



American Carbon Registry

EPRI Greenhouse Gas Emissions Offset Policy Dialogue

Workshop 8 – Offset Project Development and

Approval Processes

June 24, 2010

Washington, DC





Outline

- About Winrock and ACR
- Methodology development and approval process
- Approaches to additionality
- MRV requirements
- Approach to permanence
- Offset project pipeline and impacts of legislation



American Carbon Registry

- First U.S. private voluntary GHG registry
 - Founded 1997 by Environmental Defense Fund and Environmental Resources Trust
 - 30 million tons issued
- Pioneered system of transparent on-line reporting and serialization of verified project-based offsets – now the industry standard
- Joined Winrock International in 2007
 - Founded 1984 as a “public benefit corporation” under Arkansas state law



Recent issuances and transactions

Metric tons CO₂ equivalent

Total Tradable ERTs	24,866,694
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Registry Activity			
	ERTs Issued	ERTs Retired	ERTs Traded
2009	2,928,335	395,867	1,579,658
2008	7,938,812	1,684,387	2,609,753
2007	5,847,510	423,432	1,570,477
2006	11,027,146	7,705	350,938
2005	2,580,358	369	3,000
Total	30,222,161	2,405,276	5,868,669



Winrock International

*Nonprofit that works in the U.S.
and around the world to
empower the disadvantaged,
increase economic opportunity,
and sustain natural resources*

- Build expertise, train leaders
- Apply sound science and economics
- Mobilize markets
- Promote innovation
- Help the disadvantaged





Carbon expertise

- In-house team of AFOLU carbon experts
 - Methodologies for earliest forest carbon projects
 - Major contributor to five IPCC reports
 - Member of CDM Afforestation/Reforestation Working Group
- Analyses, methodologies, protocols for
 - U.S. Government
 - USDA, US Forest Service, USDOE 1605(b), USAID
 - USDOE Regional Carbon Sequestration Partnerships
 - USEPA Climate Leaders
 - Multilaterals
 - EPRI and electric utilities
 - Voluntary programs (CCAR, VCS, ACR, CCBA, RGGI)



ACR roles

- Publish/approve standards, methodologies, tools
 - Public consultation and scientific peer review
- Act as gatekeeper on quality
 - Set standards and certify they have been met
 - Buyers have confidence offset has compliance value, public has confidence environmental benefit is real
- Provide transparent serialized tracking of issuances, transactions, retirements
- Make all documents publicly accessible
- Oversee third-party verification



Protocol development process

- ACR publishes general and sector-specific standards
- Flexibility in methodology choice
 - Use ACR-published methodology
 - Use approved CDM methodology
 - Propose/modify existing methodology
 - Develop new methodology for approval
- Public consultation and anonymous scientific peer review of all standards and methodologies
 - Scientific rigor
 - Transparent process
 - Balance environmental integrity with commercial flexibility
 - Shorter time to market and lower cost



American Power Act “Qualified Early Offset Programs”

- Established before January 1, 2009
- Offset standards/methodologies/protocols must:
 - Be developed through public consultation or peer review
 - Require offsets be measurable, additional, verifiable, enforceable, permanent
 - Be made available to the public
- Require verification by accredited verifier
- Publicly accessible registry, serialized tons
- Financial assurance requirements
- No program involvement in project development



Recent and forthcoming standards and methodologies

ACR Standard v2.0	<i>Published Feb 2010</i>
Forest Carbon Project Standard v2.0	<i>Published Jun 2010</i>
Livestock Manure Management Project Standard & Methodology	<i>Public comment closed, peer review in progress</i>
Conversion of High-Bleed Pneumatic Controllers in Oil & Gas Systems	<i>Published March 2010</i>
Improved Forest Management	<i>Forthcoming</i>
Reducing Emissions from Deforestation and Degradation	<i>Forthcoming</i>
Landfill Gas Combustion Project Standard & Methodology	<i>Forthcoming</i>
Reducing N ₂ O Emissions through Fertilizer Management	<i>Forthcoming</i>
Agriculture Sector Standard v1.0	<i>In development</i>
Retrofitting with Low Emissions Packing in Reciprocating Compressors	<i>In development</i>
Improved Grazing Land Management	<i>In development</i>
Coastal Wetland Restoration	<i>In development</i>
China - Panda Standard AFOLU specifications, IFM methodology, Grassland Improvement Methodology	<i>In development</i>
Carbon Capture & Storage	<i>Scoping</i>
Biochar production and use	<i>Scoping</i>



Project development process

- Methodology approval step
 - None if using existing approved methodology
- Submission of GHG Project Plan
- Screening and certification
 - Optional early registration
- Independent third-party verification
- Acceptance of verification statement
- ACR registers project, posts documentation, issues ERTs
- Transactions (off registry) and retirements



MRV requirements

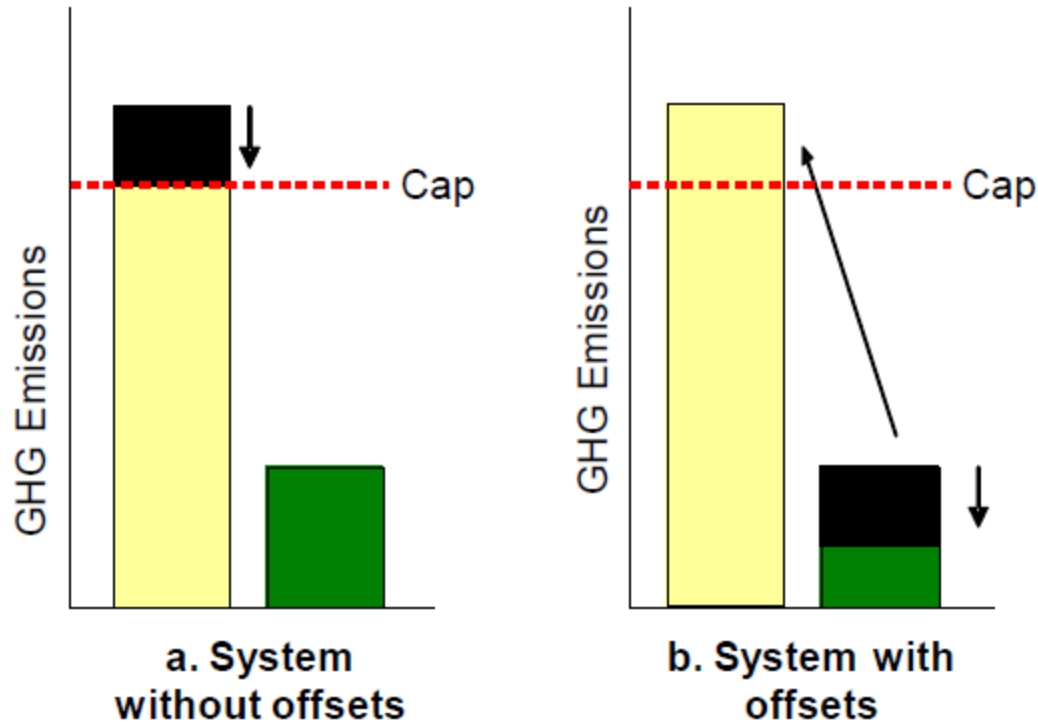
- Strongly ISO-based
- Relevance, completeness, conservativeness
 - GHG boundary definition
 - Selection of sources and sinks for monitoring
 - Uncertainty target $\pm 10\%$ of mean at 90% confidence
- Monitoring
 - Varies by project type; may be continuous, or at intervals preceding verification
- Verification
 - Desk-based audits and field verifications
 - By accredited verifier competent in the relevant scope
 - Reasonable level of assurance; $\pm 5\%$ materiality threshold



Additionality and baselines

- GHG reductions and removals exceed those that would have occurred under current laws and regulations, current industry practices, and under a business-as-usual scenario
- Two options:
 - Regulatory surplus and exceeds performance standard
 - Three-prong test:
 - Regulatory surplus
 - Exceeds common practice for area, industry/sector/forest type, similar landowners
 - Faces at least one implementation barrier: financial, technological, institutional

Why does it matter?



- Capped Sectors
- Uncapped Sectors
- Emission Reductions

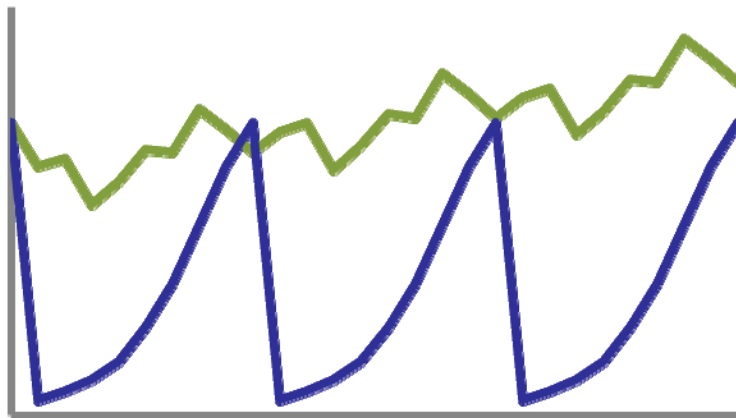




Baselines and additionality

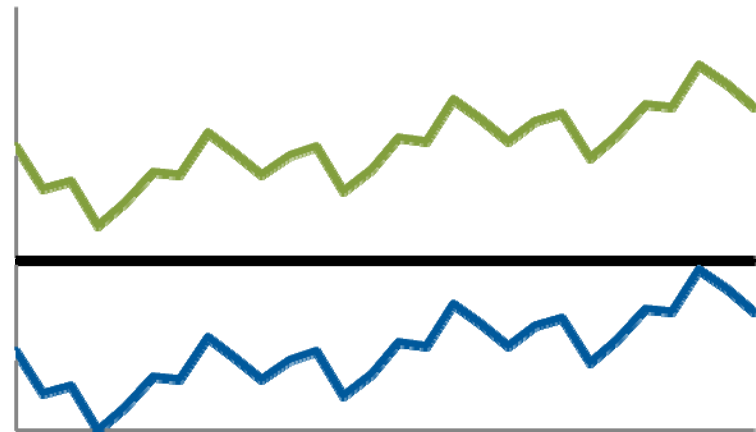
Project-specific

- More subjective, open to gaming
- Less efficient project approval process
- Rigorous tools available
- Less danger of over-crediting



Performance standard

- Less subjective
- Efficient to apply
- Heavy up-front data requirements
- Potential for over-crediting without under-crediting to balance





Fugitive methane in oil & gas sector

- Show activity is not mandated
 - Is it likely to be in future?
- Compile industry-wide data to document very low adoption rates of the GHG-reducing practice





Permanence, risk mitigation and fungibility

- Minimum Project Term of 40 years
 - Ensure project activity maintained, monitored and verified over relevant timeframe
 - Balance time commitment with broad landowner participation
 - Required of Project Proponent only
- Risk assessment and mitigation makes forest offsets effectively permanent and fungible with other offsets, allowances and emission reductions
- Focus on mitigating reversals so atmosphere “made whole”



Risk mitigation options

- Project-specific risk assessment
- Buffer contribution
 - From project itself
 - ERTs of any other type and vintage
- Unintentional reversal:
 - Proponent pays “deductible”; ACR retires buffer tons for remainder; “premium” goes up
- Intentional reversal (“buy-out option”):
 - Proponent replaces all issued ERTs for that portion of project
- Alternate risk mitigation options accepted
 - Insurance or other financial assurances to replace losses



Permanence objectives

- **Commitment is credible**
 - Timeframe meaningful in terms of climate change mitigation
- **Market participation is broad**
 - Avoid limiting participation; provide flexibility mechanisms
- **Risk is manageable for proponent and landowner**
 - Treat like insurance
- **Offsets are fungible**
 - No tCERs, term credits, discounting
 - No assigning liability to buyer/compliance entity
- **Atmosphere always “made whole”**



Project types (registered and in pipeline)

- Forest carbon: afforestation/reforestation, improved forest management, REDD
- Various agricultural and rangeland activities
- Livestock manure management
- Landfill gas
- CCS / enhanced oil recovery
- Fuel switching
- Industrial gas substitution
- Truck stop idling
- Fugitive methane in oil & gas production, processing, transmission





APA Sec. 734 “Positive List”

- Projects that reduce, flare or use methane:
 - Methane from mines, landfills, natural gas
 - Reduce fugitive emissions in oil & gas sector
 - Manure management, anaerobic digestion, waste aeration
- Projects that reduce CO₂ emissions or increase sequestration in agriculture, livestock, forestry, land use:
 - Afforestation/reforestation, improved forest management, reduced deforestation, urban forestry
 - Agricultural, grassland, and rangeland sequestration and management
 - Avoided conversion of grassland/rangeland/forest
 - Management/restoration of peatlands and wetlands
 - Conservation of marine coastal habitats
 - N₂O emission reduction (fertilizer production and/or use)
 - Biochar production and use
- Recycling and waste minimization
- Carbon Capture & Storage (with or without enhanced oil recovery)
- Destruction of ozone-depleting substances
- Small off-grid renewable electricity
- Projects reducing the GHG intensity of agricultural production



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Further information

Nicholas Martin

Chief Technical Officer, American Carbon Registry

nmartin@winrock.org

www.americancarbonregistry.org

(703) 842-9500