



Energy Boost

The ARRA Invests in West Virginia's Energy Future

Through the American Recovery and Reinvestment Act of 2009 (ARRA), the U.S. Department of Energy has furnished \$412.4 million to cover 38 energy infrastructure projects for West Virginia businesses, local

governments, non-profit organizations, West Virginia University and the National Energy Technology Laboratory. With this ARRA funding, West Virginia can boost its role as a key supplier of our nation's energy.

Rich in natural resources, West Virginia leads the nation in net interstate electricity exports. It is ranked second in annual coal production, supplying one-third of the demand east of the Mississippi River. West Virginia is a major supplier of natural gas to the Northeast, and the Marcellus Shale formation will increase its natural gas production. It is also home to the largest wind farm in the East, has abundant forests to develop for clean biomass energy and has substantial underground formations to store carbon dioxide produced by its fossil fuel power plants. Here we look at some of the key energy projects taking place in West Virginia under the ARRA.

Energy Efficiency

The Division of Energy has received \$32.7 million to invest in energy efficiency and renewable energy. This funding is being used to upgrade lighting, windows and HVAC systems in the state's administrative office buildings, correctional facilities, hospitals, laboratories, schools, colleges and universities, health care facilities and armories.

The State of West Virginia has received \$37.6 million for its Weatherization Assistance Program to expand energy audits and weatherize nearly 3,600 homes while creating jobs, reducing carbon emissions and saving money for low-income families. In addition, the program includes training and education to create a green work force.

Twenty-one communities will use a sum of \$14 million in Energy Efficiency and Conservation Block Grants to develop, promote, implement and manage local energy efficiency programs.

The Department of Environmental Protection has received \$1.7 million for the Energy Efficient Appliance Rebate Program, which offers consumer rebates to encourage the purchase of certain ENERGY STAR® appliances such as refrigerators, freezers, washing machines, dishwashers and room air conditioners.

With their \$13.9 million of ARRA funds, the National Energy Technology Laboratory in Morgantown is designing and constructing a Performance Verification Laboratory to test appliance and commercial equipment for compliance with energy efficiency standards.

Carbon Capture and Storage

American Electric Power was awarded \$305 million to demonstrate 90 percent removal of carbon dioxide from the flue gas stream at the Mountaineer Plant in New Haven using the Alstom Chilled Ammonia Process. About 1.5 million metric tons of carbon dioxide will be captured and stored in two saline formations located near the plant. Using a different carbon management approach, Touchstone Research Laboratory in Triadelphia received more than \$500,000 to cultivate algae with carbon dioxide and harvest the algae for conversion to a biomass feedstock.

Electrification of Transportation

West Virginia University has been awarded \$6.9 million to teach students, educators, emergency responders and the public about electric vehicles.

Electric Grid

The Division of Energy received \$366,000 to update the state's Energy Assurance Plan, and the Public Service Commission received \$796,000 to facilitate a review of proposed investments by electric utilities. ■

By Steven Bossart and Keith Dodrill