

A Project Developer's Perspective on Creating and Monetizing Carbon Credits from Landfill Gas Projects

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Blue Source

Agenda

- Overview of Blue Source
- Big Picture
- LF project eligibility
- The Standards – CAR, VCS and CCX
- Project example
- Questions

About Blue Source

Since 2001, Blue Source built the largest portfolio of North American emission reduction credits and projects.

- 2 primary businesses

1. Carbon Credit Portfolio

- >200 million tonnes, >10 million tonnes sold
- Over 20 project types in 45 states, Canada
- Marketing Agreement with Goldman Sachs

2. Carbon Project Investment

- >\$500 million project equity with Och-Ziff Capital Partners
 - Blended engineering, finance and transactional skills
 - 60+ projects in the pipeline; the carbon highway
- 7 offices: SLC, Houston, Calgary, SF, NYC, Denver, NC

What We Do

- Assess, Develop and Market Carbon Credits;
- Invest in gas capture and utilization systems;
- Partner with industry experts that provide technical and engineering services (EPC, O+M)

Big Picture

- Momentum continues to grow – market continues to develop
- CAR: revised protocol is more market friendly; registered projects is significant for the market. Definitely raised their profile recently;
- VCS: did not fulfill expectations for 2008; needs to pick up pace very soon;
- CCX: had a rough year but still very much a market player;
- Competition to secure projects remains however due to economic situation access to capital has become critical for some.
- Economic downturn has softened prices somewhat and brought more uncertainty about when legislation will be signed – however demand for LF projects remains strong.

Early Project Due Diligence

- Will the project create the anticipated emission reductions?
- Can we register the project activity?
- Are the carbon credits marketable?
- Do these projects meet our investment return threshold?
- How will we manage resources/time?

My Disclaimer Slide - Carbon Offset Projects

In order for a project activity to qualify for carbon credits (VERs), the project must be:

- **Real:** representing actual GHG emission reductions;
- **Measurable:** the amount of emission reductions can be quantified;
- **Verifiable:** a qualified, independent third-party confirms that the project activity actually reduced emissions as claimed; and
- **Additional:** the emissions reductions are not considered business as usual or the activity is not required by law.

Disclaimer 2 - Emission Reduction Projects

Emission reduction projects must conform to a particular industry standard and complete:

- Project documentation
- Baseline and monitoring methodology
- Third party project validation/verification
- Registration of the emission reductions on a public registry
- Perform on-going monitoring and verification

Successful implementation of this process results in a tradable ton - Carbon Finance Instrument (CFI), or Voluntary Carbon Unit (VCU), or a Carbon Reduction Ton (CRT).

The Standards

Standards	Issues
Chicago Climate Exchange (CCX) Voluntary Carbon Standard (VCS) Climate Action Reserve (CAR) American Carbon Registry (ACR)	Eligibility Volume Validation/Verification Registration Marketability

Eligibility

	CCX	VCS	CAR
1. Start Date	On or after January 1, 1999	Validated within two years of project start date.	Projects starting on or after 1/1/01 must be listed by 11/09. Thereafter projects must be listed within 6 months of operation date.
2. Additionality	Project eligible only if LFG management not required by US law.	Project specific – if using CDM must pass Additionality Tool using financial and barrier tests.	Performance Standard Test/Regulatory Test
3. Existing System	Not clear – but presume requires netting out gas.	CDM: net out gas destroyed in existing system	Passive system: net out gas destroyed. Active: Only volume beyond capacity of combustion device.

Emission Reduction Volumes

- Comparison of VER calculation for same project.
- The three standards are virtually the same until CCAR accounts for oxidation factor and discount factor. CDM imposes a huge discount for open flares (to be changed?).

Year	Landfill Gas Recovery Potential (scfm)	CCAR Volume	VCS using CDM (90% flare eff)	VCS using CDM (50% flare eff)	CCX
2008	830	64,306	71,458	39,699	74,003
2009	863	66,863	74,300	41,278	76,946
2010	898	69,574	77,313	42,952	80,066
2011	934	72,364	80,412	44,673	83,276
2012	971	75,230	83,598	46,443	86,575
2013	1,010	78,252	86,955	48,309	90,052

Validation/Verification and Registration

	CCX	VCS	CAR
Validation/Verification	Engage CCX verifier before issuance of CFIs. Upon project approval by the Committee on Offsets, obtain independent verification by a CCX approved verifier. (17 on website)	Relies on DOEs as program is built out. Validator holds most authority over project approval. Process seems straight forward for using CDM methodology.	<ol style="list-style-type: none"> 1. Select verifier (6 on website) 2. Reserve approves verifier 3. Enter data and submit for verification 4. Verifier approves 5. Reserve reviews and approves
Registration	Operational	Not operational	Operational
Monitoring	Varies	Varies	Varies

Marketability

	CCX	VCS	CAR
Estimated Market Price of vintage 2008 (1/09)	\$1.90	\$8.00	\$10.00
Volume	74,003	71,458	64,306
Gross Revenue	\$140,605	\$571,664	\$640,306

Balance of meeting eligibility, opportunity and transaction costs and revenue

Midshore Regional Solid Waste Facility - MD

- Project being developed in two phases:
 - Phase 1: design, construct and operate a LFG capture system (flaring)
 - Phase 2: beneficial use of energy
 - SCS Engineers providing design, EPC and O+M
- Landfill has permitted capacity of less than 2.5 million tons and is therefore not subject to NSPS regulations. Expected to close by 2012.
- A partial system exists and was installed in phases since 2000.
- Based on early DD, VERs for phase 1 qualify under VCS and CAR methodologies. We will subtract emission reductions associated with 'older' system. Unsure about RGGI-bility? VERs driver for phase 1 economics.
- Verification of gas and other DD will determine viability of phase 2 however it is our goal to beneficially use gas.
- Hope to be generating emission reductions by year-end.

Questions?

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