

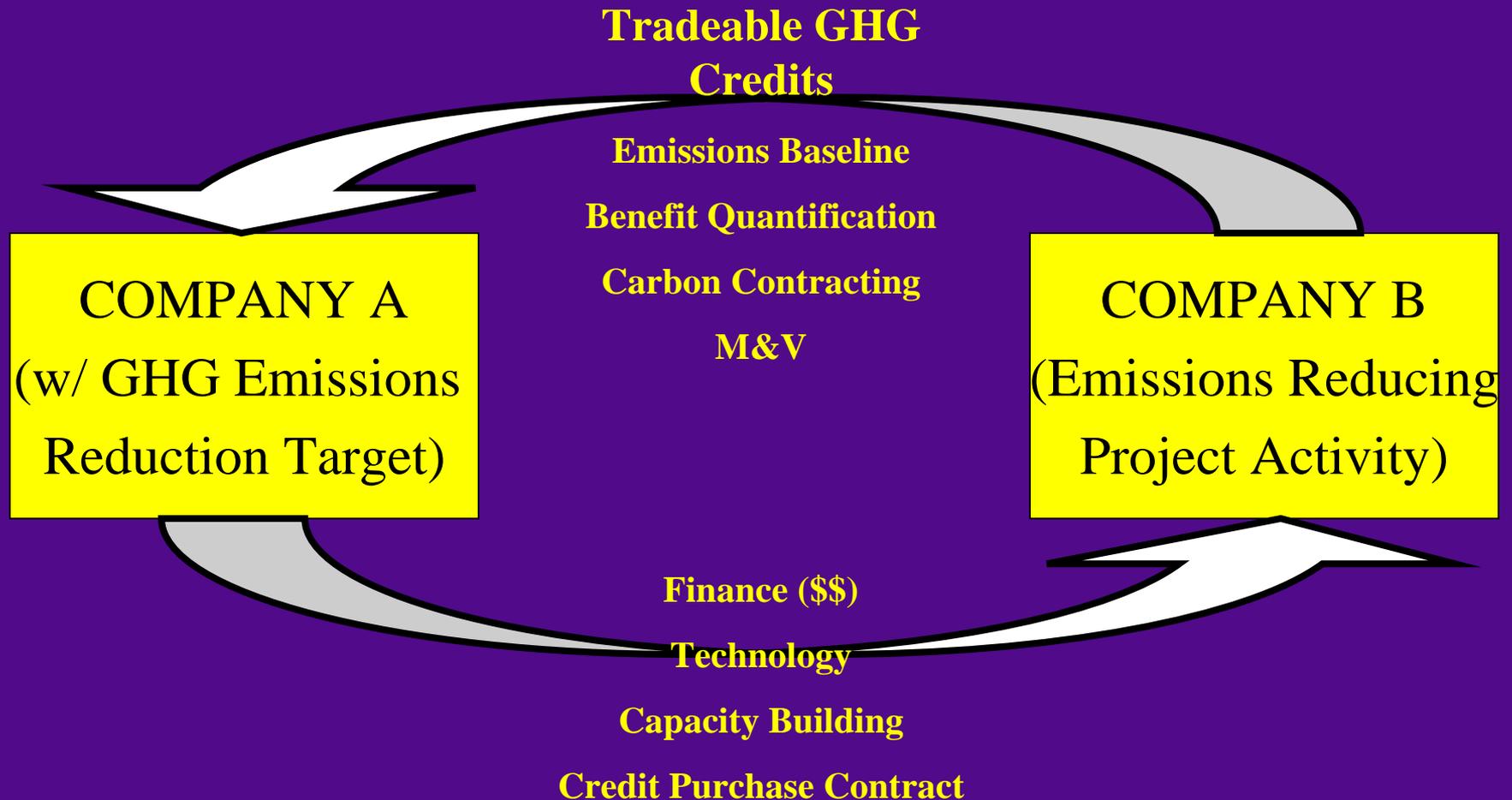
The Potential of GHG Funding For LFG Projects

Northwest Landfill Gas
Energy Workshop
April 10, 2002

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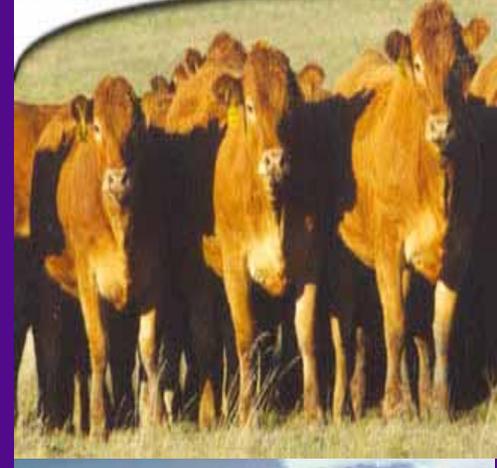


What We're Talking About: GHG Offsets



Transactions in Many Sectors

- U.S. Coalmine Methane Capture
- Landfill Methane Recovery
- School Boiler Repowerings
- Transmission Upgrades
- Power Plant Upgrades
- Sri Lanka Rural Electrification
- Chile Renewable Energy
- Bolivia Forest Conservation
- Malaysia Reduced Impact Logging
- Uganda Reforestation
- Argentina Cogeneration
- India Boiler Upgrades
- Canada Soil Carbon Management
- India Livestock Management
- Nigeria Gas Flaring Reductions
- Poland Coal-to-Gas Switching
- Honduras Biomass Energy
- Mexico Improved CFL Lighting



Pacific NW an Offsets Leader

- ✓ PacifiCorp – A Leading Utility in the Field
- ✓ Klamath Project - First CO₂ Siting Process for New Power Plants
- ✓ Oregon's CO₂ Standard Requires Offsets
- ✓ The Climate Trust's RFPs
- ✓ Seattle's Climate Neutral Commitment
- ✓ Quite a Few Offsets Being Pursued in PNW

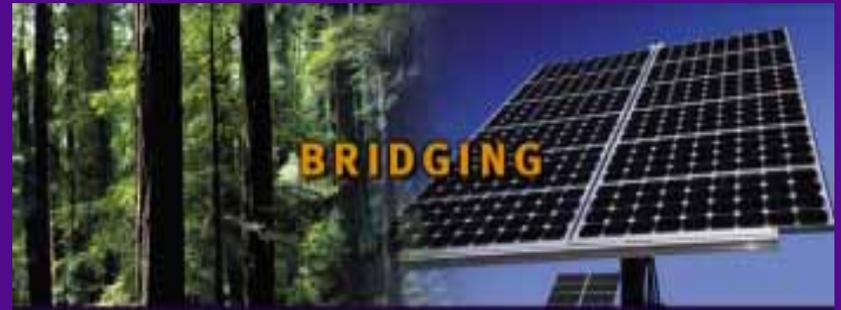


Who is Trexler and Associates, Inc?

- ✓ Doing Climate Change Mitigation Since 1991
- ✓ Works With: Private Sector Companies Looking to Address Climate Change Risks and Opportunities
- ✓ Works With: Project Developers Seeking to Access Carbon Funding
- ✓ Has Generated More than \$10 Million in Carbon Funding for Projects
- ✓ Much More Info at www.climateservices.com
 - *Including project development resources*



Designing a GHG Offset Project For Fun and Profit



The Baseline Study

- ✓ What Would Have Happened “But For” the Project?
- ✓ The Components of the Baseline Study:
 - ⌋ Identifying “but for” business and project practices
 - ⌋ Projecting changes to business practices of the project
 - ⌋ Assessing the degree of uncertainty in assumptions
- ✓ The Baseline is Key to Differentiate “With” and “Without” Cases for GHG Credit Purposes
 - ⌋ Would the methane have been collected “but for”
 - ⌋ Would the methane have been flared or utilized?
 - ⌋ Are additional legal requirements pending?



CO₂ Quantification

- ✓ If Baseline Very Clear, Measurement of CO₂ Offset Can be Straightforward
- ✓ If Baseline Not Clear, Quantification Can be an Art
- ✓ For Landfill Methane
 - ⌋ What methane management is required today?
 - ⌋ Is standard business practice already ahead of the law?
 - ⌋ Can methane emissions reductions be quantified?
 - ⌋ Does flaring count as a reduction, or required BAU?
 - ⌋ Would the methane truly have been released “but for?”
 - ✓ Over the same timeframes, or at a different rate?
 - ⌋ Are there indirect (electricity) emissions reductions?

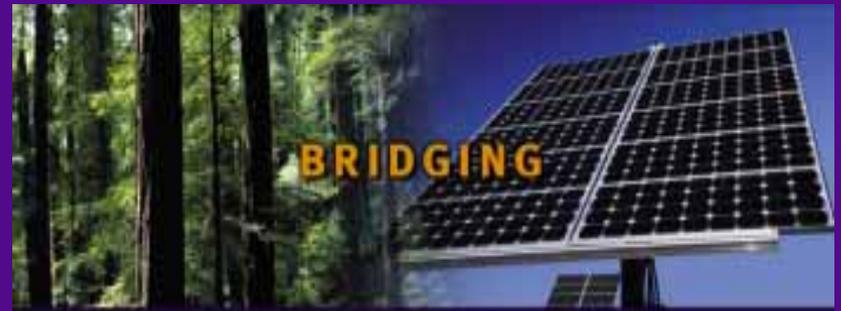


CO₂ Valuation

- ✓ Credit Valuation is Not Easy
 - ⌋ There is no market-clearing price
 - ✓ Not yet a homogeneous commodity
 - ⌋ There are many prices in the market
 - ✓ Very different willingness-to-pay among buyers
 - ⌋ Price dependent to some extent on offset quality
 - ✓ Is ownership of the reductions clear?
 - ✓ Is the baseline (and environmental additionality) clear?
 - ⌋ CO₂ values will change significantly over time



Why Are Offsets Still a Tricky Business?



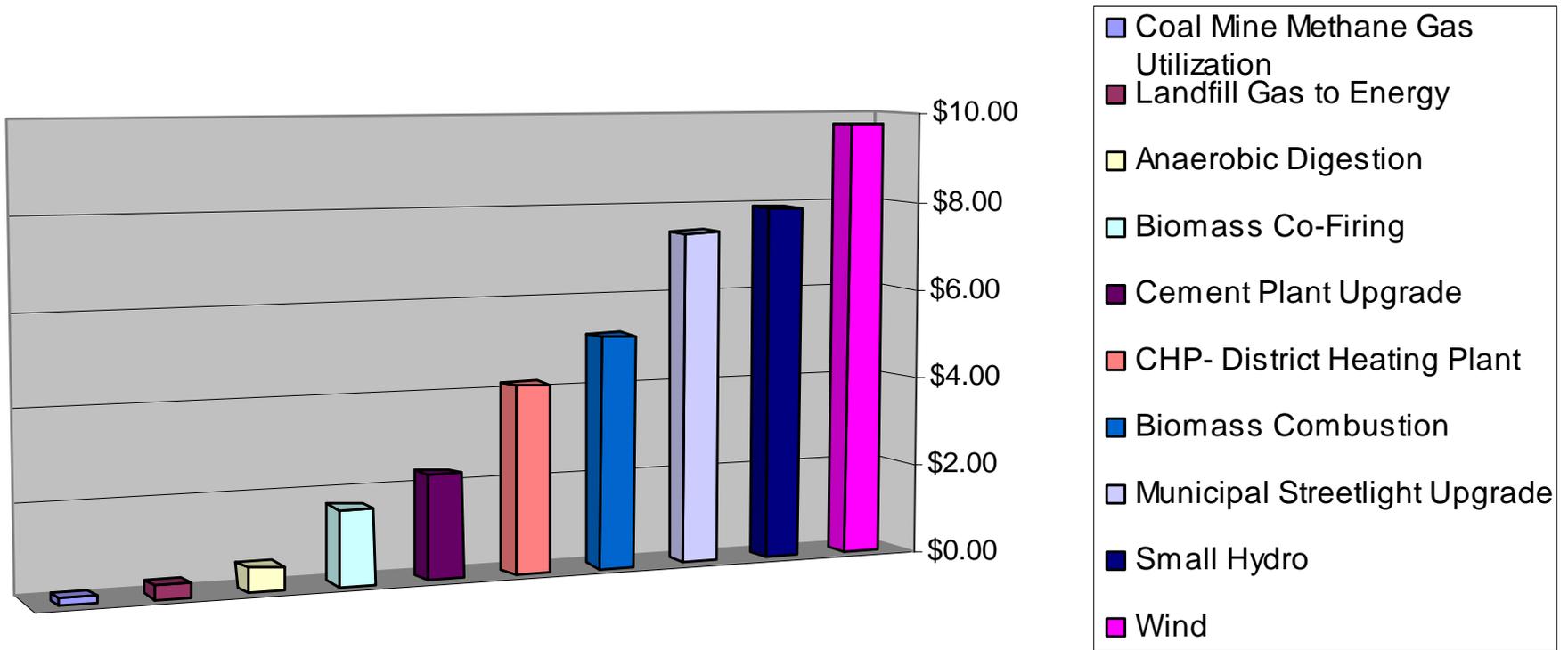
Designing a Mitigation Project

- ✓ Still No Absolute Rules to Go By
- ✓ Different Funders Want Different Things
 - Cost effectiveness, certainty, ancillary benefits
- ✓ What RFPs Want Can Differ Substantially
- ✓ Projects Currently Priced at \$1 to \$10 Dollars
 - Based on quality, marketability, ancillary characteristics
- ✓ It's a Confusing Market, and Will Remain So
- ✓ The Value of CO₂ to a Project Can Differ Dramatically
Technology to Technology



CO₂ Value for 1% ROR Impact

Effect of CO₂ Revenues On Rate of Return

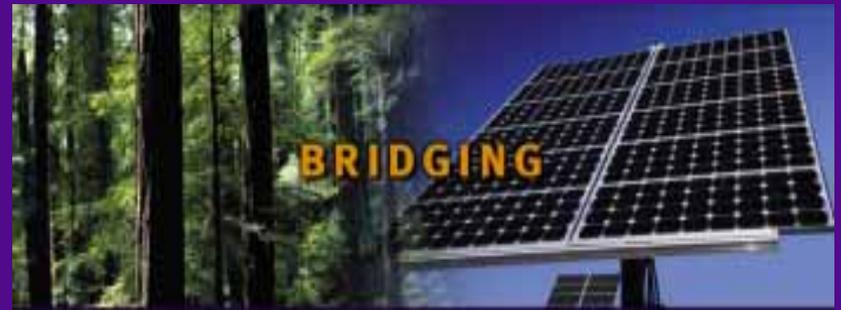


Addressing Buyers' Questions

- ✓ Will Project Stakeholders Approve of the Project?
- ✓ Project performance risk:
 - Will the project function as intended?
 - Will the project lead to emissions reductions?
- ✓ Project regulatory risk:
 - Will the reductions count as policy develops?
 - Will the project receive government approvals?
- ✓ Project credit transfer risk:
 - Is ownership clear, and contracting done well?
 - Will project partners live up to their credit commitments?
 - Will country be in compliance, and eligible to trade credits?



TAA's Role in the Process



Enhancing Project Value

- ✓ TAA Has Clients Looking for Good Projects
- ✓ TAA's Project Development Work Focuses On
 - Evaluating and mitigating risk of project failure
 - ✓ Ensuring comprehensive project design
 - ✓ High quality project partners
 - Ensuring environmental credibility
 - ✓ Baselines, additionality, monitoring and verification, etc.
 - ✓ Sector specific issues: e.g. additionality concerns
 - ✓ Good contracting, clear ownership



Working With Project Developers

- ✓ Keep Them Informed of the Market
- ✓ Assess Baselines, Quality of Reductions
- ✓ Assess Marketability of Offsets
- ✓ Prepare Offset Documentation, RFP Responses
- ✓ Marketing of Offsets
- ✓ Bringing Buyers to the Table



Available TAA Tools and Services

✓ Free:

- Passworded web site for project developers
- Easy to use data sheets for project submittals
- TAA's GGOCAD© Software System to promote your project

✓ For a Fee:

- Project due diligence
- Value creation by enhancing project marketability
- Bringing buyers to the table



What's Our Business?

- ✓ Finding Workable Solutions to Policy Questions
- ✓ Managing Corporate Risks and Rewards
- ✓ Developing Mitigation Projects

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