State and Local Climate and Energy Program

Energy Efficiency for Clean Air: The Importance of EM&V

Julie Rosenberg, Branch Chief
U.S. EPA State and Local Climate and Energy Program

EM&V Forum Annual Meeting
October 19, 2010

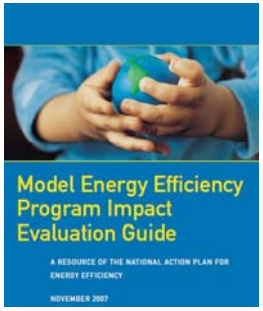
Issues & Opportunities

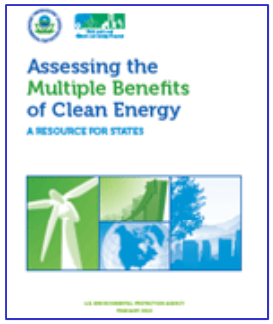
- EE/RE can be important option for air quality compliance
- EM&V is critical for using EE/RE for AQ benefit
- EPA is developing methods to help states use EE/RE in AQ strategies
- Data issues are complex
- NEEP Guidelines can help
- More to be done

EPA's EM&V Investments

Guidance

- *Model EE Program Impact Evaluation Guide* – describes standard EM&V practice and key issues (www.epa.gov/eeactionplan)
- Assessing the Multiple Benefits of Clean Energy – identifies how EE impacts can achieve other policy objectives (http://epa.gov/statelocalclimate/resources/benefits.html)





Peer Exchange

- NEEP EM&V Forum
- EM&V webinar series for states (www.emvwebinar.org)

Policy Development

- SEE Action workgroup on EM&V
- NEEP reporting guidance

EE/RE Emerging as an Air Quality Compliance Option

- SIPs (State Implementation Plan)
  - Required by Nat'l Ambient Air Quality Standards (NAAQS) for CO, Pb, NO, PM, O3, SO2
  - "Out-of-Attainment" ➔ develop SIP
  - State strategies for electric-sector emissions
    - Traditionally – require end-of-pipe emissions controls (DEQ in lead), costs recovered through rates (PUC in lead)
    - Emerging Option – add cost-effective EE/RE to compliance choices
- Future Air Rules

EM&V is critical for validating the EE/RE, allowing it to join emission controls as a legitimate option

New SIP Approach for EE/RE

- States facing increasingly stringent AQ standards
  →Seeking opportunities to incorporate EE/RE into their SIPs

- Past experience reveals stumbling blocks
  - Data issues and methods
  - Scale of EE/RE investment and impact on AQ
  - Lack of clear EPA guidance

- New strategies for helping states account for their EE/RE will:
  - Improve ability to use EE/RE in AQ compliance
  - Provide transparency to recognize/reward state leadership
  - Define a quantification methodology and outline appropriate methods/data requirements
  - Require expanded coordination across state agencies and EE program staff

New SIP Option – EE/RE in the Baseline

- EPA Baseline Analysis – fully reflecting EE/RE
  - ✓ Established what EE/RE is already in the baseline
  - Exploring what existing state policies are missing
  - Quantifying how existing policies change growth in demand and supply
  - Using this insight to build the case for DEQs and PUCs to deploy EE/RE as part of SIP compliance strategy
- Soliciting state input on data issues
  - Policies that are "on the books" and their impacts
  - Collaborating via calls/webinars with state groups: ERTACT, NESCAUM, NACAA, others?
  - EPA Working Group
- Providing data to states – Early 2011
  - Updated energy data: annual and peak energy savings/generation by state and by policy
  - Hourly load impact curves by region

EE/RE Can Help Meet Upcoming Air Rules

Upcoming requirements for power plants will

- Profoundly benefit public health
- Present compliance choices
  - controls and cleaner resources
  - EE/RE can be deployed to help reduce costs, reliability concerns and CO2

Requires collaboration across Feds and within and across states

Robust EM&V practices document
the impact - reliability – validity
of the EE resource to an unfamiliar audience

EPA

EE/RE + AQ Policy Requires Good Data

- Key issues for estimating value of EE/RE on AQ
  - Magnitude, duration, location, timing of EE savings/RE generation
  - Required level of accuracy, transparency, consistency of EE/RE data
  - Which EE/RE policies and programs are accounted for in the baseline
  - What other policies and programs (not in the baseline) are supported by rigorous data
  - Which power plants are on the margin and thus impacted by EE/RE
- EPA needs input from states, EM&V experts, and others to ensure that EE/RE accounting in AQ policy is credible and transparent

NEEP Reporting Guidelines Support EPA's EE/RE + AQ Efforts

- Reporting Guidelines support EPA AQ objectives
  - Improve transparency and consistency of EE data for use in AQ and cost-benefit analysis
- Reporting Guidelines help states link EE investment to other improvements (e.g., air, climate, economy/jobs, energy system)
- EPA supports recommended next-steps for the AQ guideline
  - Peer exchange across DEPs, PUCs, EE program staff, others
  - EPA developing clear/actionable guidance

More Work to be Done on EE/RE and AQ Integration...

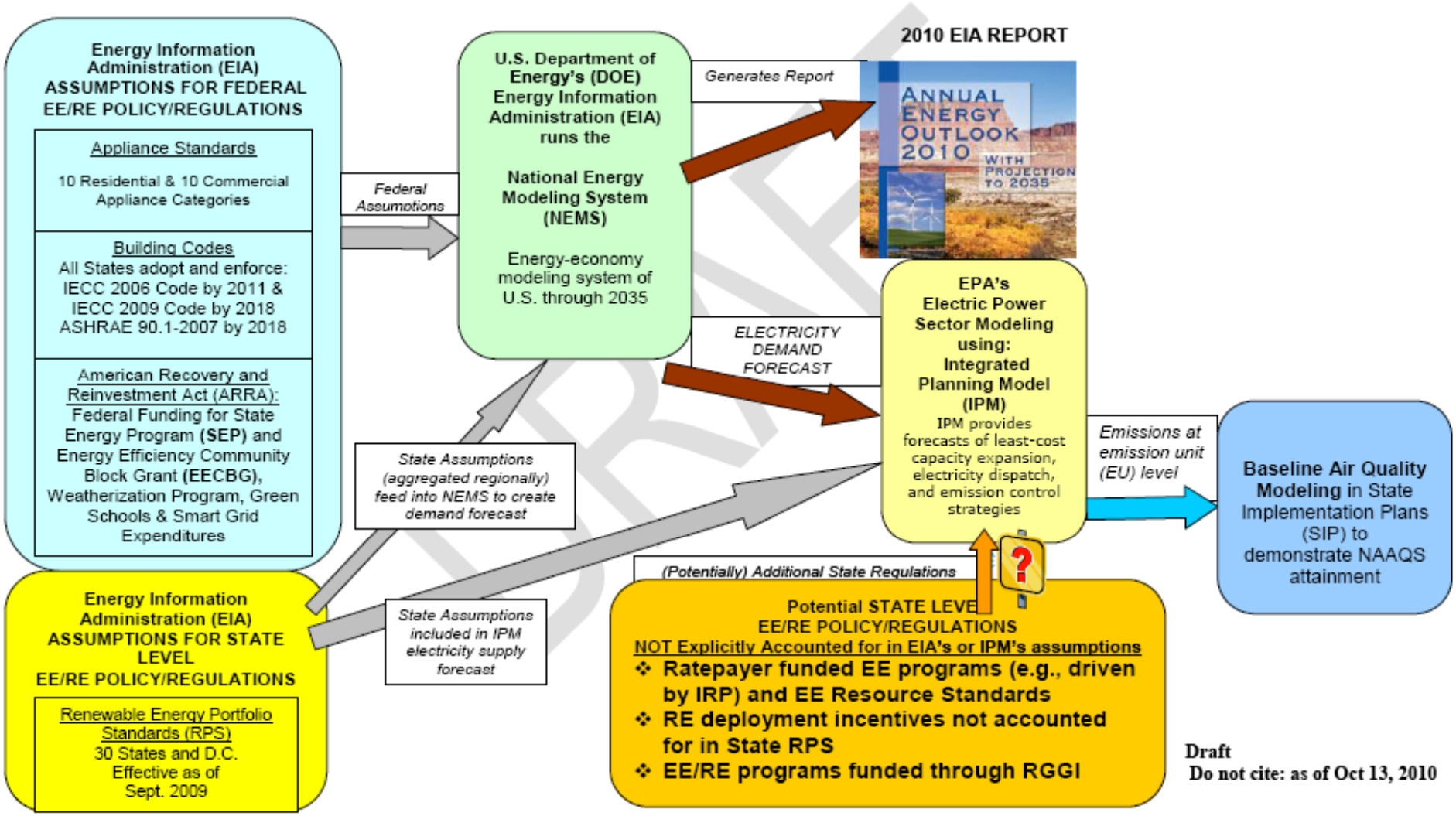
- EPA better understanding data sources
- State agencies (DEPs, PUCs, SEOs) learning policy issues, opportunities, and data needs
- Next Steps
  - EPA gathering States' input in developing products that are useful for state AQ plans
    - Working Group, calls, webinars, etc
  - EPA will work with states to ensure they are aware of and understand SIP options
  - EPA will support State peer exchanges to document best practices and share information

For More Information or To Participate

- Julie Rosenberg (Branch Chief)
  rosenberg.julie@epa.gov
  202-343-9154
- Niko Dietsch (EE/EM&V issues)
  dietsch.nikolaas@epa.gov
  202-343-9299
- Robyn Kenney (AQ issues)
  kenney.robyn@epa.gov
  202-343-9080

Appendix: SIP Baseline Schematic

Accounting for Energy Efficiency & Renewable Energy Policy in the Electric Power Sector Baseline



Draft
Do not cite: as of Oct 13, 2010