

EPA/SEI Offsets Protocols Road Test Overview

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6th EPRI Greenhouse Gas Offsets
Workshop on “Road-testing” of GHG
Emissions Offset Protocols

July 30, 2009



EPA offsets experience and activities



- Program experience
- Economic analysis
- Offsets policy, design and implementation

On-the-ground Experience: Voluntary programs



- **Non-CO₂ programs, domestic and international**
 - AgSTAR, GasSTAR, Coal Mine Methane Outreach Program, Landfill Methane Outreach Program, M2M
 - source-specific experts who identify candidate sites, conduct feasibility studies, and bring parties together
- **Energy efficiency**
 - Energy STAR

EPA Policy/Technical Experience Relevant to Offsets



- Implementing cap and trade programs for SO₂/NO_x
- National inventory work
 - US inventory
 - UNFCCC reporting, reviews
 - IPCC methodological development
- Mandatory reporting of GHGs
- Capacity building in developing countries
 - particularly for agriculture, land-use change and forestry

Offsets in USEPA Climate Leaders Program

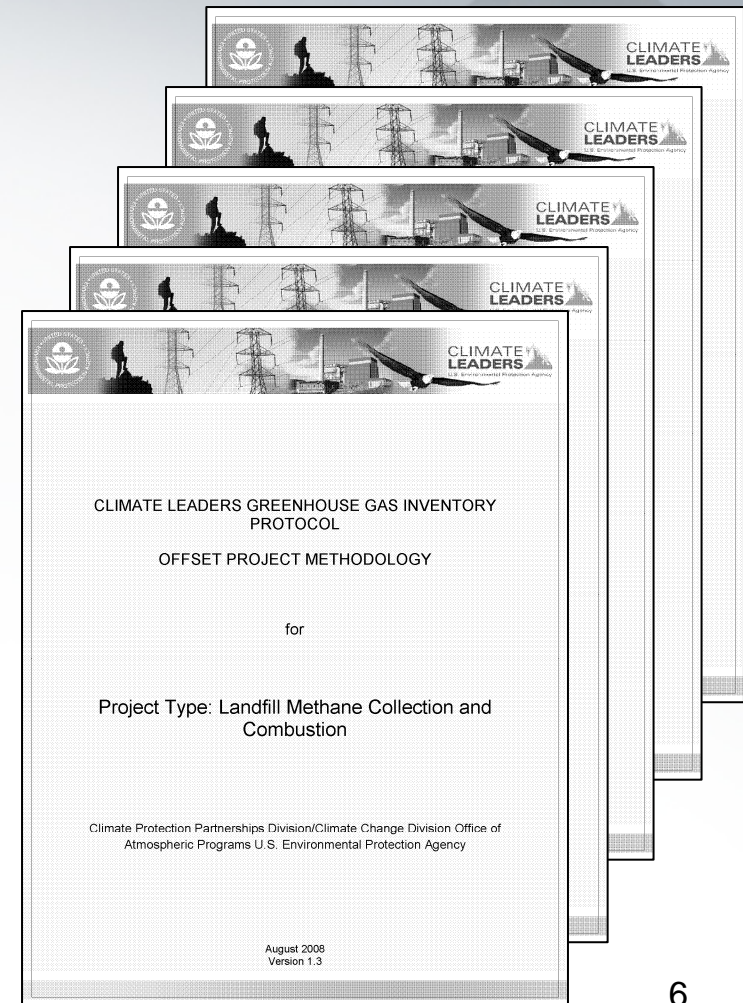


- ***Climate Leaders*** is an EPA industry/government partnership that works with companies to develop comprehensive climate change strategies
 - Partner companies (numbering more than 200) commit to setting aggressive greenhouse gas reduction goals and annually reporting progress to EPA
- An important objective of the ***Climate Leaders*** program is to focus corporate attention on achieving cost-effective reductions within the boundary of the organization
- Partners may also use reductions and/or removals that occur outside of their corporate boundary (i.e., external reductions or offsets) to help to meet their goals
- EPA's Climate Change Division has developed offset guidance based on a top-down performance standard approach to address additionality and to select and set the baseline

Offsets Methodologies



- Accounting methodologies:
 - Commercial boiler
 - Industrial boiler
 - Landfill Methane
 - Anaerobic digesters
 - Transportation – Bus fleet
 - Afforestation/Reforestation
 - End-use of methane
 - Forest management (in development)
 - Coal-mine methane (in development)



Road test with SEI: Objectives



- Increase understanding of comparability of offsets between programs and project types
- Reveal differences in project eligibility, offsets quantification, and process rigor
- Identify gaps and potential improvements in Climate Leaders protocols

Selected Project Types and Protocols



- Project types
 - Landfill methane
 - Manure digesters
 - Afforestation
- Protocols
 - CDM
 - RGGI
 - CAR
 - CCX
 - Climate Leaders

Road test: Process



- Compared protocol elements common across project types
- Selected or designed sample projects representing common project characteristics
- Evaluated the following for each project using the 5 protocols
 - Project type
 - Project boundary
 - Regulatory Eligibility
 - Performance thresholds and emissions baselines
 - Project GHG emissions reductions
 - Project monitoring
 - Project emissions reductions

Selection/Role of Sample Projects



- Real projects if available were road-tested
- If not possible data was merged from a number of different sample projects
- Even if a given sample project would be ineligible under a particular protocol (e.g., start date, geographic limitations) it was still used for the road-test

Common Protocol Features: Additionality



Program	Project-type standards		Project-specific analysis		Other
	Performance standard?	Practice-based standard?	Common Practice Test?	Investment or Barrier Test?	
Climate Leaders	X	X			
CDM		X	X	X	
RGGI	X	Implicit			No funding from system or customer benefit fund No credits or allowances awarded under any other mandatory or voluntary GHG program.
CCAR	X	X			
CCX		Implicit			All new projects in eligible categories are deemed additional

Common Protocol Features: Project Eligibility



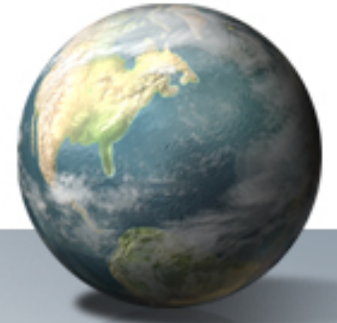
Program	Eligible Project Locations	Project Start Date
Climate Leaders	U.S. Project developers able to develop a performance standard for an international project type can propose an international project.	February 20, 2002
CDM	Developing (non-Annex 1) countries where Designated National Authorities (DNAs) are established	January 1, 2000
RGGI	<p>Within RGGI participating states or other approved jurisdictions</p> <p>If allowances exceed trigger price (USD 10), offsets allowed from any governmental mandatory program outside U.S. with a limit on GHG emissions.</p>	December 20, 2005
CCAR	U.S.	<p>Carbon sequestration: January 1, 1990</p> <p>Methane capture⁶: January 1, 2001 or six months from operation</p>
CCX	Any country except Annex 1 countries that are Party to the Kyoto Protocol	<p>January 1, 1999 except</p> <p>Forestry projects: January 1, 1990</p>

Common Protocol Features: Process Requirements



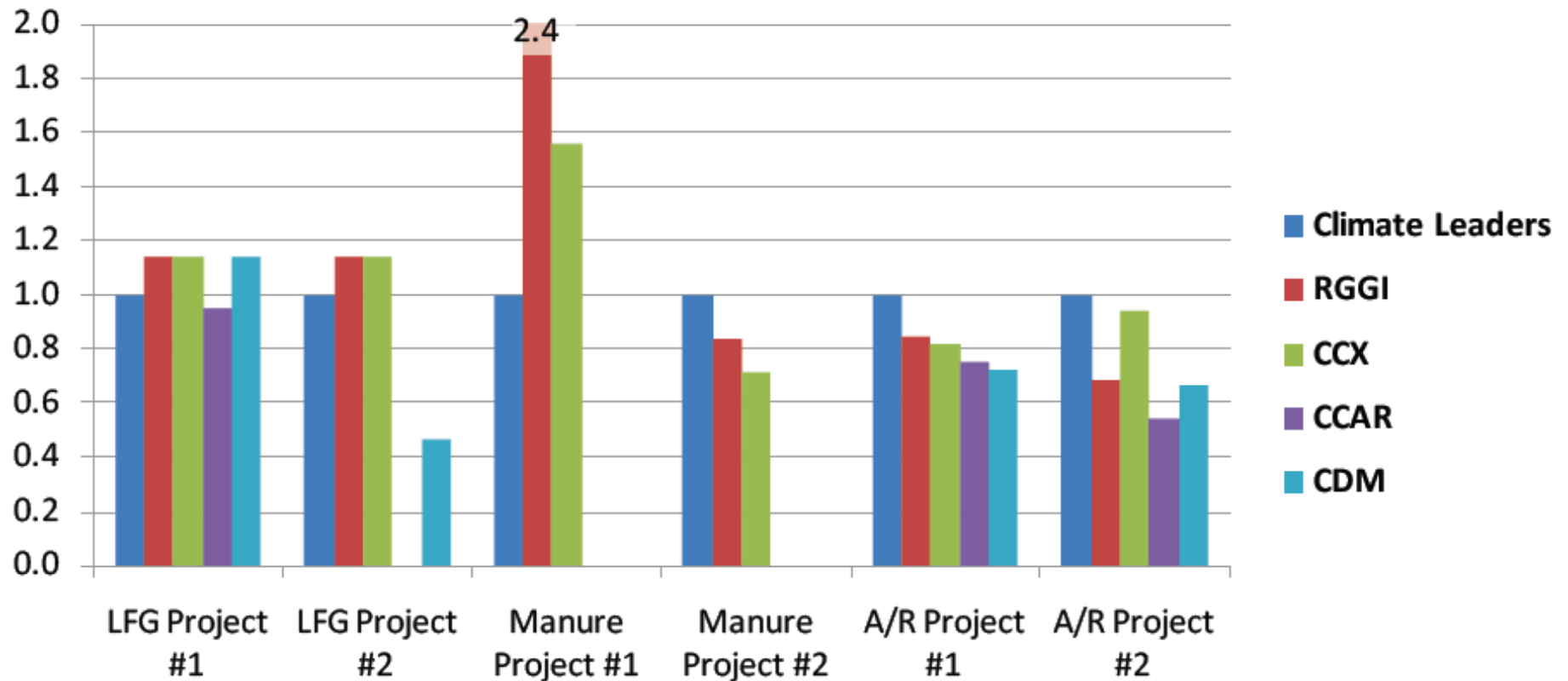
Program	Who validates/verifies?	Who approves/registers?	Name of Registry	Timing of Crediting	Crediting Period
Climate Leaders	EPA	EPA	Use of registry recommended, not required.	Ex-post	Based on goal period of Climate Leaders Partner company.
CDM	Designated Operational Entities (DOEs)	CDM Executive Board	CDM Registry	Ex-post	Either one 10 yr period or 7 yr with up to two renewals. For afforestation/reforestation projects, either one 30 yr period; or 20 yr with up to two renewals
RGGI	Accredited independent verifier	State regulatory agencies	Under development	Ex-post	Initial 10-yr period followed by 10-yr renewal with approval Afforestation: 20-yr period with renewal
CCAR	Approved third-party verifiers	State of California and CCAR	The California Registry	Ex-post	Manure management: 10-yr period Landfill projects, shorter: 10-yr period or up until regulation Forestry: 100 yr period
CCX	CCX-approved verifiers	CCX Comm. on Offsets	CCX Registry	Ex-post	8-yr. period

Common Protocol Features: Conclusions



- Protocol design influenced by eligible project location
- Eligible project start date can encourage early action but also limit non-additional projects

Road test: Results



Relative offsets credits calculated. Climate Leaders value = 1.

Key Differences Driving Offset Credit Differences



- **Additionality**
- **Regulatory surplus requirements**
- **Monitoring methods**

Looking Forward



- Continuing to work with Climate Leaders partners
- Continuing to work closely giving technical guidance to external groups (e.g., CAR)
- Providing policy-neutral technical assistance to Congress upon request
- Engaging with stakeholders to understand views on offsets
- Providing technical support to new EPA leadership



Resources

- *Climate Leaders* Offset Methodologies and Guidance
(www.epa.gov/stateply/resources/optional-module.html)
- Road-testing of Selected Offset Protocols and Standards:
A Comparison of Offset Protocols
(<http://www.seib.org/WorkingPapers/WorkingPaperUS09-04.pdf>)
- EPA economic analyses (Waxman-Markey, Lieberman-Warner, etc.)
(<http://www.epa.gov/climatechange/economics/economicanalyses.html>)