



Regional Greenhouse Gas Initiative

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

Landfill Gas Offset Projects in the Regional Greenhouse Gas Initiative (RGGI)

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RGGI Cap-and-Trade Program Components

- 10-state CO₂ cap-and-trade program
 - 10 linked state programs forming a regional CO₂ allowance market
- Start date of January 1, 2009
- Covers fossil fuel-fired electric generating units 25 megawatts and larger
- Two-phase cap: stabilize CO₂ emissions through 2014; reduce 10% by 2018
- Three-year compliance period
- Allowance banking allowed without limitation
- Allowance allocation: approximately 85% of regional emissions budget to be auctioned initially, with auction percentage increasing over time
- Offsets allowed with limitations; requirements prescribed in rule

Eligible Offset Categories

- End-use energy efficiency (building sector; excludes electric end-use efficiency)
- Afforestation
- Landfill gas capture & destruction
- Methane capture & destruction from animal manure management operations (anaerobic digesters)
- SF₆ leak reduction (electricity transmission & distribution sector)
- International carbon allowances & credits under limited circumstances (e.g., CDM, EUA)



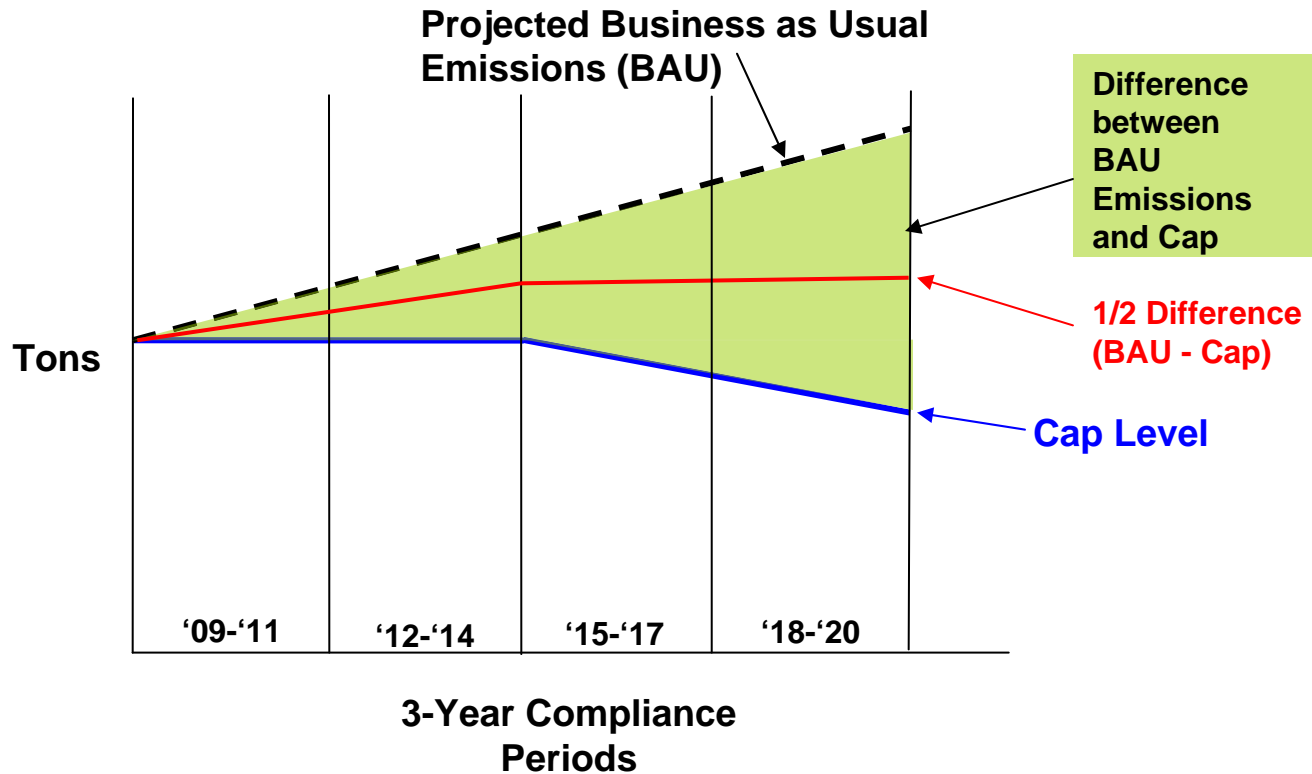
Offsets Geographic Scope

- Projects must be located in RGGI participating states (CT, DE, MA, ME, MD, NH, NJ, NY, RI, VT)
- Offset projects from other U.S. states if MOU executed with cooperating state agency to provide compliance and enforcement assistance to RGGI states
- If \$10/ton trigger hit, international offsets allowed (e.g., CDM)

Offsets: Quantitative Limit on Use

- Limit applied to source compliance; no limit on issuance of offsets (creates competitive market--no limit on potential available pool of offsets)
- Each regulated source may “cover” up to 3.3% of its total reported CO₂ emissions in a compliance period with offsets
- If \$7/ton price trigger hit, limit on use expands to 5% of reported emissions
- If \$10/ton price trigger hit, limit on use expands to 10% of reported emissions

Quantitative Offsets Limit Explained



Limit derived based on 50% of projected avoided emissions

Key Carbon Offset Concept: Additionality

- Additionality requires projects to be beyond “business as usual” as defined by the program
 - Actions taken (and related emissions reductions) are "additional" to those that would have otherwise been undertaken in absence of the offset program
- Is the action being undertaken as part of current standard market practice? If so, the action is likely not additional.
- If the answer to one or more of the following questions is yes, the action is likely additional :
 - Is expected offset allowance revenue driving investment in a project beyond standard market practice?
 - Is a project unlikely to occur without significant incentives?
 - Do significant market barriers exist?

Additionality: Why do we care?

- Offsets mechanisms absent additionality criteria would primarily involve crediting of emissions reductions achieved through typical market activities, such as:
 - Normal capital stock turnover due to replacement of old equipment
 - Improvement of production efficiency or business practices to meet competitiveness goals
 - Typical market activities that provide emissions reduction co-benefits (e.g., building remodels, retrofits)
 - Actions undertaken to meet other non-GHG regulatory requirements
 - Actions undertaken as the result of market transformation incentives

Additionality: Why do we care?

- Additionality key criteria for ensuring that projects result in “real” emissions reductions in context of cap-and-trade
 - Demonstration that incremental environmental benefits are being achieved due to the offset policy mechanism
- Offset emissions reductions occur outside capped sector (different than CAA offset concept)
 - Offsets allow an additional ton of CO₂ to be emitted from sources subject to RGGI, in an amount equal to each ton of emissions reduction achieved outside the capped sector through an offset
 - To maintain integrity of emissions cap, offset projects must provide reasonable assurance that emissions reductions that would not otherwise have occurred are being achieved due to cap-and-trade offset mechanism

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 in relation to a BAU scenario?
 - Requires a counterfactual assessment - knowledge of a future project scenario that will not actually take place
 - Involves development of a project-specific business-as-usual baseline scenario
 - Involves 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)

RGGI Offset Design Approach

- 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 (e.g., CDM), increasing process transparency and reducing transaction costs

RGGI Standardized Approach

- Use benchmarks and/or performance standards as proxies to infer financial additionality
- Examples:
 - Benchmark: qualitative eligibility criterion for a project that reasonably ensures that project is unlikely under standard market practice
 - For example, prohibition of receipt of both offset allowances and other attribute credits, such as RECs, to address likely current market drivers for categories of projects
 - Performance standard: projects that exceed the standard qualify as additional
 - Emission rate
 - Energy efficiency criteria
 - Market penetration rate

Operationalizing Additionality: General Criteria

- Project Initiation: Must apply no later than 6 months after project initiation (exception for projects undertaken between December 20, 2005 and December 31, 2008 -- must apply by June 30, 2009)
- Regulatory Additionality: No offset allowances awarded for actions that are required pursuant to any local, state or federal law, regulation, or administrative or judicial order
- Regulatory-plus Benchmark: Projects may not receive funding or other incentives from any state SBC program or from programs funded through the auction of CO₂ allowances
- Regulatory-plus Benchmark: For projects with electric generation component, project sponsors must transfer the legal rights to any attribute credits generated (except RGGI offset allowances) to state regulatory agency (RECs, etc.)

Additionality for Landfill Gas Projects

- Regulatory additionality: Eligible projects limited to non-NSPS landfills. Non-NSPS limits to small landfills (< 2.5 million tons WIP design capacity)
 - Small landfills face institutional and financial barriers (capital rationing) to development of LFG projects
 - Projects at non-NSPS landfills are typically small scale and require incentives to be considered viable
- Regulatory-plus additionality benchmarks:
 - SBC and REC provisions: prohibition on certain incentives and requirement to transfer rights to attribute credits other than offset allowances

Overview of Regulatory Components

Each offset category has prescriptive regulatory requirements that detail the following:

- Eligibility requirements
 - category-specific additionality provisions, supplementing general provisions
- Project description
- Emissions baseline determination
- Calculation of emissions reductions (or net carbon sequestered)
- Monitoring and verification requirements
- Monitoring and verification plan with category-specific requirements
- Independent verification required



For more information...

- **Model regulatory requirements specified in RGGI Model Rule available at <http://www.rggi.org>**
- **State regulations available through links on RGGI website**
- **Contact me if you have questions**
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