Climate Leaders Approach to Offsets and Updated Offsets Guidance

Melissa Weitz
Climate Change Division
U.S. Environmental Protection Agency

October 7, 2008

Overview of Presentation

- EPA Perspectives and Experience on Offsets for Climate Leaders
- Description of USEPA Accounting Protocols
- Additionality Discussion and Project Type Examples
  - Commercial/Industrial boilers
  - Manure management: anaerobic digesters
  - Afforestation/Reforestation
- Climate Leaders Guidance Documents

Offsets and Climate Policy

EPA Perspectives Informed by

- Programmatic experience in the offset sectors
- Economic analysis of sectoral mitigation options
- Economic analysis of legislative proposals
- U.S. GHG Inventory and IPCC work

Additionality Defined - USEPA

- Until a program or policy defines additionality it simply a theoretical discussion
  - Would it have occurred?
- Proposed projects are required to demonstrate that they are additional by achieving a level of performance that, with respect to emission reductions or removals, or technologies or practices, is significantly better than business-as usual
- Top-down, standardized methodology
  - Set appropriate metrics for additionality, baseline, and monitoring options
  - Additionality should be determined for each project type included in an offsets program
  - Business-as-usual is determined by assessing performance of similar, recently undertaken or planned practices, activities or facilities in a relevant geographic area

Performance Standard Approach

- "Additionality" based on an analysis of a relevant sector in a specific spatial area
  - Data from (1) historic, (2) planned or (3) projections
  - Proxy for barriers, financial decisions and "intent" tests
- "Recent" historic performance is proxy for "near " future performance
- Performance standard is specific to project type
  - Comprised of performance threshold (additionality determination) and baseline
  - Emissions rate, practice standard, technology standard
- Performance standard is periodically updated
  - Reflects continuous performance improvements in sector (e.g., changes in regulations, market trends, and technology developments are reflected in updates)
  - Adjustments made to "proposed projects," not to existing

Advantages of Performance Standard Approach

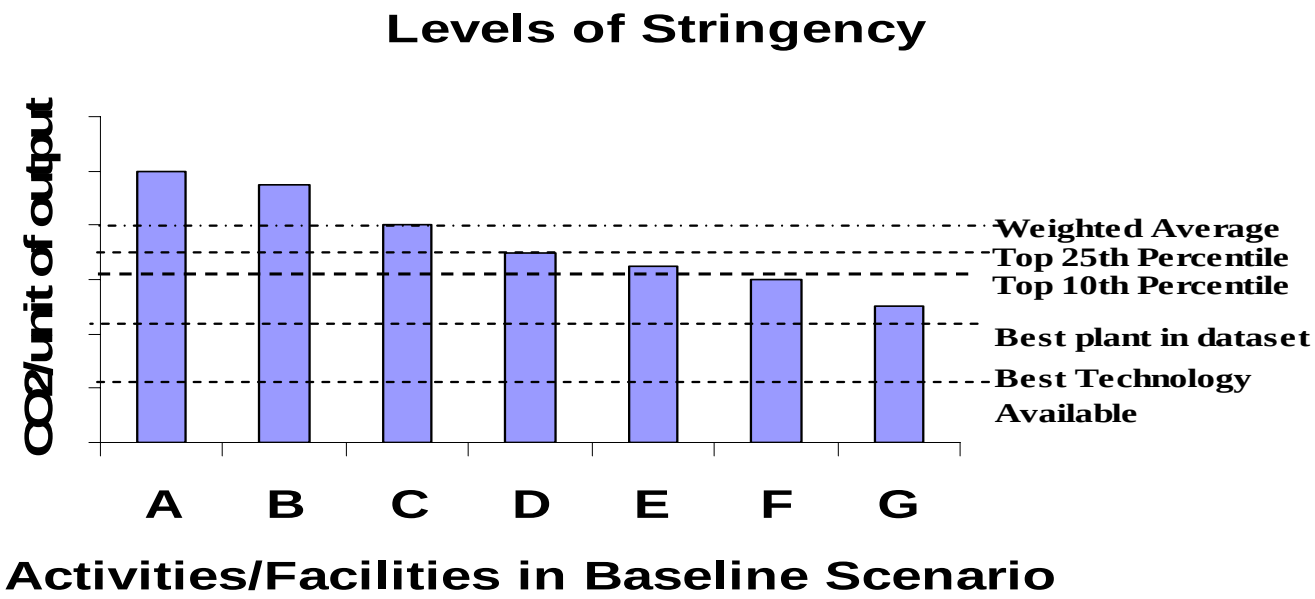
- Project developers are aware of the accounting "rules" in advance
  - Methodologies prepared for specific set of project types
  - Equations needed for estimating and calculating emissions and reductions/removals are provided
- Reduces the complexity, cost and subjectivity of constructing individual project-specific arguments and subsequent review
- Can be used for a variety of project types (sectors and geographic areas)
- Minimizes risk of accepting a project that is not additional or rejecting a project that is additional
- In general, consistent with WRI/WBCSD GHG Project Protocol, CCAR, RGGI

EPA Offset Methodology Steps

- Clearly Define the Project Type
  - Location, technology, size
- Define Project Boundary
  - Physical, GHG, temporal, leakage
- Determine Regulatory Eligibility
  - Federal, state and local
- Develop and Apply the Performance Threshold and Emissions Baseline
  - Determination of Additionality – performance threshold (emissions rate, technology, practice)
  - Baseline for calculation – emission baseline
- Estimate Project Emission Reductions
  - Software tool, Model or Equations
- Implement Project, Monitor Emissions
  - Limited set of acceptable monitoring approaches – direct metering, modeling
- Quantify Project GHG Emissions Reductions

Selecting the Performance Threshold

- Data Sets
- Type
  - Practice, Emissions, Technology
- Level



Emissions Rate - Commercial Boilers

- Threshold represents a level of performance (emissions rate) beyond that expected compared to the efficiencies of recently installed commercial boilers.
- Based on the energy efficiency/resulting CO2 emissions of commercial boilers installed since 1990
  - KgCO2/MMBtu
  - Represents 20th Percentile
    - Retrofit and New

Technology Standard - Industrial Boilers

- Threshold represents a level of performance (technology) beyond that expected of a typical industrial boiler
  - Based on the suite of current technologies available for improving boiler efficiency
- Boiler must meet engineer's specifications, include a non-condensing optimizer, and must add at least one technology listed in the methodology to be additional

Practice Standard – Manure Management: Anaerobic Digesters

- Threshold represents a level of performance (practice) beyond that expected of a typical manure management system
- Based on the suite of current technologies and common practices
- Takes into account minimum requirements for waste systems for each animal type

Table Ia. Dairy and Swine Operations in the U.S. by Manure Management System

Animal	Number of Operations by Manure Management System						
	P/R/P	Anaerobic Digester	Lagoon	Liquid/ Slurry	Solid Storage	Deep Pit	Total
Dairy	72,487	62	4,453	4,345	9,494	1,147	91,989
Swine	53,230	18	6,571	6,303	1,129	11,643	78,894

Anaerobic digesters in place on: Dairy farms: 0.06%
Swine farms: 0.02%

Practice Standard – Afforestation/Reforestation

- Practice-based performance threshold
  - "performance" beyond typical practices in a region to convert cropland or pasture to forest
- Background rates of conversion are based on USDA Natural Resources Inventory (NRI) data
  - Highest average "business as usual" rates:
    - conversion of cropland to forest: 2.31% (Eastern Gulf Coast Flatwoods)
    - conversion of pasture to forest: 2.37% (in the Sierra Nevada Basin)

Offsets and Climate Leaders – Method0logy Development

- Accounting methodologies already developed for:
  - Commercial boiler (Emissions Rate)
  - Industrial boiler (Technology Standard)
  - Landfill Methane (Practice Standard)
  - Manure Management – Anaerobic digester (Practice Standard)
  - Transportation – Bus fleet (Emissions Rate)
  - Afforestation/Reforestation (Practice Standard)

- Accounting methodologies in draft form:
  - End-use (landfill and manure management) (Emissions Rate)

- Accounting methodologies under development:
  - Forest management (Practice Standard)
  - Coal-mine methane (Practice Standard)

Offsets and Climate Leaders: Using Offsets to Help Climate Leaders Achieve Their GHG Reduction Goals

- Guidance for Climate Leaders offset projects released August 2008
  - Offset Program Design Overview
  - Sample Request for Proposals
  - Project Design Document Template
  - Climate Leaders Offset Project Methodologies for specific project types

Highlights of Climate Leaders Offsets Guidance Documents

- Overview document outlines program specific guidance, including:
  - Geographic scope
  - Start Date
  - Updates to the performance standard
  - Vintage
  - Review and approval of projects
- Sample RFP template for Partners looking to procure Climate Leaders offsets for their GHG reduction goals
  - Proposals are required to comply with overview guidance document
- Project Design Document template allows Partners to propose a project:
  1. Using a new performance standard based methodology for other project types OR
  2. Using an alternate domestic dataset or data for a project outside the U.S.

Contact Information

- Melissa Weitz (weitz.melissa@epa.gov)

Resources

- *Climate Leaders* Offset Methodologies and Guidance (www.epa.gov/stateply/resources/optional-module.html)