIFIC GOALS AND POLICIES**					
8.1	Support for switching to less carbon-intensive fuels (coal and oil to natural gas or biomass)					Double-check treatment of this option in the ES TWG
8.2	Industry-specific emissions cap-and-trade program					Should encourage involvement in vol. programs like CCX; increased reporting of emissions is helpful; sequestration could be big for AR; AR-only C&T approach probably not practical

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8.3	Negotiated Emissions or Energy Savings Agreements					Good to encourage this, but if AR-only, then there may be competitiveness issues for some industries
8.4	Local government program for voluntary emissions targets by businesses					
8.5	Provide tools and information for residents, businesses, and communities to perform GHG inventories					More useful in the presence of training and a central database to house reported info – these are important components of other policy options
RCI-9	**OTHER**					
9.1	Government agency requirements and goals					
9.2	Reduce energy use by 10% in state-owned buildings					Should be merged with 1.10
9.3	State building carbon-neutral requirement					
9.4	Municipal Energy Management					
9.5	Statewide effort to retrofit existing buildings (residential, commercial, public, and industrial) for energy efficiency					
9.6	Focus on specific market segments					

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9.7	Energy efficiency reinvestment funds					
9.8	Industrial audits					
9.9	Focus on Industrial ecology/ by-product synergy					