



## Understanding Carbon Offsets

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### SCS Background

- **Mission:** Verify and stimulate outstanding environmental sustainability and social responsibility
- **Services:** SCS has provided third-party environmental certification, auditing, testing, and standards development since 1984.



## Greenhouse Gas Verification at SCS

- Carbon Footprint and Carbon Offset verification
- Accredited to ISO 14065, Greenhouse gases – Requirements for validation and verification bodies, in 2009 by American National Standards Institute (ANSI)
- Operate on a global scale under a variety of GHG programs
- Specialize in forest carbon offset verification



## SCS Greenhouse Gas Verification



## Relevance for Green Building

- Going beyond business as usual could generate offsets
- Lack of standards for green building offset project activities (no standards=no offsets)
- Under Waxman- Markey, green building project types could apply to EPA for approval
- Energy efficient buildings allow occupants to reduce GHG emissions
- One promising example: Maine State Housing Authority “Carbon Quantification Project” for weatherization, credits under the Voluntary Carbon Standard (VCS)



## Carbon Offsets 101

- Voluntary vs. Regulatory Carbon Markets
  - “Cap and trade” system operating in Europe, Australia, New Zealand
  - US has regional cap and trade regulations-
    - RGGI
    - AB 32 (California Global Warming Solutions Act)
  - Voluntary carbon market is primary in the US



## Types of Carbon Credits

- Allowances
  - Primary instrument of a regulatory cap and trade system
  - Tradable permits to pollute
  - Number of allowances issued to industry reduces over time, bringing down cumulative emissions
- Offsets
  - In a regulatory cap and trade system, offsets come from projects outside the capped sector and are a cost mitigation tool
  - In the voluntary market, all credits are offsets (there is not cap, nor allowances)
  - Offsets are from projects that reduce or sequester GHG emissions

Allowance  
≠  
Offset

## Offset Project Types

- Landfill/Livestock Methane Capture
- Industrial Gas Destruction
- Forestry
- Coal Mine Methane Capture
- Organic Waste Digestion
- Nitric Acid Production
- Others

## Existing Voluntary Offset Standards

- Expected Pre-Compliance
- Develops protocols through Working Groups and public participation
- Price: \$5-7/ton CO<sub>2</sub>e



CLIMATE  
ACTION  
RESERVE  
BESEBAE  
ACTION  
CLIMATE

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## Existing Voluntary Offset Standards

- Project-specific standard: developers can submit unique methodologies/project types using double approval process
- Price: \$4-5/ton CO<sub>2</sub>e



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## Existing Voluntary Offset Standards

- Emphasis on Co-Benefits: projects must generate socio-economic benefits, environmental benefits, and undergo stakeholder review process
- Usually coupled with VCS



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## Existing Voluntary Offset Standards

- Can aggregate group of small projects
- Tradable on an exchange
- Prices for credits have crashed due to perceived lack of quality



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## Role of Offsets in Cap and Trade

- Lower the cost of a cap-and-trade system
- Allows sectors that do not fit under a cap system to undertake projects that reduce emissions
- Allow entities that are not included in the cap to participate
- Provides indirect linking mechanism between regional or national carbon markets

## Role of Offsets in the Voluntary Market

- Reduced footprint
- Pre Compliance
- Investment



Ron Barrett

## Credible Carbon offsets must be:

- Real
- Verifiable
- Additional
- Permanent
- Co-Benefits
- No leakage
- No “double accounting”



## Greenhouse Gas Verification

- Ensures a standardized approach to evaluation of GHG claims
- Provides accuracy, completeness, consistency, comparability and transparency
- Gives offsets credibility
- Rigorous standards enforced by third party is reflected in offset prices



## Carbon Footprint Reporting & Verification

- The first step in reducing emissions is to determine what emissions your organization is responsible for!
- You must report emissions from:
  - Purchased electricity
  - Stationary combustion (e.g. heating)
  - Vehicle emissions
  - Other sources
- Standards serve as a guidebook on how to correctly report emissions



## Carbon Offset Project Development

- Standards serve as a guidebook describing how to correctly design project and quantify emissions reductions
- Project developer fully elaborates emissions reduction project according to selected standards



SCS-Validated Ducks Unlimited Carbon Offset Project in Prairie Pothole Region of the Dakotas. (image: Ducks Unlimited)



## Carbon Offset Project Verification

- Verification audit consists of:
  - Check of calculations & evaluation of statistical models
  - Evaluation of standards compliance
  - Visit sites
  - Evaluate how data was collected & what systems are in place



SCS-Validated Carbon Sequestration Project in Marais des Cygnes National Wildlife Refuge, Kansas. (image: U.S. Fish & Wildlife Service)



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## Verification Lessons Learned

- Evolving science - expect some hiccups along the way!
- Forest carbon offsets are politically problematic
- The institutional capacity of the standards body is an important consideration



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## Verification Tips

- Be prepared, it will save you time and money:
  - Have the necessary experts involved.
  - Have your experts available for the audit.
  - Be organized and make sure that your project documents are well prepared.
  - Understand the protocols, in detail.
  - Be complete in your submittals—Hide and Go Seek will work to your disadvantage.
  - Your documentation needs to be strong and comprehensive; don't skimp on narrative.
- As needed, seek and obtain written guidance from the standards body.
- Verifiers cannot consult



## Life Cycle Assessment & Offsets

- Allows for offsets that address regional climate impacts.
  - Some regions carry more of the burden of climate change than others. LCA can account for effects on sensitive regions like the Arctic.
- Expands offsets beyond the “Kyoto GHGs”
- Helps avoid environmental trade-offs
- May allow companies to become truly “Climate Neutral”



**Questions?**

**For more information:**

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