

# **EPA/SEI Offsets Protocols Road Test Overview**

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Emissions Offset Protocols

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# **EPA offsets experience and activities**



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

# **On-the-ground Experience: Voluntary programs**



- **Non-CO<sub>2</sub> 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 SO<sub>2</sub>/NO<sub>x</sub>
- 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

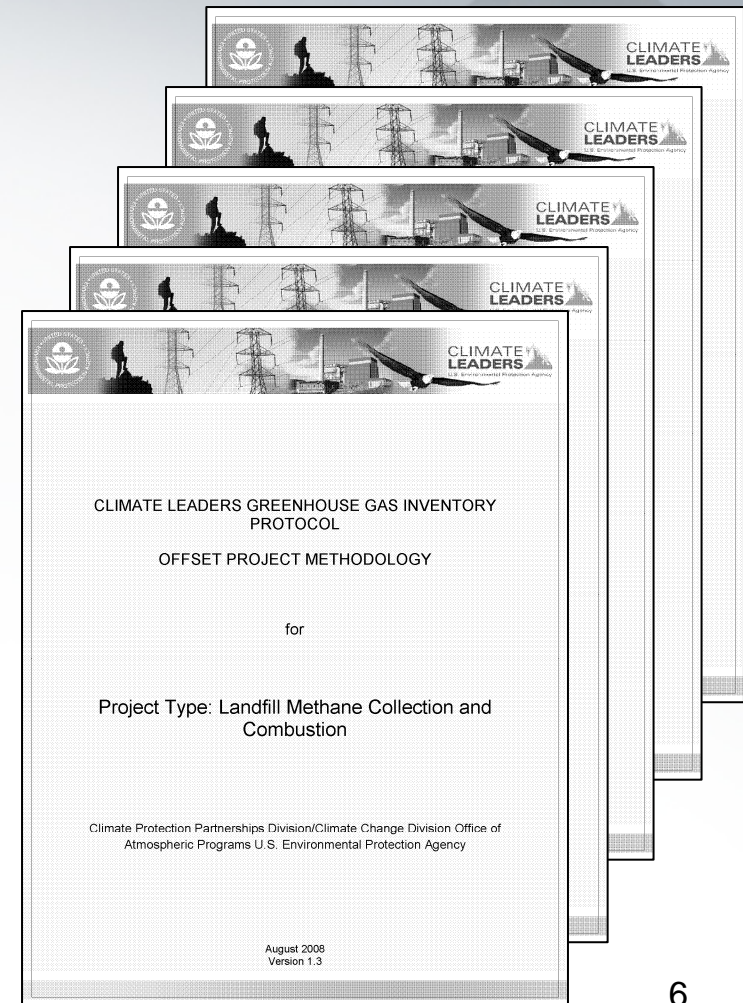


- ***Climate Leaders*** is an EPA industry/government partnership that works with companies to develop comprehensive climate change strategies
  - Partner companies (numbering more than 200) commit to setting aggressive greenhouse gas reduction goals and annually reporting progress to EPA
- An important 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	Within RGGI participating states or other approved jurisdictions  If allowances exceed trigger price (USD 10), offsets allowed from any governmental mandatory program outside U.S. with a limit on GHG emissions.	December 20, 2005
CCAR	U.S.	Carbon sequestration: January 1, 1990 Methane capture <sup>6</sup> : January 1, 2001 or six months from operation
CCX	Any country except Annex 1 countries that are Party to the Kyoto Protocol	January 1, 1999 except Forestry projects: January 1, 1990

# Common Protocol Features: Process Requirements



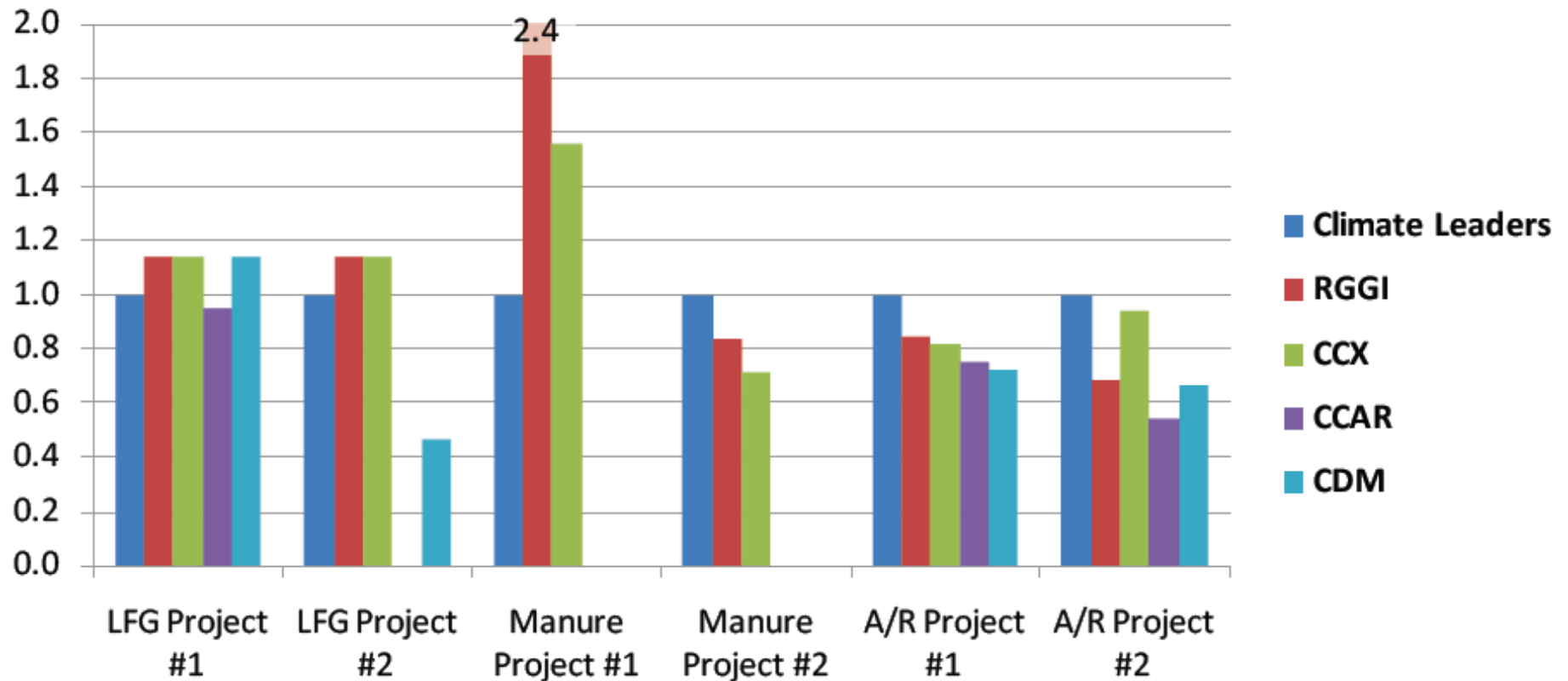
Program	Who validates/verifies?	Who approves/registers?	Name of Registry	Timing of Crediting	Crediting Period
Climate Leaders	EPA	EPA	Use of registry recommended, not required.	Ex-post	Based on goal period of Climate Leaders Partner company.
CDM	Designated Operational Entities (DOEs)	CDM Executive Board	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](http://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>)