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Understanding Carbon Markets: Issues and Opportunities

Commonwealth of Virginia Energy & Sustainability Conference
Meeting the Climate Change Challenge
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Cameron Prell



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Carbon Markets: What's Here, What's Coming



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Global Carbon Markets Growing Rapidly

Transaction Volumes and Values, 2006 and 2007¹

Markets	Value (US\$million)	
	2006	2007
Total Voluntary Markets	96.7	330.8
Total Regulated Markets	31,051	63,697
Total Global Market	31,148	64,028

Source: New Carbon Finance, Ecosystem Market Place, World Bank



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Current State of Market?

Depends on which carbon market is being analyzed...

- Kyoto prices are affected by financial sector collapse.
- RGGI prices are down for all sorts of reasons
- Some voluntary market prices are down, but in first 4 months of 2008, CCX reported trading volume growth of 240%.
- Demand for US-based Voluntary Carbon Standard (VCS) offsets is seen to be steadily rising.



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Why Carbon Trading?

Principle 1: Carbon Trading provides for certainty of actual emissions reductions with a carbon “price” determined by market participants.

Principle 2: Ensures abatement occurs at lowest possible cost by letting market decide where to make credible and verifiable reductions



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What is the Market?

- **Compliance vs. Voluntary**
- **Allowances vs. Offsets**



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Compliance vs. Voluntary

Compliance Markets

- State or regional programs (RGGI, WCI, MRP)
- International regimes: Kyoto, EU ETS

Voluntary Markets

- Over-the-Counter Transactions (“VERs” and “VCS”)
- Exchange-Traded Credits: CCX or NYMEX
GreenExchange



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Compliance Markets Provide Context

There are VAST differences between compliance regimes in the US.

- **The Kyoto Protocol is a legal binding international agreement that created the largest current compliance market.**
- **Countries that have ratified Kyoto can achieve their target reductions via three flexible mechanisms (allowance trading, CDM, JI).**
- **US compliance markets are in many ways based on the Kyoto model, but each has its own unique model (e.g., RGGI vs. WCI).**

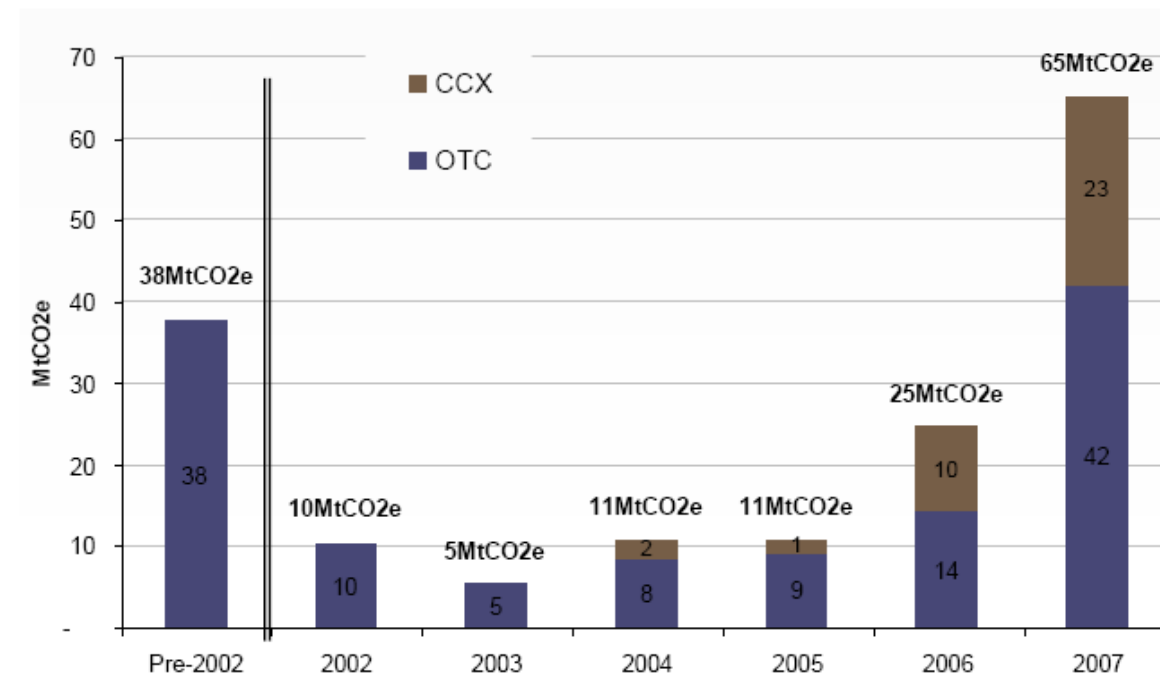


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Voluntary Markets Are a Derivative of Compliance Markets

Figure 2: Voluntary Carbon Market Volumes²



Source: Ecosystem Marketplace, New Carbon Finance



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Voluntary Market Overview

- **CCX** was established to allow members to voluntarily, through binding contract, reduce their carbon inventory below an agreed-upon baseline.
- **CCX Members** can generate **Carbon Financial Instruments (CFI)** through direct reductions or purchase of qualifying offsets.
- **VER** or **VCS** transactions are generally bilateral agreements to voluntarily reduce emissions off of a negotiated baseline.



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Allowances Vs. Offset Credits

Allowance: An allowance to emit as created under a cap and trade program by a “covered entity”.

Offset: Unit of verified CO₂e reduction created by “uncapped” entities.

***Both credits are intended to convert the right to emit into tradable unit to take advantage of market efficiencies.**



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Offset-Based vs. Allowance-Based Credits

OTC voluntary credits generally come from Offset-Based Projects (e.g., methane destruction, and forestry/land-based projects).

Exchange-traded credits are mostly Allowance-Based (e.g., energy efficiency, renewable energy).



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Numerous Voluntary Standards

- **Voluntary Carbon Standard**
- **CDM**
- **CCX Guidelines**
- **VER+**
- **Gold Standard**



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Quality of Credits

Real: Are the reductions based off a true baseline?

Additional: Would the reductions not occur in the marketplace but for the additional investment?

Permanent: Will the reductions be maintained over time?

Verified: Has a third-party certified/audited the reductions?

Enforceable: What party has rights to the reductions?



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What Drives the Price of Carbon Credits

- Supply/Demand
- Scarcity
- Quality/Vintage
- Bundled/Unbundled



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Is there a Future for the Voluntary Market?

The value of voluntary carbon markets going-forward depends on the timing, design and scope of any future mandatory compliance market.



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Linkage?

1. All Carbon Credits Are Not Created Equal
 - Metrics and standards drive each individual carbon market.
 - Comparing some credits is like comparing apples to kumquats.

2. What is “it”? A commodity or an asset?
 - Voluntary markets are treating credits as commodities.
 - Compliance market treatment is unresolved.



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Linkage is a Policy Decision

International Carbon Action Partnership

ICAP, which is led in many ways by California's Governor Schwarzenegger, is seeking:

- (1) common international protocols and registries;
- (2) stringent, consistent and transparent compliance and enforcement mechanisms to ensure market and environmental integrity.



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Anticipating Federal Carbon Regulation

1. “Lieberman-Warner” was a dress rehearsal
2. Both presidential candidates support a federal cap and trade regime.



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Key Carbon Policy Issues

Early action credit

Preemption vs. Integration

Scope of “covered entities”

Allocation/auction

Linkage

Offset eligibility

Safety valve mechanism



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Forecast?

- **The global carbon market is here to stay.**
- **The implementation of U.S./regional cap-and-trade schemes will happen, regardless of the existence of any Post-Kyoto (2012) international framework.**
- **For the US market the most immediate opportunities are in the Voluntary Market, RGGI and CDM.**



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What should you do?

1. If your organization hasn't yet, assess your carbon inventory.
2. Develop and implement carbon risk management strategy.
3. Assessing financial risks and benefits of carbon market participation.
4. Target the right market, forecast regulatory risk and price volatility.
5. Make sure your interests are being heard on Capitol Hill.



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Cameron Prell

Williams Mullen

A Professional Corporation

1666 K Street N.W. Suite 1200

Washington, D.C. 20006 Tel: 202.293.8112

Fax: 202.293.5939

E-Mail: cprell@williamsmullen.com

Web: <http://www.williamsmullen.com>