



Catalog of State Actions Energy Supply (ES) 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 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.

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 ₂ e) per year by 2020	High (H): \$40/tCO ₂ e or above
Medium (M): From 0.1 to 1.0 MMtCO ₂ e per year by 2020	Medium (M): \$15–\$40/tCO ₂ e
Low (L): Less than 0.1 MMtCO ₂ e per year by 2020, or 1 MMtCO ₂ e by 2050	Low (L): Less than \$15/tCO ₂ e
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.

Option No.	GHG Reduction Policy Option	Potential GHG Emissions Reduction	Cost per Ton	Externalities, Feasibility Considerations	Priority for Analysis	Notes / Related Actions in AR
ES-1	EMISSIONS POLICIES AND OVERARCHING ITEMS					
1.1	GHG cap-and-trade					Won't work well for AR alone; to be effective, must be applied at least regional if not national, international
1.2	Carbon (GHG) tax					Same as 1.1
1.3	Generation performance standards and/or mitigation requirements for electricity					PSC has developed stds for 2008 that has implications for a GPS
1.4	Integrated resource planning (IRP)					
1.5	Voluntary GHG commitments					
1.6	Technology Research and Development					Ratepayers already funding R&D via EPRI; more state support for more national participation could be helpful.
ES-2	RENEWABLE ENERGY AND ENERGY EFFICIENCY					
2.1	Renewable and/or Environmental Portfolio Standard (RPS/EPS)					Need transmission to help import low emitting generation; AR will need to develop more in-state resources – wind, solar
2.2	Grid-based renewable energy incentives and/or barrier removal					
2.3	Distributed renewable energy incentives and/or barrier removal					

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2.4	Green power purchases and marketing					Coops will have green (hydropower) purchase options for consumers avail. soon
2.5	Combined Heat and Power (CHP) standards, incentives and/or barrier removal					
2.6	Pricing strategies to promote renewable energy and/or CHP (e.g., net metering)					AR already has some net metering provisions but can/should be strengthened
2.7	Renewable energy development issues (zoning, siting, etc.)					
2.8	Technology-focused initiatives (biomass co-firing, energy storage, fuel cells, etc.)					Crop-based biomass not a net advantage for GHG emissions
2.9	Public Benefits Charge					
ES-3	FOSSIL FUEL AND NUCLEAR ELECTRICITY					
3.1	Advanced fossil fuel technology (e.g., IGCC, CCSR) incentives, support, or requirements					Need funding support at the national level.
3.2	New Nuclear Power					
3.3	Relicensing/Up-rating Existing Nuclear Power					Both AR units have been relicensed and upgraded
3.4	Efficiency improvements and re-powering existing plants					
3.5	Technology-focused initiatives					
3.6	Geological underground sequestration at new plants					Plum Pt. & Hemsted, plus more 2 in planning stages

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ES-4	FUEL PRODUCTION, PROCESSING AND DELIVERY					
4.1	Oil and gas production: GHG emission reduction incentives, support, or requirements					
4.2	Natural gas transmission and distribution					
4.3	Oil Refining: GHG emission reduction incentives, support, or requirements					
4.4	Coal Production: GHG emission reduction incentives, support, or requirements					
4.5	Coal-to-liquids Production: GHG emission reduction incentives, support, or requirements					
4.6	Low-GHG Hydrogen production incentives and support					
4.7	Oil and gas tax as a funding mechanism for GHG reduction options or R&D					Could be an excise tax, severance tax, etc.
ES-5	CARBON CAPTURE AND STORAGE OR REUSE					
5.1	CCSR incentives, requirements and/or enabling policies (administration, regulation, liability, incentives)					
5.2	R&D for CCSR					Need to identify and evaluate suitable sites in AR for geologic storage

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ES-6	OTHER ENERGY SUPPLY OPTIONS					
6.1	Transmission system upgrading					
6.2	Reduction of transmission and distribution line losses					
6.3	General distributed generation support (interconnection rules, net metering, etc.)					AR has a net metering law; PSC has developed rules for implementation
6.4	Environmental (GHG emissions) disclosure					
6.5	Landfill Gas Recovery (see also Waste)					
6.6	Waste to Energy (see also Waste)					
6.7	N ₂ O Reduction Co-benefit					
6.8	Smart Grid					Transmission and distribution to the end-user; should include broadband to home-owners