WEST VIRGINIA OFFICE OF ENERGY – PROPOSED GHG REDUCTION STRATEGIES

Pursuant to Section 60114 of the federal Inflation Reduction Act, the State of West Virginia is required to develop strategies to reduce GHG emissions in various sectors within its economy. In order to comply with the requirements of Section 60114 of the Inflation Reduction Act, the West Virginia Office of Energy has developed the following strategies to reduce GHG emissions from the Power Generation Sector, the Industrial Sector, and the Commercial and Residential Building Sector.

Proposed Strategies	Description	Types of Policy Mechanisms
Power Generation		

Efficiency Improvements in Existing Fossil Fuel Fired Powerplants	• Creating a program to promote the implementation of efficiency improvement technologies on existing powerplants to decrease those facility's emission intensity.
	• This program would include projects associated with the implementation of new technologies that allow for fossil fuel fired powerplants to decrease the carbon intensity of the electricity they generate, including technologies such as:
	  ◦ Neural Network / Artificial Intelligence
	  ◦ Boiler Feed Pumps
	  ◦ Air Heater & Duct Leakage Control
	  ◦ Variable Frequency Drives
	  ◦ Blade Path Upgrade (Steam Turbine)
	  ◦ Redesign / Replace Economizer
	  ◦ Improved Operating & Maintenance Practices
	• This program would include a cost share component expected for project applicants.
		This may include one or more of the following policy types:
		• Project grants
		• Performance based financial assistance
		• Advantaged cost recovery mechanisms

New Baseload Generation with Small Modular Reactors, Geothermal, Hydropower, and Natural Gas	• Creating a program to promote the implementation of new baseload electricity generation technologies within West Virginia to create sources of new baseload generation. • This program would include the development of Small Modular Reactor (SMR), Geothermal, Hydropower, and Low Carbon Natural Gas technologies and associated generation facilities and may support the planning, permitting and approval processes for these types of facilities. • This program would include a cost share component expected for project applicants.	This may include one or more of the following policy types: • Project grants • Performance based financial assistance • Advantaged cost recovery mechanisms

Proposed Strategies	Description	Types of Policy Mechanisms
Power Generation and Industrial		
Carbon Capture and Sequestration on Existing Facilities	• Creating a program to promote the implementation of carbon capture on existing fossil fuel-fired powerplants and industrial facilities to decrease emissions from those facilities. • This program would include projects associated with the implementation of carbon capture equipment on facilities themselves as well as the infrastructure necessary to transport captured carbon to existing and planned sequestration facilities or the development of necessary new carbon sequestration facilities. • WV will coordinate this policy to support the other actions being taken within the state related to carbon capture and sequestration such as the Appalachian Regional Clean Hydrogen Hub (ARCH2). • This program would include a cost share component expected for project applicants.	This may include one or more of the following policy types: • Project grants • Performance based financial assistance • Advantaged cost recovery mechanisms

Proposed Strategies	Description	Types of Policy Mechanisms
Industrial		
Coal Mine Methane Leakage Reduction and Use	*Some details of the proposed policy may change based on what research reveals is allowable under the EPA draft rule associated with methane leakage* • Creating a program, or enlarging existing state programs, to promote the identification, capture, and use of methane from coal mines to reduce mine related emissions of greenhouse gases. • This program would include projects associated with identifying methane leakage in active and abandoned coal mines, implementing methane capture technologies, and, if feasible, making that methane available for use. • This program would include a cost share component expected for project applicants.	This may include one or more of the following policy types: • Project grants • Performance based financial assistance
Natural Gas and Petroleum Systems Methane Leakage Reduction and Use	*Some details of the proposed policy may change based on what research reveals is allowable under the EPA draft rule associated with methane leakage* • Creating a program, or enlarging existing state programs, to promote the identification, capture, and use of methane from natural gas and petroleum systems to reduce those system's emissions of greenhouse gases. • This program would include projects associated with identifying methane leakage, implementing methane capture technologies, and, if feasible, making that methane available for use. • This program would include a cost share component expected for project applicants.	This may include one or more of the following policy types: • Project grants • Performance based financial assistance
Efficiency Improvements and Electrification in Existing Industrial Facilities	• Creating a program to promote the implementation of efficiency improvement and electrification technologies on existing industrial facilities to decrease those facility's emission intensities. • This program would include projects associated with the implementation of technologies that reduce the energy required by industrial facilities. • This program does not include assessing the feasibility of technologies to be implemented at individual sites • This program would include a cost share component expected for project applicants.	This may include one or more of the following policy types: • Project grants • Performance based financial assistance

Proposed Strategies	Description	Types of Policy Mechanisms
Commercial and Residential Buildings		
Energy Audits for State, County, and Local Government Buildings	• Creating a program that allows for automated tracking of state government building energy usage, that will additionally be made available to county and local governments, to identify buildings with a disproportionately high energy use. • Additionally, a program will be established to perform energy audits on prioritized government buildings that have a disproportionately high energy usage to identify opportunities to reduce that usage and reduce emissions caused by those buildings.	This may include one or more of the following policy types: • Funding for WV resources • Project grants
GHG Reduction Programs for State Government Buildings	• Creating a program to implement the GHG reduction opportunities identified in the energy audits program on prioritized state-owned buildings to allow for the realization of emission reduction opportunities identified in the energy audits. • The prioritization criteria for which energy use reduction projects will be enacted will include a cost and impact analysis to identify the projects that have the maximum energy use and GHG emission reduction for the least cost. • This program could include the installation of solar on state-owned buildings as a mechanism to reduce the GHG emissions impact of those buildings' energy use. • Additionally, universities and community colleges located in or serving high proportions of disadvantaged communities will be prioritized for implementation of GHG reduction opportunities to serve the dual goals of reducing GHG emissions as well as reducing the burden of energy costs to those educational institutions. • This program would include an application for funding for GHG reduction projects on state-owned buildings only; projects on local government owned buildings would not be funded through this program.	This may include one or more of the following policy types: • Project grants for state-owned buildings This will not include: • Funding for non-state-owned building projects