

**OVERVIEW OUTLINE OF
Draft Protocol Recommendation**

**Strategy for Inclusion of Energy Efficiency and Renewable
Energy in State Implementation Plans for Air Quality and
Climate Change**

DRAFT

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for:

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Metropolitan Washington Air Quality Committee (MWAQC)

COG Climate, Energy, and Environment Policy Committee (CEEPC)

MWCOG Energy Advisory Committee (EAC)

MWCOG Intergovernmental Green Building Group (IGBG)

State and Local Energy Offices

Public Service Commission of Maryland, the District of Columbia, and the
Commonwealth of Virginia

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Background

Renewable energy and energy efficiency and conservation (EERE) are core components of the regional strategies to reduce carbon emissions and improve air quality. To meet environmental sustainability goals, governments in the National Capital Region are leading by example to reduce energy consumption through installation of energy efficient equipment and to increase quantities of clean energy produced and purchased in the region. This document contains specific recommendations on approaches for inclusion of EERE programs in regional air quality and climate and energy sustainability plans. It is intended to be a living document that is modified over time to reflect best practices for inclusion of EERE in climate and air quality plans.

Summary Points

- Energy efficiency and renewable energy programs should be included in regional air quality and climate/energy planning documents.
- Energy efficiency and renewable energy programs should be included in SIPs as voluntary bundle items and for use in weight of evidence.
- Programs mandated under law may be included in the base case conditions supporting future emission projections.
- The energy impact of voluntary initiatives can be tracked and emission benefits quantified using available emission calculators.
- States wishing to include EERE measures in the SIP as a voluntary control measures should establish Emission Allowance set aside authority and procedures.
- The need for rigorous evaluation, measurement, and verification (EM&V) varies depending on project/program sponsor, intended uses of impact data, and available resources. The Northeast Energy Efficiency Partnership's EM&V Forum is currently developing a set of standardized EM&V and reporting guidelines for program administrators in the mid-Atlantic and New England. These procedures, once finalized, should be integrated into this planning protocol.

Approach Used for Research Project

Voluntary advisory workgroup formed. Members include local energy managers, state energy offices, state air agency officials, Public Service Commission staff, and utility staff for Dominion, Pepco, and Constellation.

Staff compilation and review of supportive policies, guidance, and technical resources.

Research on development of marginal emission factors based on a refined impact analysis of different EERE measures reflecting available load shape data. Development of a spreadsheet tool for conducting emission benefit calculations.

Meetings with technical experts supporting development of regional air quality and climate action plans.

Consideration of how relevant national protocols may address similar factors or needs.

Briefings and solicitation of feedback with technical and policy committees:

- COG Energy Advisory Committee (EAC)
- COG Intergovernmental Green Building Group (IGBG)
- Metropolitan Washington Air Quality Committee (MWAQC)
- MWAQC Technical Advisory Committee (TAC)
- MWAQC Local Government Initiatives Subcommittee
- Climate, Energy, and Environment Policy Committee (CEEPC)

Options for Including Programs in SIPs and Climate Plans

EERE in SIPs

There are four basic options for inclusion of energy efficiency and renewable energy measures (programs/projects) in SIPs.

- Baseline Emission Projections Modification
- Mandatory Control Measure
- Voluntary Control Measure in the Voluntary Bundle
- Weight of Evidence

Current approach is to include some local government efficiency and renewable energy programs in the SIP's voluntary bundle and in weight of evidence.

Green Building Policies and Programs
Building Efficiency Investments
Traffic Signal Retrofits (for credit)
Wind Energy Purchases (for credit)
Renewable Portfolio Standards
High Electricity Demand Day Initiatives

Criteria to Evaluate Options

Technical adequacy
Can be accomplished within existing resources
Is an approved option within the relevant regulatory context
Does not create problems for future planners and regulators

Key Supporting Policies and Tools

EPA Guidance for Inclusion of EERE in SIPs
Letters of Commitment/Recordkeeping
EM&V Protocols
Emission Benefit Calculator
NOx Allowances Set Aside Authority, Process, and Implementation
Annual Tracking and 3-year True Up Report

EERE in Regional Climate and Energy Action Plans

Regional Climate and Energy Action Plans are voluntary initiatives designed to align program activities to achieve established emission reduction targets. Current approach is to include the following EERE programs in the near term regional Climate and Energy Action Plan:

- Green Building Policies
- Building Benchmarking and Disclosure Requirements
- Green Building Codes
- Building Retrofits
- Purchase of renewable energy
- Installation of renewable energy systems on-site
- Energy education and outreach
- Energy challenge programs

A voluntary collaboration is being developed with utilities to develop system to track progress over time.

Possible Programs to Consider for Air Quality and Climate Plans

State and Local Energy Plans and Strategies

- EmPower Maryland
- Virginia Energy Plan
- District Sustainable Energy Utility
- Green DC Agenda
- Arlington Fresh AIRE
- Alexandria EcoCity
- Loudoun Strategic Energy Plan
- Cool Counties
- Cool Capital Challenge

Clean Energy Mandates and Goals

- Renewable Portfolio Standards
- Renewable Energy Purchases

Efficiency Standards

- Energy Efficiency Resource Standards
- Appliance Efficiency Standards
- Building Codes

Public Building Efficiency and Green Building Programs

- Energy Audit Programs
- Clean Energy Municipal Financing
- Home Energy Loan Program
- Building Retrofits

Federal Home Weatherization Program
Home Performance with Energy Star Programs
Energy Efficiency Outreach Programs
Federal High Performance Building Program

Private Building Efficiency and Green Building Programs
Energy Performance Contracts
Clean Currents

Voluntary Clean Energy and Efficiency Programs
County Efficiency Workgroups
County Climate, Energy, and Sustainability Committee

Key Drivers

- Carbon Reduction Targets
- Compliance with NAAQS
- Energy Savings Targets
- Renewable Electricity Targets
- Peak Demand Reduction Targets
- High Electricity Demand Day Initiatives

Other Related Policy and Programs

- Public Benefits Charges
- Decoupling
- Interconnection Standards
- Feed-in Tariffs
- PJM Capacity Market
- Funds
 - DC Renewable Energy Development Fund
 - DC Sustainable Energy Trust Fund

Recommendations

During inventory development process, take time to understand which efficiency or renewable programs may already be reflected in the baseline emission projections for ROP/Attainment Years.¹ Research methods and inputs for EGAS and IPM. Do not take steps to modify the baseline emission inventory projections at this time unless there are strong and documented reasons to believe that EERE will significantly alter IPM or EGAS growth assumptions.

Maintain and expand inclusion of local EERE projects in the voluntary bundle and weight of evidence. Continue to foster common methodologies for tracking, estimating, and reporting impacts, including costs and benefits. Document approaches to estimating costs/benefits of programs from a multi-pollutant perspective.

¹ Large EERE programs are reflected in our current SIPs because the growth factors applied were from EGAS which reflect estimates from DOE Annual Energy Outlook, but only for programs in law/regulation at the time the growth factors were developed.

Consider estimating the benefits of state-level EERE initiatives and including assessment of possible impacts in weight of evidence. Don't establish a new mandatory reporting relationship between the utilities, state air agencies, and the public service commissions at this time.

Consider a request to the attainment modeling groups to conduct a sensitivity run to demonstrate possible air quality benefit of EERE programs not captured in either the selected growth factors or the high electric demand day situations across mid-Atlantic. Generic results could be used in the weight of evidence section.

EPA should consider providing additional guidance/data from eGrid about appropriate emission rates to use for benefit calculations (baseload, nonbaseload, time matched marginal).

Update the COG regional emission calculator as new eGrid data, loadshape data, or other factors become available.

Track developments from the NEEP EM&V Forum and incorporate new EE documentation and reporting strategies as they become available.

Foster relationship between COG, electric utilities, PJM, state weatherization programs, and state HPES programs to develop method and process to document progress in meeting energy efficiency and renewable energy targets and goals in the regional climate and energy action plan.

Consider incorporating EERE reporting components into state, local, and regional public education and outreach campaigns (e.g., Solar Mapping, Earthaid, Cool Capital Challenge).

Additional Content of the Protocol Recommendation

Resource List

Factsheet on Emission Calculator

EM&V Recommendation

Documentation of Emission Allowance Set-aside Programs, Authority & Process

Fact Sheets: PJM Capacity Market, Emission Factors/eGrid, EPA Voluntary Measures Guidance, HEDD, EM&V

Glossary

Contact List