

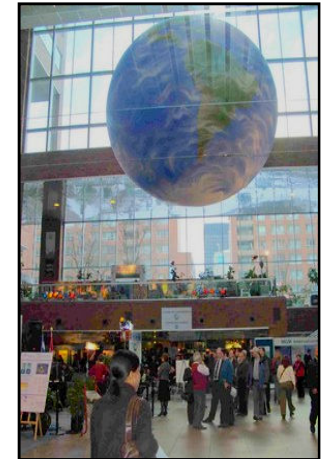


Business Opportunities in Wind Energy and Carbon Finance

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Westin, Halifax



Scotian WindFields Inc

- **Nova Scotian owned and dedicated to promoting local ownership of wind energy resources**
- **Utilizes the CEDIF program for outreach, accountability and raising capital**
- **Scaled to fit (utility, commercial and small scale)**
- **Successful bid with NSPI announced last week**
- **Specializing in embedded/inside the fence generation**
- **Turnkey home and small-business solutions**



Wind Energy Benefits

- **Environmental advantages**
- **Cost of generation is decreasing to become competitive with fossil fuels**
- **Cost will continue to decrease while fossil fuels increase**
- **Long-term fixed cost is an advantage for business planning**
- **Local generation of energy means security of supply and economic spinoffs that are lacking from imported forms of energy**

Carbon Credits 101

- **Basics of carbon credits, carbon management, and carbon trading**
- **Where do credits come from – the theory behind the system – why do they work**
- **The importance of branding – jurisdictions and brands of credits**
- **Carbon credits and business planning**
- **Takeaways – how can you take advantage of the carbon economy and its new opportunities**

What is a carbon credit

- **One tonne removed or avoided**
- **It is what we say it is**
- **Agreement among nations, agreement within small jurisdictions**
- **Commodity**
- **Currency**

Criteria for a currency

- **Social agreement**
- **Jurisdictional reach**
- **Standards of measurement**
- **Standards of exchange**

Where do credits come from?

- **Theory of “Additionality”**
- **Kyoto protocol & the UNFCCC**
- **Common jurisdiction**
- **Enforceable regulation**
- **Measurable and verifiable**
- **Ongoing monitoring**

Why a carbon credit

- **Essential to reduce emissions**
- **Market solution to a societal problem**
- **Group solution necessary**
- **Turned to the market to make it so**
- **Credit incents where obligation cannot go**

How to birth a credit

- **Depends on the brand**
- **UNFCCC – CDM**
- **Cap and Trade**
- **VER's**
- **Gold Standard**
- **RECs and Green Tags**
- **Personal offsets**

CER Brand - Origins

- **UNFCCC brand**
- **Market mechanisms introduced in Marrakech Accords at the 7th COP**
- **Carbon as a commodity**
- **Puts environmental value into commercial marketplace**

CER Brand - Rationale

- **Transfer clean technology and expertise from Annex I countries to developing nations**
- **Encourage sustainable development globally**
- **Jump-start healthy infrastructure in developing nations**

CER Brand – The Players

Project Proponents

Annex I Nation

Developing Nation

Designated National Authorities

Executive Board of UNFCCC



CER Brand – The Partnership

Project Proponents from Annex I country and Developing nation

Benefits to both partners

Sustainable development, clean technologies introduced to host country

Carbon Offsets to the Developed Country



How to make a credit – CER

1. Additionality

A Key Principle of CDM

Not “Business as Usual”

Project would not happen in absence of the program

The Marrakech Accords outline additionality as follows: “A CDM project activity is additional if anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the registered CDM project activity.”

How to make a credit - CER

2. Host Approvals

Project Feasibility – optional but necessary

Secure host country approval – differing processes dependent on national goals (usually SD prominent, but also economic requirements)

Project Idea Note (PIN) – format developed by host country

How to make a credit - CER

3. Project Design Document (PDD)

Baseline

Methodology

Additionality

Justification and SD

Monitoring and validation plan

Duration of the project activity and crediting period

How to make a credit - CER

4. Validation

Designated Operational Entity

- conducts stakeholder consultations (locally and invites comments on UNFCCC web site)**
- reviews PDD (analyses ghg calculations, methodology, environmental impacts, additionality)**
- validates GHG emission reductions**

How to make a credit - CER

5. UNFCCC Approvals

PDD Submitted to Executive Board

Executive Board Reviews

Executive Board can send back for revision

3 – 6 months process

Once PDD meets approval, project is registered

How to make a credit - CER

6. Monitoring and Validation

Ongoing Monitoring

according to Monitoring Plan

performed by proponents in concert with DOE

Ongoing Validation

performed by DOE on site and off site

How to make a credit - CER

7. Credits are issued

Issuance of Credits

Credits are issued by UNFCCC EB

Held in a Registry according to instruction in the ERPA

How to make a credit: the other brands

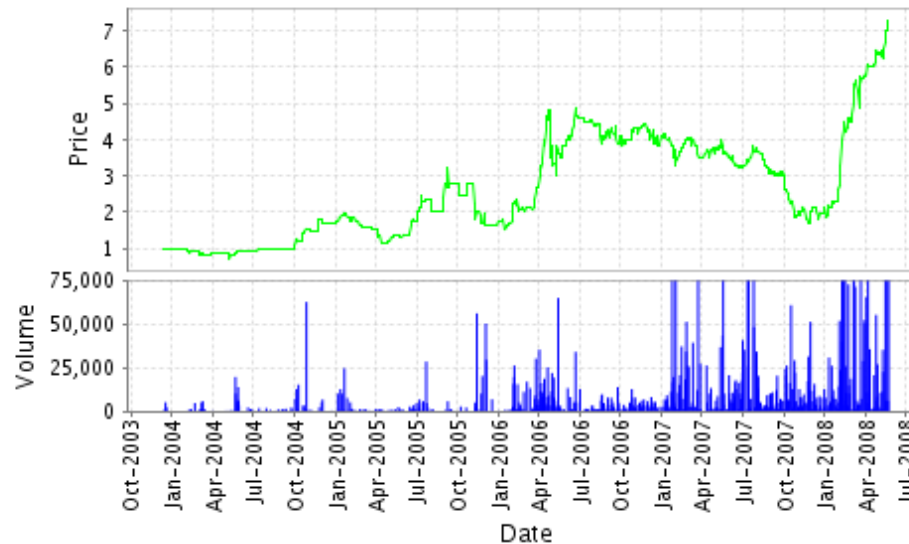
Commonality with CERS

- Additionality**
- Verification and monitoring**
- Central registry**
- Common jurisdiction and regulation**

Where there's smoke there's money

- **Chicago Climate Exchange / Montreal Climate Exchange**
- **RECs and Green Tags**
- **EU Trading Scheme**
- **Alberta's Compliance Carbon Offset Market**

CCX Carbon Financial Instrument (CFI) Contracts Daily Report



Gold Standard

- **Value added branding standard**
- **Offers a quality label to CDM/JI and voluntary offset projects to attract premium prices**
- **Renewable energy and energy efficiency projects with sustainable development benefits are eligible**
- **The Gold Standard is endorsed by over 38 non-governmental organizations worldwide**
- **<http://www.cdmgoldstandard.org>**

Carbon Offsets

- **Capitalizing on sense of personal responsibility and awareness of global warming**
- **Buyers include: Progressive organizations, government departments, commercial entities, event planners**
- **Verifying Standards include: Gold Standard, Voluntary Carbon Standard**
- **Verifying Entities will compete: CSA, ISO, Eco-logo, etc**

No Limits to Innovation

- **Headline: “Aborigines burn the way to climate control”**
- **Natural gas refinery in Darwin funding Aborigine forest control practices to offset their own emissions**
- **\$850,000 a year for 17 years**
- **Can be bi-lateral contracts – a credit is what we say it is**

Incorporating Carbon into Business Planning

- **Annual Reporting**
- **Insurance accountability**
- **Risk Management**
- **Seeking sustainability – new revenue streams**
- **Additionality and project management**

Takeaways

- **Incorporate planning for credits from the outset of projects (Additionality must be established early)**
- **Partnerships and challenges**
- **Many opportunities in the fields of verification, monitoring and project design**
- **Many opportunities for innovation – do your research into verification and standards**

Thank you

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