

Carbon Offsets and Green-e Certification

The market for emissions reductions

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Outline: Things to Come

1. **Intro to CRS and Green-e**
2. What is an offset?
3. Offset projects
4. The voluntary market
5. Certification standards
6. RECs vs. offsets

Center for Resource Solutions

- CRS is a U.S. 501.c.3 NGO
- Established in 1997
- Focus on environmental issues, renewable energy and energy efficiency policy
- Encourage consumers and businesses to buy renewable energy
- Set the recognized standards of excellence
- We work in the US and internationally (China SEP)

CRS creates policy and market solutions to advance sustainable energy.

Center for Resource Solutions



Green-e Energy: Launched in 1997 to provide consumer protection for the green power markets in North America.

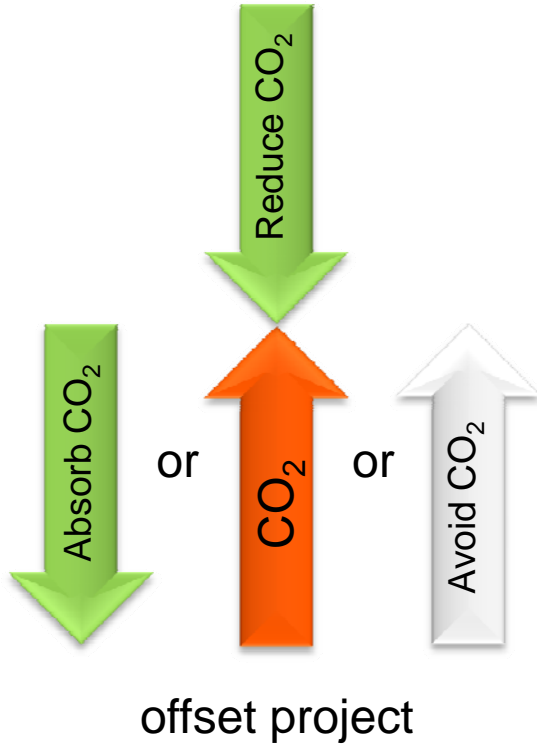
Green-e Marketplace: Launched in 2005 to verify green power claims made by companies purchasing renewable energy for their operations.

Green-e Climate: Launched in 2008 to provide consumer protection for the carbon offset market.

Carbon Offsets

- A **carbon offset** represents a specific quantity of greenhouse gas (GHG) emission reductions (i.e. a ton of carbon dioxide absorbed or avoided) from a project-based activity, which is purchased in order to negate or diminish the impact of the recipient's GHG emissions.
- When you purchase an offset, you alone have the right to all associated **claims** about the environmental benefits it embodies.
- An offset is to be regarded as real **environmental commodity**, not a donation or investment in a future project.

Offset Sources



Renewable energy
Energy efficiency
Agriculture/forestry/land use
Methane destruction
Industrial gas destruction

Quality

Permanent

Must last in perpetuity, the emission reduction cannot be reversed.

Additional

Must be spurred by the carbon market, “beyond business as usual” several tests.

Verified

Must result from projects whose performance can be readily monitored and verified.

Enforceable

Must be backed by contracts or legal instruments that define their creation and ensure exclusive ownership.

Real

Must represent actual emission reductions that are not artifacts of incomplete or technically flawed accounting.

Compliance Markets

Meeting mandatory mitigation obligations with offsets

Clean development mechanism (CDM) – the international compliance market

- Developed countries can help meet their kyoto targets by purchasing certified emission reductions (CERs)
- Administered by the UNFCCC Secretariat, the CDM Executive Board
- 1,792 registered projects
- Vast majority of projects in China, India, and Brazil
- 2008 transactions: 389 million tonnes CO₂-e, worth \$6.5 billion

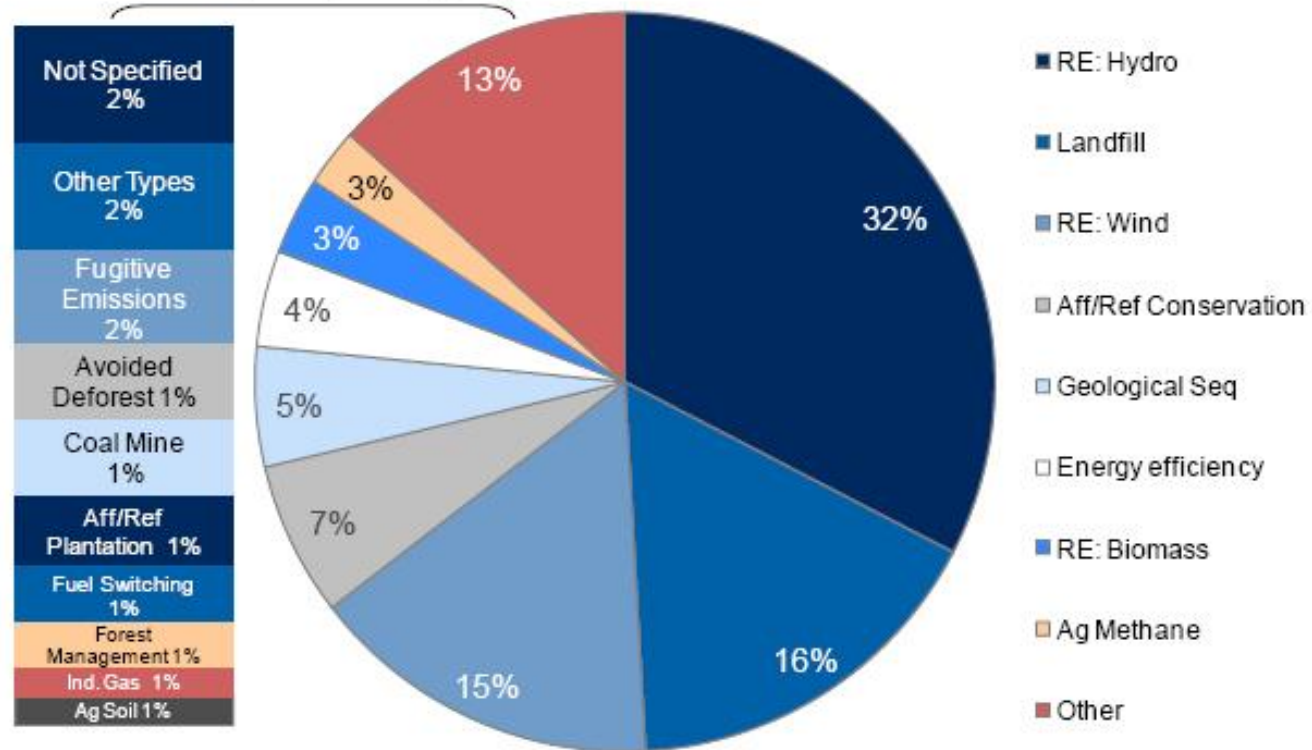
The Voluntary Market

Global market for emission reductions to meet voluntary demand

- Different places where trading takes place – exchanges vs. over the counter (OTC)
- Different commodity names
- Global market
- total value in 2008: \$705 million
- total volume in 2008: 123 million tonnes CO₂-e

Voluntary Market

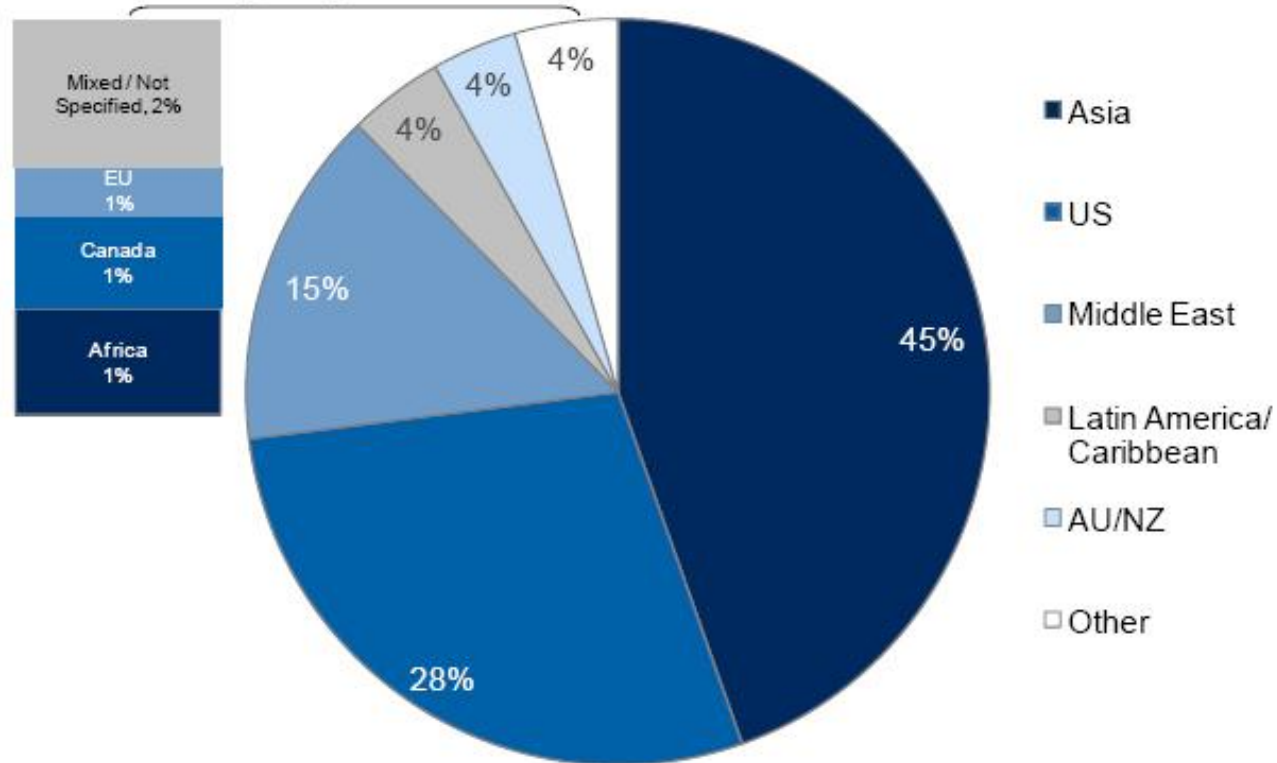
Transaction Volume by Project Type, OTC 2008



Source: Ecosystem Marketplace, New Carbon Finance.

Voluntary Market

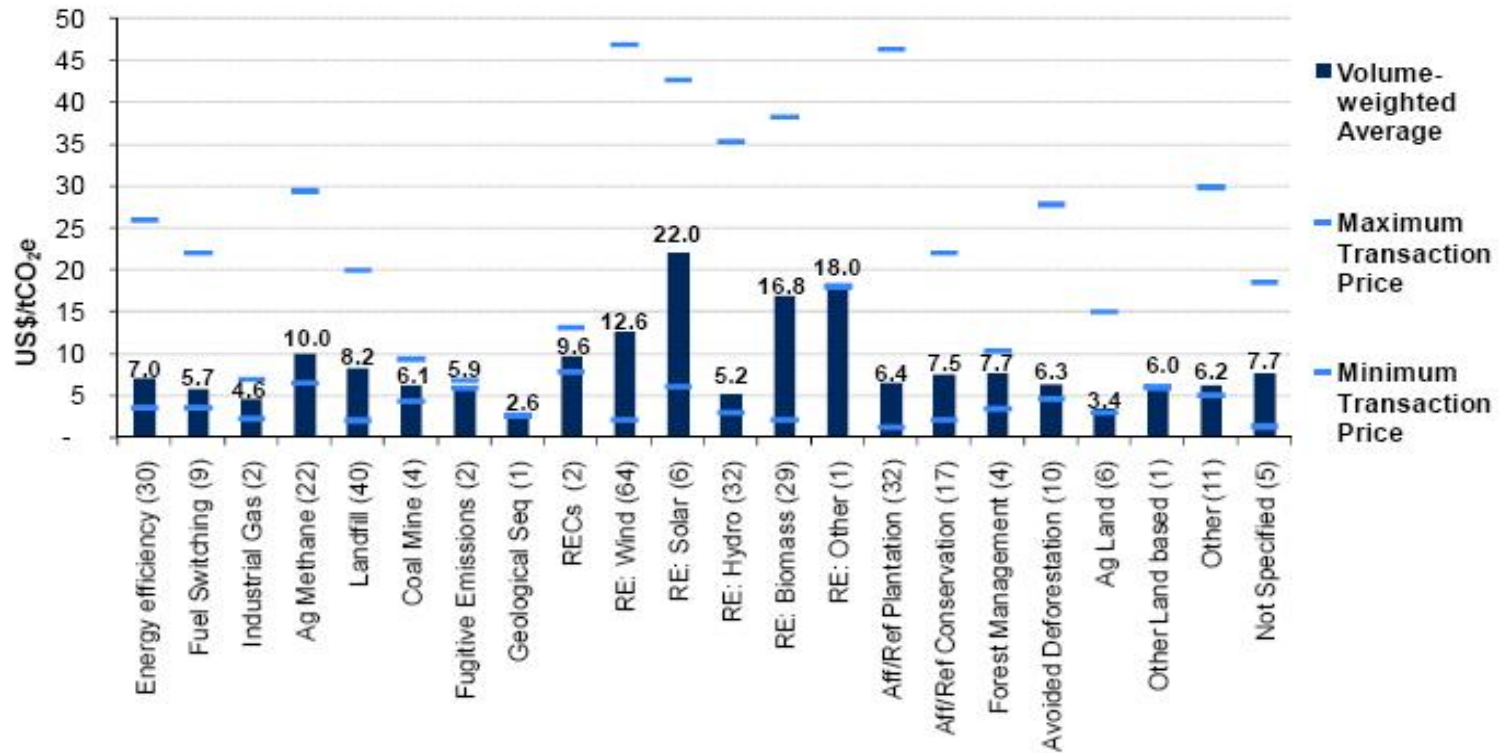
Transaction Volume by Project Location, OTC 2008



Source: Ecosystem Marketplace, New Carbon Finance.

Voluntary Market

Credit Price Ranges and Averages by Project Type, OTC 2008

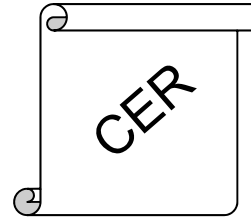


Source: Ecosystem Marketplace, New Carbon Finance.

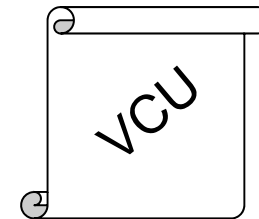
Note: Numbers within parentheses indicate number of observations.

Project Certification

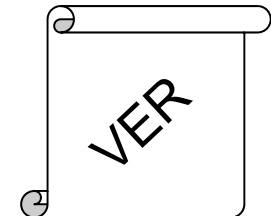
the CDM



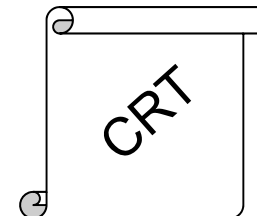
Voluntary Carbon Standard



Gold Standard

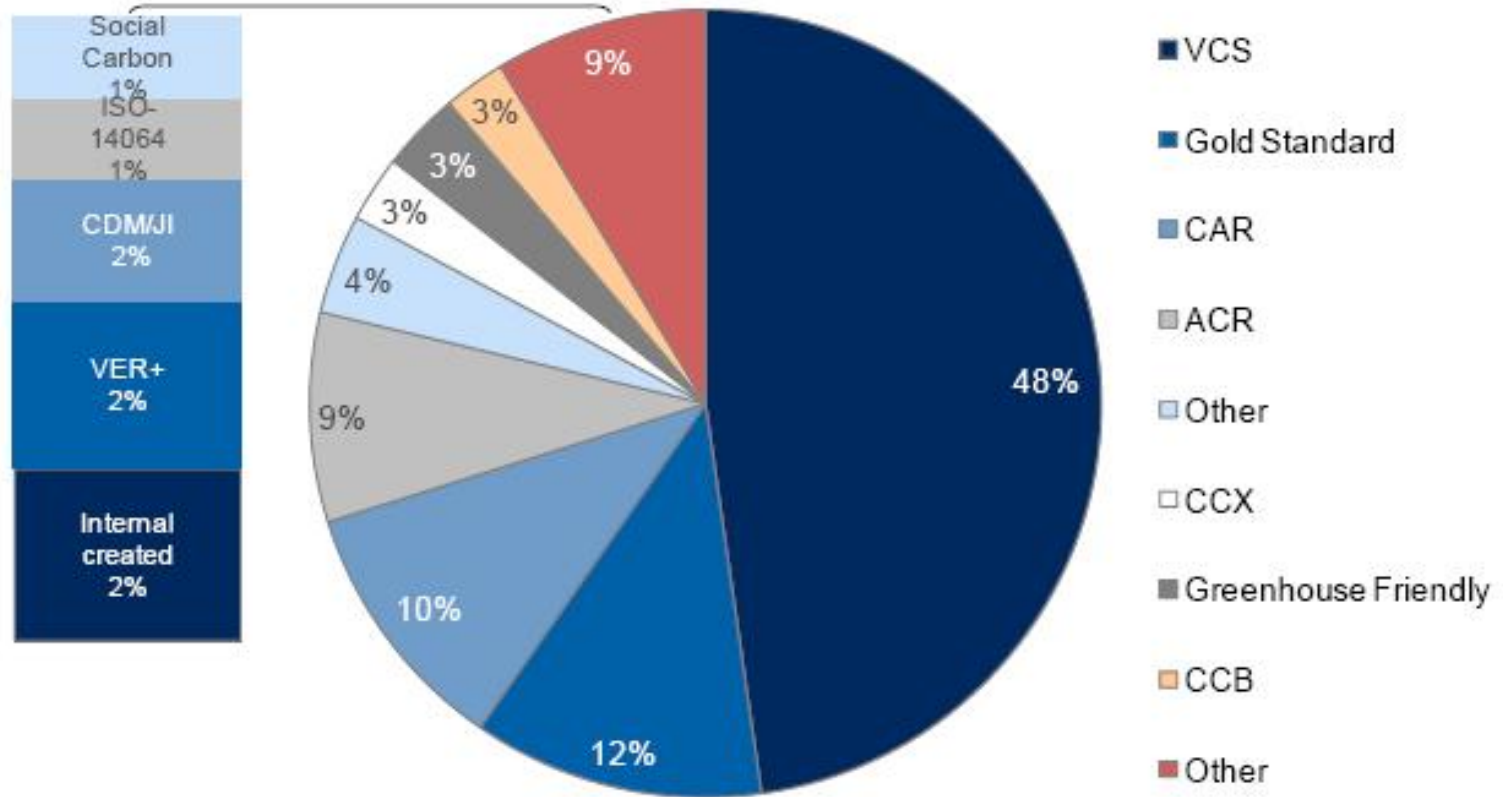


Climate Action Reserve



Project Certification

Standard Utilization, OTC 2008



Source: Ecosystem Marketplace, New Carbon Finance.

Offset Certification – Consumer Protection

The Path of a Green-e Climate Certified Offset

How Green-e Climate certification works, from project to consumer



1 **The Project.** A greenhouse gas emission reduction (offset) project, such as renewable energy, energy efficiency, methane capture, or forestry.

Projects must be certified by a **Green-e Climate Endorsed Partner**. These Endorsed Partners verify that the greenhouse gas emission reduction (offset) projects meet stringent criteria.



2 **The Seller.** A company buys the offsets produced from the project, and packages them together into a product that is then sold to consumers.

Green-e Climate Certified Offsets are real, permanent reductions from “additional” projects. Consumers are guaranteed that a seller’s supply of offsets equals their sales, and that their advertising is accurate.



3 **The Consumer.** Buys a Green-e Climate Certified offset to balance their own greenhouse gas footprint.



Climate

Offset Certification – Consumer Protection

Product Name **Product Content Label**

Project Type	Project Certification	Project Location	% of Product*
Energy Efficiency	Gold Standard	Mexico	20%
Landfill Gas Capture	Voluntary Carbon Standard	Tanzania	40%
Renewable Energy	Green-e Climate	United States	20%
Digester Gas	Clean Development Mechanism	China	20%

The emission reductions supplied were created in:

2007-2008



Green-e Climate is an independent certification program for greenhouse gas emission reductions (offsets) sold on the voluntary market. It provides a way to identify products that meet the program's high environmental and consumer-protection standards. For more information on Green-e Climate certification requirements, or to find certified products, see www.green-e.org or call 888-63-GREEN.

*The percentages listed are prospective. Actual figures may vary. For more information on how much they can vary see *Price, Terms & Conditions*.

Offset Certification – Consumer Protection



Climate

- Consumer protection program for greenhouse gas emission reductions.
- Certifies “offset” products sold at retail level.
- Standard and program developed through advisory group and stakeholder processes.
- Currently 10 marketers participating.
- 135,000 tons certified in 2008.

RECs vs. Offsets

REC – all the ‘green’ attributes, expressed in energy unit (MWh)

Offset – just the carbon attribute, as a ton of CO₂ reduction

- A REC is NOT an offset – RECs transcend carbon, offsets transcend renewable energy.
- But a renewable energy project can be an offset project, i.e. generate offsets...if it meets additionality requirements.
- RECs and offsets cannot both be produced for the same MWh of generation...it's one or the other.

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