

## **Project Summary**

**Title:** Promoting Air Quality with Clean Energy in the Metropolitan Washington Area

**Name of Applicant:** Virginia Department of Mines, Minerals, and Energy (DMME)

**Project Director/Principle Investigator:** Ken Jurman, Virginia DMME

**Participants:** Virginia Energy Office, Metropolitan Washington Council of Governments, Virginia Department of Environmental Quality (Air Division), Maryland Energy Administration, Maryland Department of the Environment (ARMA), District Department of Environment's Energy Office and Air Quality Division.

**Project Objectives:** The major objective of the proposed work is to demonstrate and quantify environmental benefits resulting from selected energy efficiency and renewable energy (EERE) programs implemented by the State and local governments in the Metropolitan Washington region. The primary focus will be on estimating reductions in emissions of pollutants (nitrogen oxides (NO<sub>x</sub>), and carbon dioxide (CO<sub>2</sub>) from projects and programs with the goal of including these programs in the State Implementation Plans and regional climate change strategies. The goal is to develop quantified estimates of air quality benefits that are deemed robust enough to: (1) support U.S. Environmental Protection Agency (EPA) approval of emissions reduction credit in the State Implementation Plans (in Maryland, Virginia and the District of Columbia) for the fine particulate matter standard and the forthcoming ozone standard; and (2) gain recognition of air emissions reduction credit in state greenhouse gas emission registries.

**Project Description:** The project will focus on capturing the air quality benefits of several major energy initiatives, including key elements of the Renewable Portfolio Standards (in Maryland and DC) and state and county programs to increase building energy efficiency. The accomplishment of the overall objectives will require successful implementation of the following steps: (1) providing energy and air agencies in MD, VA, DC and local government members of MWCOG with the necessary tools to quantify the energy savings, increased renewable generation, and reduced emissions of greenhouse gases and nitrogen oxides that result from EERE measures; (2) advising program managers on data protocols and collecting the necessary data to estimate the environmental and economic benefits of measures; and (3) helping the State and District air agencies to implement regulatory policies that are necessary to fully recognize and capture the reduced emissions of air pollutants resulting from EERE programs.

**Project Methodology:** The project will involve review of existing energy valuation protocols, recommendations for protocols for selected EERE measures, development of spreadsheet tools to document energy savings and generation, development of spreadsheet tools to document emission reduction and economic benefits, and a variety of outreach and extension efforts to incorporate recommendations into relevant planning documents and regulatory programs.

**Potential Impact:** The project objectives are important because many of the air quality benefits of EERE programs are not quantified or fully recognized under various current regulatory programs. By developing and implementing rigorous methodologies to calculate and document the air quality benefits from EERE projects, it is expected that EERE projects will receive EPA approval and win wider acceptance as SIP measures to be included in State Implementation Plans within the region and across the county. In addition, the project will provide a model of cooperation among multiple agencies to address energy and environmental goals and will provide best practices that other State and local governments can replicate.