

Voluntary Carbon Markets A Participant's Perspective

NAC

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North American Carbon

- GHG emission trading since 1996
- Some of the first GHG emission reduction trades in North America
- 100% Canadian owned
- www.northamericancarbon.com



Greening Canada Fund

- NAC shareholder in Green Power Action (GPA)
- GPA is Manager of Greening Canada Fund
 - Private placement Fund
 - For companies wishing to manage carbon footprint through carbon offsets
- www.greenpoweraction.com
 - Note: Securities of this Fund will be offered to selected investors only by means of a complete offering memorandum. This presentation does not constitute an offer of any security of this Fund to the general public.

The logo for North American Carbon (NAC) is displayed in a white rounded rectangle with a subtle drop shadow. The letters 'NAC' are in a large, bold, blue sans-serif font. Below them, the words 'North American Carbon' are written in a smaller, blue sans-serif font.

NAC
North American Carbon

Reminder

“If the enemy is in range.....
..... so are you !”

Army Manual

“Talent is Never Enough”
by John Maxwell



Global Climatic Change

- Coined by CIA in a 1974 report
- Based on early 60s-70s crop failures in Asia/Soviet Union
- Geopolitical impact of food shortages
- *Clima* – Greek for ‘inclination of the sun’s rays’



Where we are – national emissions (2005 data)

○ United States	7.2 GT
○ China	7.0 GT
○ Indonesia	3.1 GT
○ Brazil	2.4 GT
○ Russia	2.1 GT
○ India	1.8 GT
○ Canada	0.8 GT (0.56 Kyoto)



source: US GHG AMI



Markets

- Does Compliance transcend Voluntary – probably not
- Voluntary – set your own quality criteria and goals
- Different buyers – different markets?
- Price stratification



Markets – Pre-compliance

- Regulatory goals
- Financial objectives
- Corporate emitters with large liabilities
- Market players: buy low / sell high
- US – Canada
- Judgment call on acceptability – high risk



Markets – Voluntary

- Carbon neutrality goals
- CSR – PR objectives
- Separate from competition
- Individuals/NGOs/ENGOS
- Value – open to Buyer's determination – their criteria/goals – low risk



Overview from a Voluntary Market Perspective

- Overview of technology, scale, and risk factors
- Sectors
- Due diligence
- Markets



Project type - Renewables

- Wind, solar, hydropower, geothermal
- Site specific issues
- Technological reliability
- Data collection
- Investment costs vary
- Financial industry – experienced
- Quantification and verification standards



Project Type

Methane/HFC destruction

- Landfill gas flaring
- EFW facilities
- Mine mouth methane
- Industrial Process controls – NO₂ capture
- SF₆ capture – utilities
- Measurement / baselines



Project type – Fuel Switching

- General term that covers a myriad of applications
- Power plant retrofits to bio-based transport fuels
- Usually economic – in-house projects
- Baseline data collection an issue



Project type -Energy Efficiency

- Cogeneration – building envelopes – consumer products – equipment upgrades
- Project scale key - aggregation
- Baseline data
- Ownership
- Electricity system dependent – emission factors



Project type - Forestry

- Industrial or urban
- Project scale - aggregation
- Baseline data – Afforestation /Reforestation
- Ownership
- Species impact
- Permanence



What about new technologies ?

- Hydrogen – fuel cells
- Biofuels
- Carbon sequestration and storage
- Batteries/electric storage technologies
- Nuclear ?
- Hybrid vehicles



Voluntary market – Regime impact

- Geographic location wide open
- Impact to the extent of competition for offsets/credits
- Price implications
- RGGI, WCI, Canadian Federal regime, Alberta regime, CDM, JI



Quantification - standards

- Existing protocols: Alberta, CDM, etc.
- Custom build
- RGGI, WCI, Canadian Federal regime, Alberta regime, CDM, JI
- Your own review body/committee



Verification - standards

- Third party verifiers
- ISO 14064 standard
- VCS, CDM
- Verifier capability, certification and experience



Registration

- No current regulatory requirement
- Privately operated Registeries
- Fee for service
- Depends on the Buyer(s) requirements
- Seller may choose to register or wait for Buyer to decide



North American Carbon

Supply Sectors

- Industrial Sectors
 - Power, Manufacturing, Waste Management
- Social Sectors
 - Institutional, Municipal, NGOs



Project Size

- How does size effect economics of project
- Scalability – aggregation opportunity
- Financing attractiveness
- Permits/approvals – minimum threshold
- PR value on small projects in social sector



Vintage/Volume

- When can we expect first delivery
- How much per year
- Delivery risk
- Annual volume growing or shrinking
- Is “newer” better ?



Due Diligence – Global Risk Factors

- Technical risk – proven technology or application
- Geographic risk – host nation
- Operating risk – fuel supply / feedstock
- Financial risk – secure partners
- Regulatory risks
- Environmental risks
- PR risk



Due Diligence - Specific Factors

- Project developer – track record / background check
- Technology – track record
- Project location – local history
- Aggregator – title issues
- Due Diligence check list – ERPA



Cost Control Strategy

- Due Diligence
- Quantification
- Verification
- Legal Costs – manage and direct
- Transfer costs – Registry



Voluntary Markets Motivation - Buyer

- Corporate Social Responsibility Goals
- Carbon Neutrality
- Reputation / Branding / Marketing
- Targeted funding to specific geographic region or sector



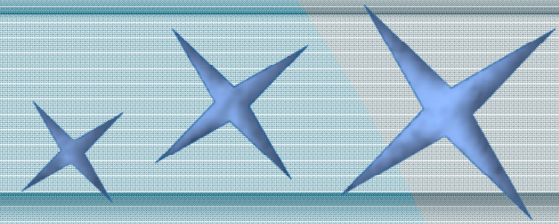
Voluntary Markets Motivation - Seller

- Capture value not reflected in compliance market
- Potential retirement has value to some agencies
- Incremental revenue
- Contractual Risk – potentially less onerous



Voluntary Market - Recap

- Regulatory failure increases importance
- Differentiation on criteria not always recognized in a regulatory regime
- PR value versus compliance value
- Can co-exist with regulatory market; demand due to different drivers for both Buyers and Sellers



Thank-you

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