RGGI Regional Greenhouse Gas Initiative

An Initiative of the Northeast & Mid-Atlantic States of the U.S.

RGGI: SF_6 Offsets Opportunities

Christopher Sherry
New Jersey Department of
Environmental Protection

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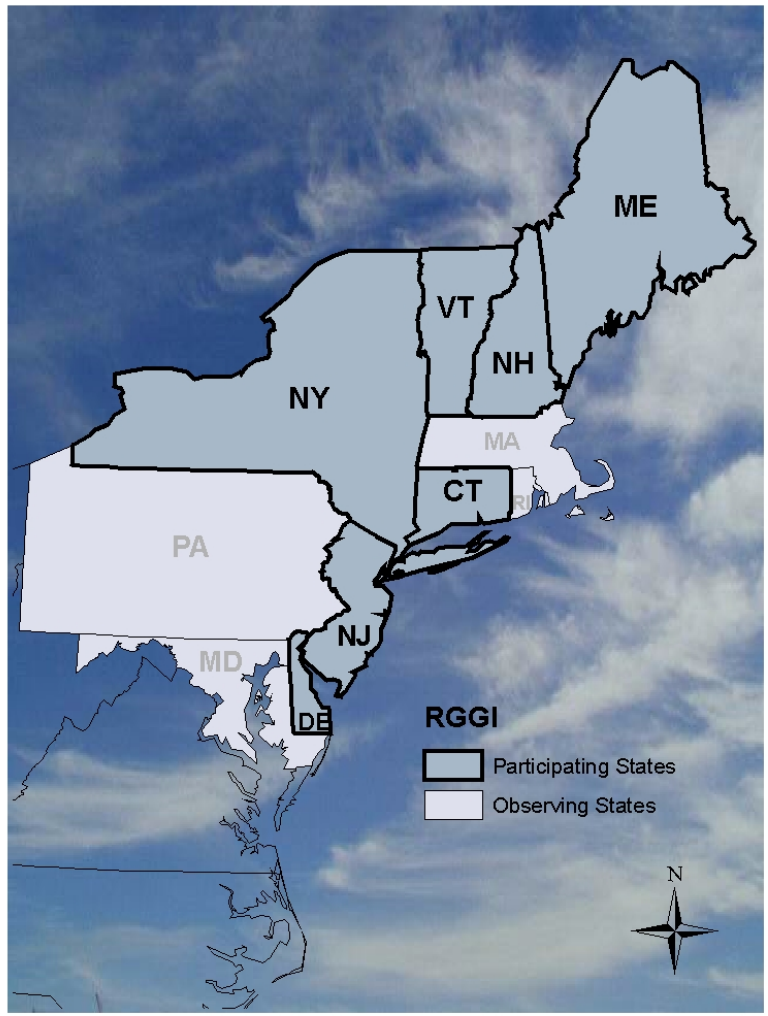
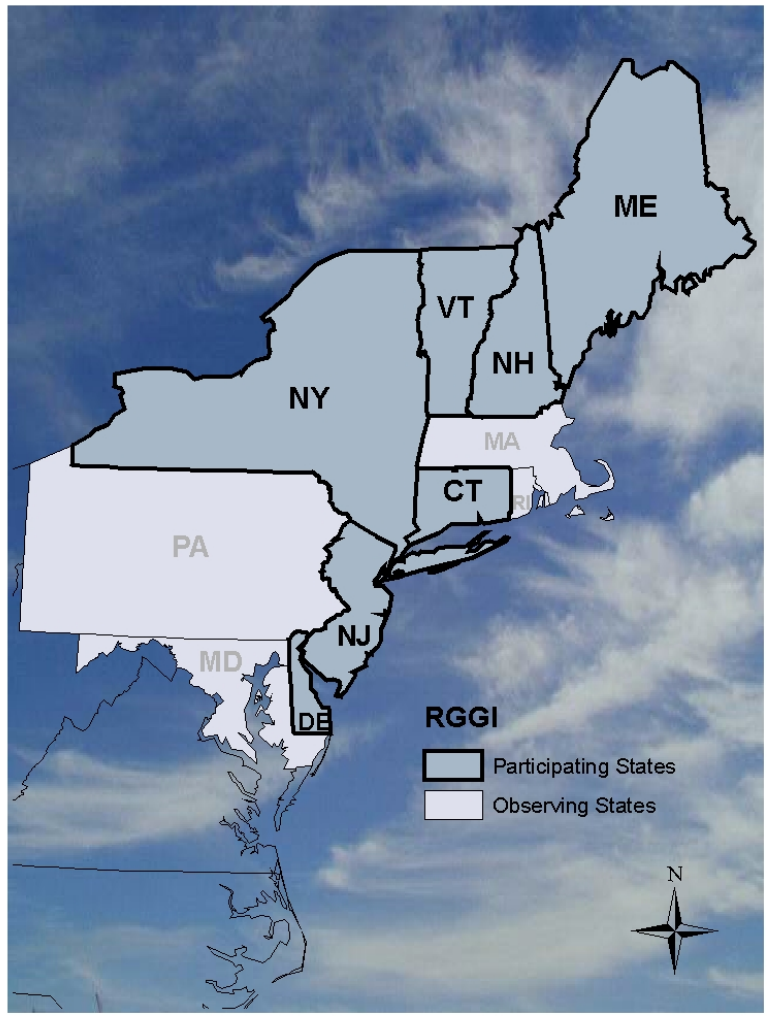


Overview

- RGGI program basics
- Review of offsets design approach
- Overview of offsets model rule components
- SF_6 requirements



RGGI Program Components

- Start Date of January 1, 2009
- Covers Fossil-Fired Electric Generating Units 25 Megawatts and Larger
- Three-year Compliance Period
- Two-Phase Cap--Stabilize Emissions through 2014; Reduce 10% by 2018 (cap start point ~ 1990 emissions)
- Emissions Offsets as a Compliance Option

Eligible Offsets Types

- **Offsets—project-based reductions:**
  - Types:
    - Natural Gas, Oil, Propane End-use Energy Efficiency
    - Afforestation
    - Landfill Gas Capture & Combustion
    - Methane Capture & Combustion from Animal Manure Management Operations
    - SF_6 Leak Reduction -- Electricity Transmission & Distribution
    - International carbon currencies under limited circumstances (CDM)

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RGGI Offset Design Approach

- Guidance from agency heads and stakeholders to pursue a benchmark/performance standard approach to additionality
- Allows project developers and interested stakeholders to understand program requirements up-front
  - sets a transparent standard for project evaluation
- Avoids administrative case law approach (CDM), which increases assurance of environmental integrity and reduces transaction costs

Additionality: What do we mean?

- Additionality requires projects to be beyond “business as usual” as defined by the program
  - Actions taken are "additional" to those that would have otherwise been undertaken, or that would have been undertaken, but at some future date
- Is the action being undertaken as part of current standard market practice? If so, the action is likely not additional.
- Is offset revenue likely driving investment in a project beyond standard market practice, or is a project unlikely to occur without significant incentives? If so, the action is likely additional.

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Additionality: Why do we care?

- Additionality is key criteria for ensuring that projects result in “real” emissions reductions
  - Incremental environmental benefits are being achieved due to the offset mechanism
  - Since offsets allow an additional ton of CO_2 to be emitted from sources subject to RGGI in an amount equal to each ton of emission reduction achieved through an offset, offsets projects must provide reasonable assurance that they are achieving emissions reductions that would not otherwise have occurred

Additionality: Why do we care?

- Offsets mechanisms without additionality criteria would likely involve quantification of emissions reductions achieved through typical market activities, such as:
  - Normal capital stock turnover due to replacement of old equipment
  - Actions undertaken to meet other non-GHG regulatory requirements
  - Actions undertaken as the result of other market transformation incentives
  - Improvement of production/operational efficiency to meet competitiveness goals

Operationalizing Additionality: How do you accomplish?

- Two levels of additionality:
  - Regulatory additionality: is the project required by law or regulation?
    - Simple yes/no test.
  - Financial additionality: does the project present an attractive investment alternative in the current market?
    - Requires a counterfactual assessment--knowledge of a future scenario that will not actually take place
    - Involves development of a business-as-usual baseline
    - Tests to determine investment attractiveness, such as market barrier evaluation, financial analysis (IRR or NPV for project with and without expected offset allowance revenue, as compared to baseline project scenario)

Operationalizing Additionality: How do you accomplish?

- Case-by-case evaluation of financial additionality has been widely criticized
- Process is cumbersome, selection of case-specific scenarios and variables is critical to outcome
- Subject to gaming: “tell me a good story”
- Very difficult to accurately gauge the investment calculus of individual investors
  - Threshold investment decisions, such as IRR benchmarks vary among investors

Operationalizing Additionality: What are the alternatives?

- Use benchmarks and/or performance standards as proxies to infer financial additionality
- Examples:
  - Benchmark: qualitative eligibility criteria for a project that reasonably ensures that project is unlikely under standard market practice
  - Performance standard: projects that exceed the standard qualify as additional
    - Emission rate
    - Energy efficiency criteria
    - Market penetration rate

SF_6: Additionality Issues

- Issues:
  - Existing voluntary program (how do avoid penalization of existing EPA partners?)
  - Emissions projected to decrease over time under business-as-usual (simply crediting for reductions relative to current baselines unlikely to meet additionality test)
  - Expense of SF_6--current financial incentive to manage (utilities should be required to implement basic good practice)

- Solution:
  - Performance standard based on regional EPA partner emission rates

Key SF_6 Requirements

- Focus is on entity-wide reductions of SF_6 emissions (across load-serving entity)
- Baseline entity-wide emission rate must be below the performance standard emission rate to qualify
- Performance standard exemption for LSEs that face infrastructure issues that preclude optimal SF_6 management
- Quantification using EPA SF_6 Partnership mass-balance quantification, with expanded monitoring and verification requirements

Overview of Model Rule Offsets Components

- Each eligible offset type has standard requirements in the model rule, outlining in detail the following:
  - Eligibility (includes additionality provisions)
  - Project description
  - Emissions baseline determination
  - Calculation of emissions reductions (or net carbon sequestered)
  - Monitoring and verification requirements

  - While model rule language is fairly detailed, there will be the need for the development of guidance documents to elaborate some regulatory requirements

Overview of Model Rule Offsets Components

- Two-step application process
  - Consistency determination (made by regulatory agency):
    - Project eligibility
    - Certification of monitoring and verification plan
    - Emissions baseline determination, as appropriate
  - Submittal of monitoring and verification reports:
    - Must receive consistency determination prior to submittal of first M&V report
    - Offsets allowances issued based on emissions reductions demonstrated per approved M&V reports (decision to issue made by regulatory agency)
  - Both steps of the process require independent verification component by accredited verifiers

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