

# Technical Requirements of Carbon Offset Accounting

*Federal Trade Commission Carbon Offsets Workshop  
Washington, DC  
January 8, 2008*



Derik Broekhoff, Senior Associate  
*World Resources Institute*

# Standardizing Carbon Offsets

## Broad Criteria

**Real  
Surplus  
Permanent**

**Verifiable**

**Enforceable**

## Standard Requirements

### ➔ Accounting Standards

- Project baseline identification
- Additionality
- Leakage
- Ensuring a “ton is a ton”

### ➔ Monitoring/Verification Standards

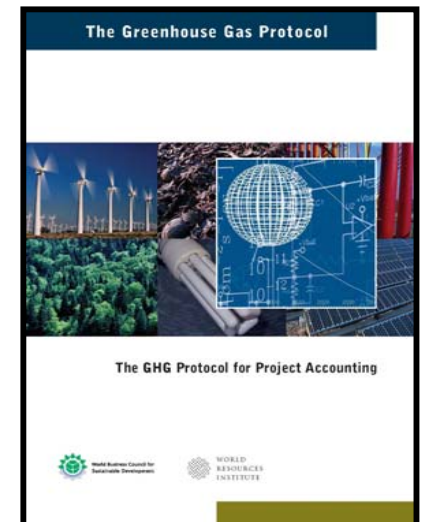
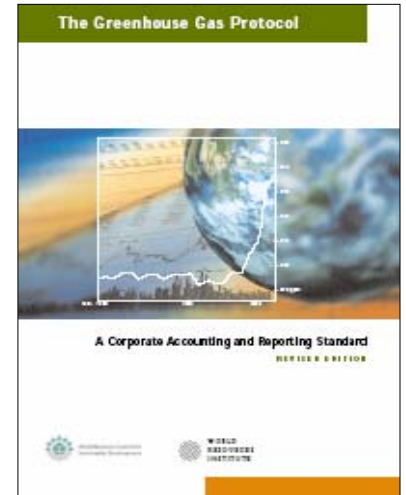
- Validation of projects
- Monitoring & verification of project performance and GHG reductions
- Certification of GHG reductions

### ➔ Tracking & Contractual Standards

- Serialization & tracking through registries
- Transfer of offset “property rights”
- Avoidance of double-counting / double-claiming

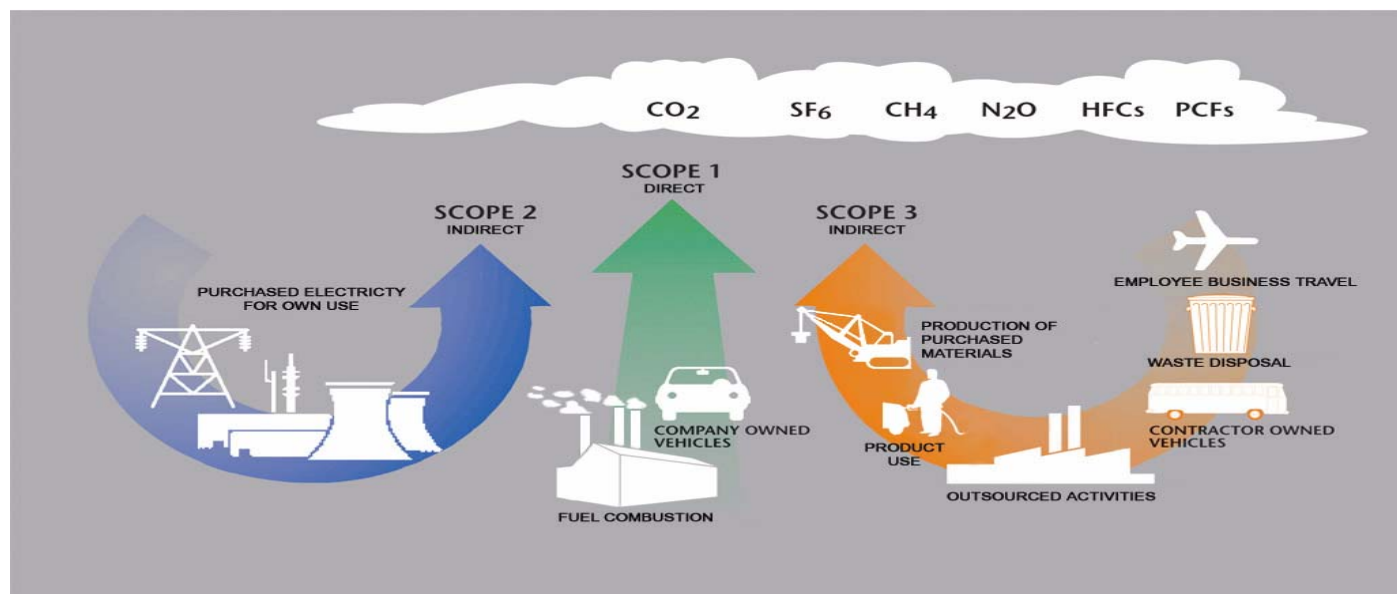
# The Greenhouse Gas Protocol

- Convened in 1998 by WRI & WBCSD
- Mission: “To develop international GHG accounting & reporting standards for business through an inclusive and transparent multi-stakeholder process”
- Two modules:
  1. *Corporate Inventories*
  2. *GHG Projects*



# Corporate Inventory GHG Accounting

- Determines the emissions you need to reduce or offset...
  - **Scope 1:** Direct emissions from owned sources
  - **Scope 2:** Indirect emissions from purchased electricity
  - **Scope 3:** Other indirect emissions



# GHG Project Accounting

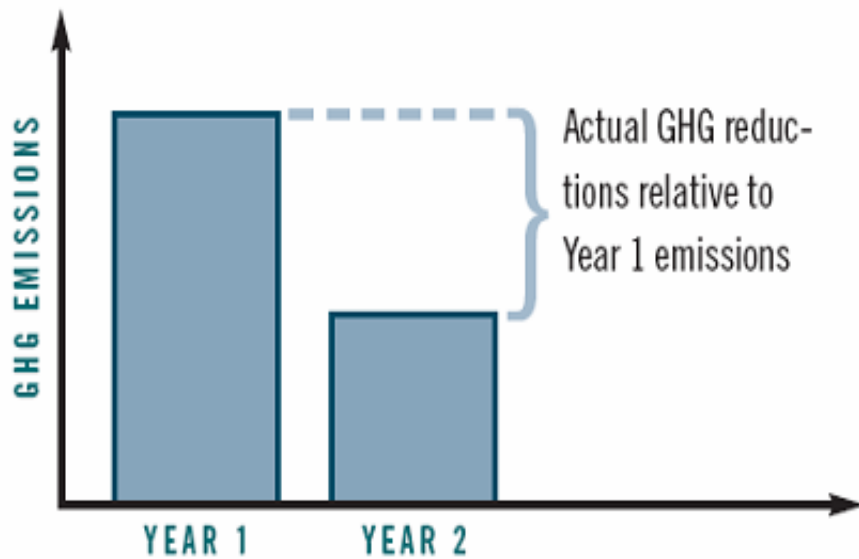
- Quantifies GHG emission reductions from individual projects...



# Key Concept #1: The Baseline Scenario

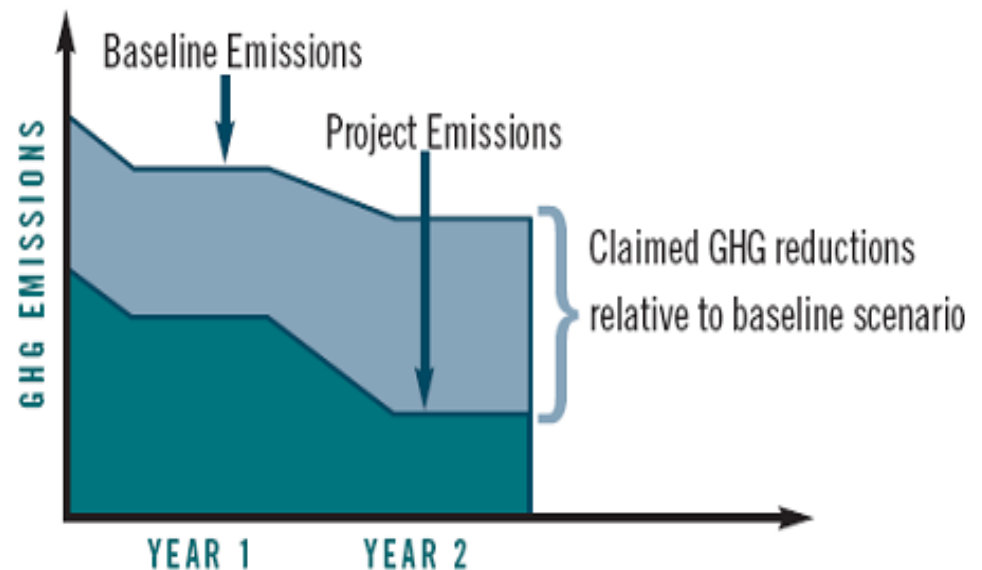
Offset reductions are quantified against a *forward-looking* and *hypothetical* scenario

## Entity Reductions



“Base Year” Emissions

## Offset Reductions



“Baseline” Emissions

# Key Concept #1: The Baseline Scenario

- Baseline Scenario =  
what *would have* occurred...
  - “In the absence of a considerations about climate change mitigation” – *GHG Protocol*
  - In the absence of a carbon offset market

# Baseline Emissions

- Identify alternative technologies/practices (“baseline candidates”)
- Assess alternatives using either of two procedures:
  - ➡ **Project-Specific Procedure.** Identifies the most likely alternative using barriers/benefits analysis.
  - ➡ **Performance Standard Procedure.** Estimates baseline emissions using a below-average emission rate for all alternatives.

# Key Concept #2: Completeness

- Projects can have both intended and unintended effects on GHG emissions
- Example: Biomass fuel could reduce onsite combustion emissions, but increase emissions from “upstream” sources
- **All significant changes in GHG emissions should be accounted for**

# Key Concept #3: Monitoring and Verification

- Monitoring Is Required To:
  - Determine actual emissions under the project scenario
  - Validate important assumptions about the baseline scenario
  - Quantify total emission reductions

# Challenges to Standardization

- What data are required to establish a baseline scenario and “additionality”?
- Which baseline procedure should you use?
- How stringent do performance standards need to be?
- How far do you go in examining unintended effects?
- ➔ GHG accounting principles are a guide, but ultimately these are **policy questions...**