The Developing US Voluntary Offset Market

GE AES Greenhouse Gas Services

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Greening America

Profile of current US GHG offset market

Behaving like a brand new market

- No consensus of standards & methodologies
- No leaders established, but with many small players
- Very high interest: PEW Research/BELC, Point Carbon, WRI, other industry initiatives
- Almost no coordination amongst NGOs – WRI, Environmental Defense, etc
- Intense investment interest—new funds being announced weekly. Huge interest in new carbon remediation projects and technologies.

  Clinton' CGI/ PE/ Brokers/ Traders/ Companies/ etc.

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Reasons for Footdragging

Inhibitors to developing a sustainable US Voluntary market

- Unknown regulatory direction – indecision on the compliance horizon
- Educational hurdles and some inertia on the demand side
- Lack of critical offset development frameworks and lack of controls
- Low priority by sector – Lack of success models
- More talking than action

"It takes as much energy to wish as it does to plan"

Eleanor Roosevelt

Is There a Sustainable VER Supply Source

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Source Category	US net emissions (2007 est, MMTCO2e)	No. of target sites or companies	Annual VER supply potential of targets (MMTCO2e)
Landfill Gas (LFG) methane	134	301(non NSPS) 102 (NSPS unknown)	17.6 4.9
Coal Mine Methane (CMM)	59	10 (CMM degas, active UG) 115 (CMM,VAM, active UG) 400 (AMM, closed UG)	2.6 34.4 5.0
Ag/Manure methane (AgM)	40	Poultry farms in top 10 states Swine farms in top 10 states Dairy farms in top 10 states	2.1 15.9 14.8
Wastewater Treatment methane	25	16,000+ (municipal) N/A (industrial)	3.3 2.5
Sulfur hexafluoride (SF6)	13.2 (power) 3.3 (other)	81 (power, EPA pgm participants) N/A (non-participants) DuPont	1.0 4.8 1.0

- **Methane and SF6 Emissions**
  - **275 million tCO2e / yr from listed source categories**
  - **110 million tCO2e / yr available for US-based project development**
    - **Filtered for small-scale projects that may not be economically viable**

Market Overview

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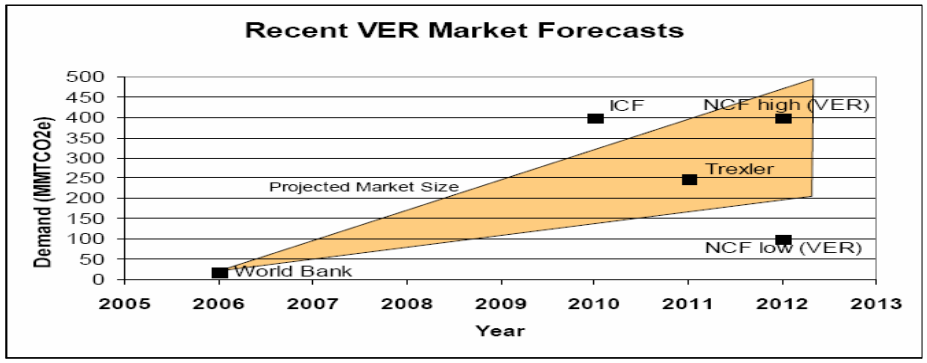
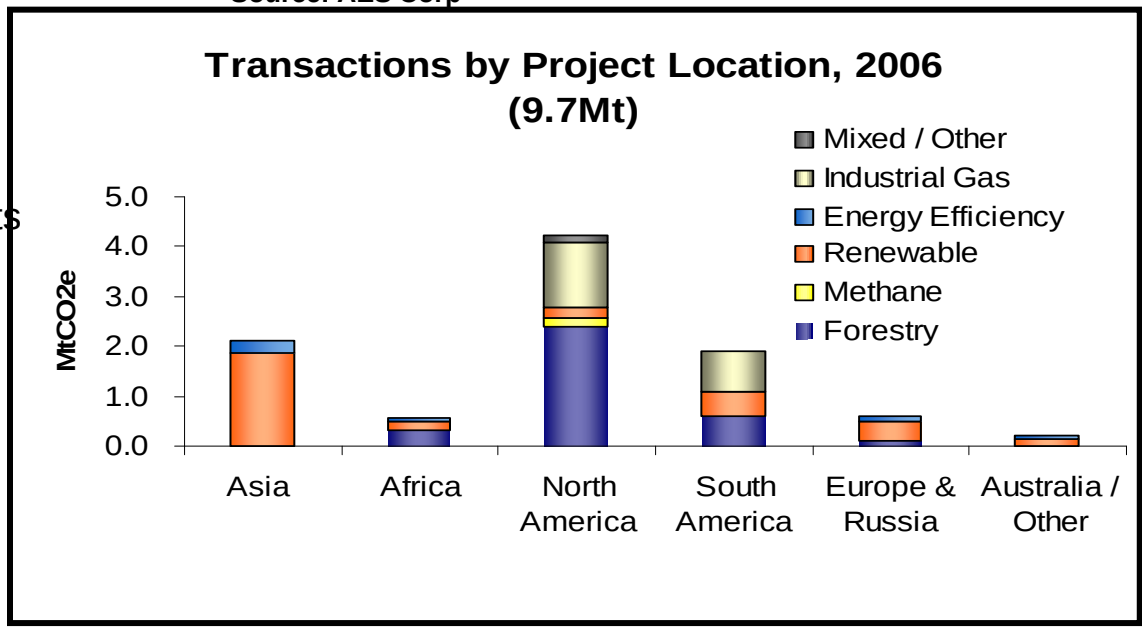
- **2006 Voluntary Market (Global)**
  - ~$100MM value
  - 60/40 split between OTC and Chicago Climate Exchange
  - 200% growth over 2005
- **Market Forecasts**
  - Global Market to be $1-5bn by 2012
- **Prices**
  - Avg. price: $4.1/tonne
  - Range: $0.45 - $45/tonne
  - Premium paid for high quality projects
- **Project Types**
  - Forestry projects
  - (36% vs. 1% in CDM)
  - U.S. focused (68% demand and 43% of projects)



Source: AES Corp



Source: New Carbon Finance

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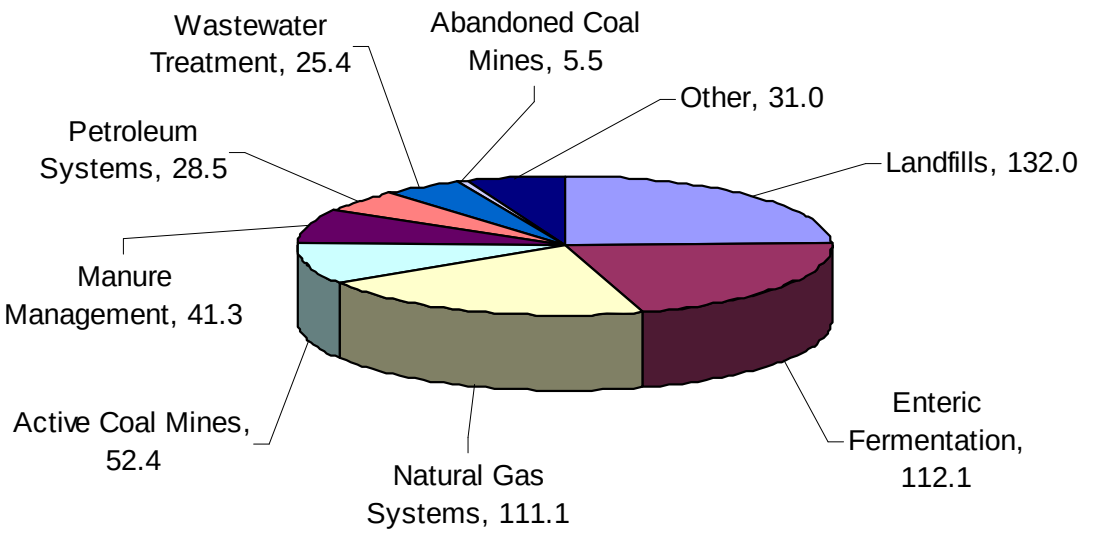
US GHG Emissions

Figure IV-1: US Emissions of Anthropogenic Methane in 2005 (MMTCO2e)



Source: EPA 430-R-07-002

US Emissions market (as of end of 2004) is 50% larger than the industrialized countries governed by Kyoto!!!

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GE and AES: A commitment to developing the US Voluntary Market

For GE and AES an extension of their current business platforms:

- **GE EFS (Energy Financial Services)**
  - More than $1.5 billion in renewable energy assets (wind, solar, biomass, hydro and geothermal
  - Logical fit with their Ecomagination initiative
  - More than $14 billion in energy and water resource assets

- **AES (Alternative Energy)**
  - 13 electric utilities, 121 generating plants, 27 countries
  - Over $300 million already invested in GHG offset production
  - Established position in the CDM / CER markets
  - Target of 26 million tonnes of GHG offsets by 2011 (ROW)

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Our Approach: Bring operating disciplines to the GHG Credit Market

- Standard of Practice fully integrated into our GHG credit business model
  - The standard defines the quality of the product – internal quality control and governance
- Design elements should secure a leadership position:
  - Ensure verification tests and audits are met for GHG credit-based claims
  - Ensure “good” tons – environmental integrity
  - Ensure “real” tons – scientific integrity
  - Consistent, uniform quality controls maximize portfolio value – “A good ton is a good ton”
- Adherence to “World-class” principles and requirements
  - Compatibility
  - Transparency
  - Voluntariness & additionality
  - Verifiability
  - Certification
- Previewed to leading NGOs, vetted through the Ecomagination process

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Our Approach: Bring operating disciplines to the GHG Credit Market

Focus on developing relationships with key industry influencers, policy makers and certified partners

- Previewed to leading NGOs, including WRI, TNC, Environmental Defense, Conservation International
- Vetted through the Ecomagination process and Green Order
- Program reviewed with CMOP and LMOP teams
- Selected Certified Partners including; SCS Engineers, CH@MHill, Climate Check and Raven Ridge Resources

Project selection/qualification

- GGS conducts market research for projects and new markets
- ID project, enter into Project Information Note
- Pre-screening: quantification of baseline and project reduction; determination of additionality and eligibility.
- GGS develops project build document, incorporates “GHG project plan” elements (uniform checklists and templates used in development)
- Internal review and approval
- GGS approves investment in project, confirming conformance with standard and methodology requirements, etc., and confirms rights to credits and attributes. 3rd party validation.

INVEST and OWN

GHG VER Development Processes:

Best practices and Conformance to our Standard

GGS Project and Asset Management

- GGS operates projects. Manages all aspects from initial permitting through construction through operation and ongoing maintenance
- At the end of the first year, or on other appropriate time schedule, Independent 3rd party (selected by GGS) will conduct verification (which includes confirmation of eligibility as well as actual monitoring of GHG reductions.

  (in practice, we will institute a process of “pre-verification” for first-of-kind projects – in many cases we trade on experience in CER markets)
- Active role in joint planning--future project development with owners/ developers. Determining options in expanded development, process enhancements and new technologies

OPERATE and MAINTAIN

GHG VER Development Processes:

Best practices and Conformance to our Standard

Registration and Verification

- Independent 3rd party will issue a verification report and letter
- JV Standards Manager assembles certification package, including project documents, verification reports, etc.; recommends to JV General Manager for Certification
- GGS Verification officer performs final review and signs certification
- At every key step, updates are logged to project registry and tracking system
- Credits are registered and retired on delivery date.
- Cycle repeats throughout the crediting period (additional option, appropriate to some projects/project types.

VERIFICATION/REGISTRATION, SALE & RETIREMENT

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Quality Management Guarantee

- A significant challenge in the Voluntary Market is providing the Buyer with confidence that the product they purchase is above reproach
  - Managing from creation to retirement under full processes and controls

- The AES-GE GGS venture has the infrastructure to deliver this -
  - Technology – fully auditable, security controlled system to document the handling of every emission reduction from cradle to grave
  - Offset development platform already established
  - Separation of duties – this product is becoming a highly valued commoditized instrument that demands management and controls
  - Established standard and processes and controls already in place

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  - Technology – fully auditable, security controlled system to document the handling of every emission reduction from “cradle to grave”
  - Offset development platform already established
  - Separation of duties – ensuring our offsets become highly valued financial instruments demands strict management and controls
  - Established standard and processes and controls already in place

Emissions Reduction >> Commodity Product

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CREATION	ISSUANCE	DELIVERED	RETIRED
• Emission Reductions are created under publicly available, scientifically proven quality standards	• Each Reduction is issued a Unique Identifier and handled through rigorous processes and captured in our security controlled data warehouse	• Unique Serial Numbered VER's are mapped to our customer delivery requirements • Every reduction delivered is easily tracked to its individual creation details	• Once retired the VER remains in our data warehouse with a full audit trail from cradle to grave

INPUT
Scientifically Proven Greenhouse Gas Reductions

OUTPUT
Customer Security…every purchase has a guaranteed environmental impact!

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US Voluntary Market : Criteria for success

1. Must operate with a “Whole view” of the requirements for a sustainable US GHG market. (Develop / Invest / Manage Operate / Verify / Certify / Register/ Sell / Retire).
2. Create the broad infrastructure to support the business
3. Establish critical mass – investments in people, processes and technologies.
4. Innovation is critical
   - **Improvements in project development/ operating efficiencies**
   - **New technology (*not the number of CMM projects under contract*) will make the difference –**
5. Customer education / support services are essential- particularly a demand side focus

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The Outlook is Promising

- Huge level of interest in developing the voluntary emissions reductions market
- Money is pouring into the market
- Legislation recognizes role of an offset market
- Infrastructure is maturing
- Expertise and experience gleaned from Kyoto and JI initiatives is a driver.
- Investments in new technologies are underway

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Eleanor Roosevelt

THANK YOU