

The Carbon Offset Trade
Association (COTA)
and
The Alberta Offset Credits
Market

*Presentation to the Failsafe Investment
Seminar*

June 2, 2009

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The Carbon Offset Trade Association (COTA)

- ***The Carbon Offset Trade Association (COTA) is comprised principally of participants directly involved in the Alberta Carbon Offset Market.***
- ***It was formed with the encouragement of Alberta Environment and Climate Change Central to directly address the issue of market operational self-regulation.***
- ***In 2008 the Alberta Minister of Environment challenged the Carbon Offset Suppliers Association - Alberta (COSAA now COTA) and the industry to self regulate.***

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The Carbon Offset Trade Association (COTA)

- **COTA**
 - *Membership based Association operating as non profit*
 - *Differs from other organizations in that it is comprised principally of members transacting directly in a regulated offset credits market*
 - *Members will reflect a broad base of market stakeholders*
 - *Members required to adhere to a code of conduct and transactional standards*

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The Alberta Carbon Offsets Market and the Carbon Offset Trade Association (COTA)

- The primary goal of COTA is to *enable and sustain* the Carbon Offset Market as a powerful new goods and services opportunity and as a vehicle for GHG reduction.

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The Alberta Offset Credits Market

- *The Alberta Offsets Market*
 - *Allowing Alberta to gain experience with a regulated offsets market*
 - *Anticipates by design a Canada wide national offsets market*
 - *A process largely based upon the efforts of the original national offsets system design*



The Alberta Offset Credits Market

- *Designed against an environmental model*
 - *An environmental standard and rigour to be applied*
- *Regulation Based*
 - **Regulation** of compliance thresholds for emitters is the market driver
 - **Codes of Practice** translate regulation to guidance for market participants
 - *Project and Verification Guides*



The Alberta Offset Credits Market

The Market Design and Definitions

- Science based, government validated protocols allow offset quantification*
- Projects specific to each protocol measure protocol data requirements and quantify offsets through a data management system*
- Market service providers through projects and bound by contractual relationships transact the ownership of offsets*
- Independent, third party verifiers assure the conformation of the project offset quantification to protocol requirements*

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The Alberta Approach Beliefs

- *Alberta believes the implementation of new technology will be a big part of the long-term solution.*
- *Market instruments are needed to bridge the gap between current emissions and long-term solutions.*
- *All Albertans must be part of the solution*
- *Requires strategic and focused investment in transformational changes (technology, behavioral, etc.)*



Alberta Approach Opportunities Created

- *The regulatory policies and guidance are based upon an environmental risk management with enforcement model.*
- *In practice even with verification spot audits are being conducted by Alberta Environment for compliance quality.*
- *The typical critical market requirements of supply chain management, operations, transactions, and production management were left for development by the projects and at the risk of the projects.*



Alberta Approach Opportunities Created

- *In effect under this risk management approach the implementation of the market was likely accelerated*
- *Although initial market implementation had been achieved the operational and transactional components of the market including competitive practices, supply chain management, project design, data management, contracting, and offset value to producers, and even verification performance had become uneven varying from project to project.*
- *At this point project proponents were encouraged by Alberta to form COSAA to address these operational and transactional issues in October 2007.*



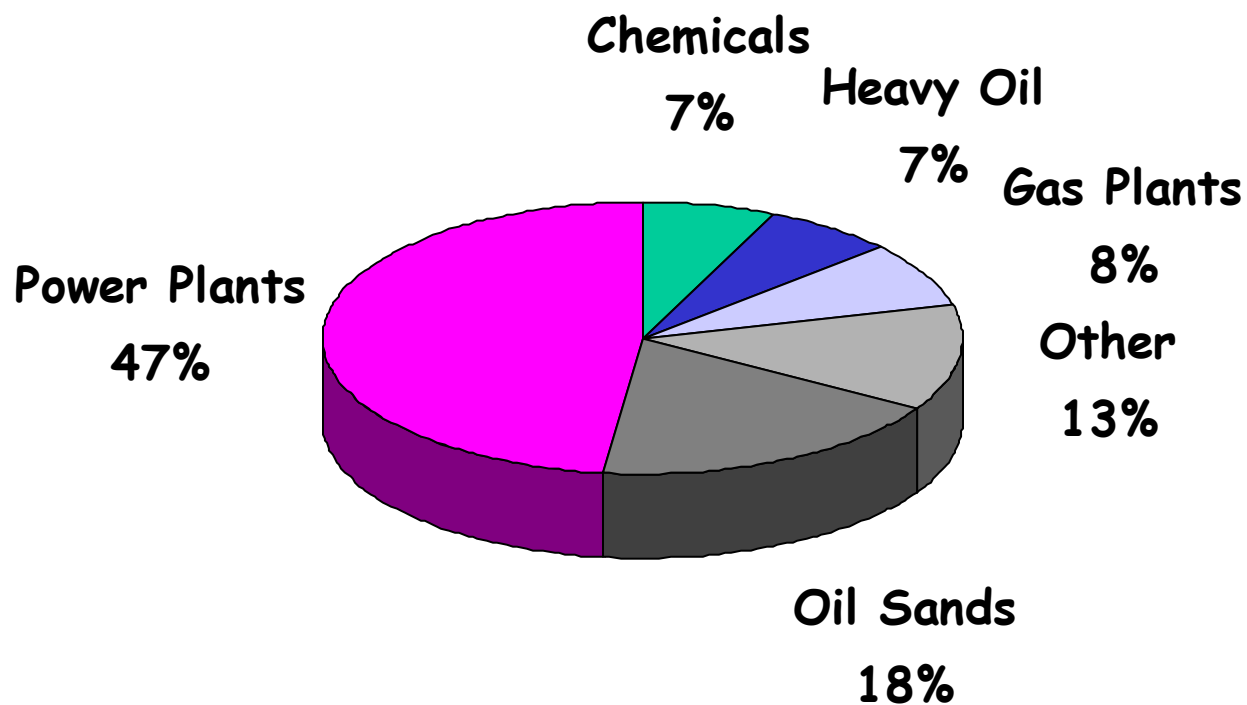
Alberta Approach Opportunities Created

- *The new market attracted a significant amount of project and protocol development investment.*
- *In order to provide the demanded larger blocks of offsets required by LFEs, project proponents formed into aggregators of offsets.*
- *With operational risk management policy, the project proponents and market participants were given the advantage of flexibility in project design and operation.*
- *This approach was successful at stimulating millions of dollars of private investment and development in projects from the private sector.*



Large Industrial Emitters Profile

(*>100,000 tonnes CO₂e/year*)



Core System Elements

- *A demand for credits*
 - *Created through the emission reduction regulation*
- *A supply of credits*
 - *Creation allowed through the regulation*
- *Rules to govern the system*
- *Consequences for non-compliance*



This is Still a Marketplace

- **Markets depend upon transactional clarity and the confidence**
 - of investors, buyers and sellers in the vigour and the sustainability of the market
- **The market must clearly define its product**
 - by setting and applying both the required (under regulation) and the understood (business) standards for transaction
- **The value realized by effective data management will not be realized unless costs are controlled and revenues are adequate**
 - for project return on investment and
 - The revenue in the offset market is affected by the offset creation performance.
 - The market costs are affected critically by the clarity of the data management requirements



COTA Will Anchor the Alberta Carbon Offsets Market

- **The COTA solution....**
 - **recruits government, industry, market practitioners, and Albertans...**
 - in development, implementation, and the maintenance of market standards aligned with regulation
 - **associates critical market practitioners in a business infrastructure...**
 - capable of developing, implementing, quantifying, recording, and reporting performance against market standards
 - **strives for internal association integrity...**
 - through membership code of conduct and leadership governance
 - **prevents and resolves dispute...**
 - through the ability of the COSAA standards system to measure market practitioner performance

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The COTA Business Plan

- **The COTA Business Plan proposes to have operational within 2009....**
 - ***a broad based trade association...***
 - *including of all mission critical market participants and stakeholders and generating revenue from memberships*
 - ***an association technical committee...***
 - *addressing offset protocol market implementation efficiencies and offset volumes*
 - ***the COSAA Communications Plan...***
 - *promoting the worth of the market and clarifying market functions*
 - *elevating the transactional knowledge of internal market participants*

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The COTA Business Plan

AMAP

- **The COTA Business Plan proposes to have operational within 2009....**
 - ***At the request of the Minister Renner the COTA Alberta...Market...Assurance...Project (AMAP)...***
 - ***aligning business and transactional standards...***
 - *for protocol data management, project data management, contracting, with government regulation and guidance*
 - ***a business system...***
 - *allowing the measuring, quantifying, recording, and reporting of market practitioner performance against market standards*
 - ***certifying market practitioners...***
 - *holding to business and transactional standards and as source of association revenue*
 - ***dispute prevention and resolution mechanisms...***
 - *for market participants*



The COTA Business Plan

- *The fundamental premise of the plan...*
 - *is to protect and promote the value of the Alberta Carbon Market with both external and internal stakeholders for the benefit of members and the marketplace.*
- *The premise will be delivered through...*
 - *the principles of advocacy, dispute resolution, and partnership of industry and government.*



Goals of COTA

- ***Protect and promote the value of carbon offsets in the marketplace***
- ***Ensure standards of practice in the market through a certification and annual renewal process for critical market sectors***
- ***Provide dispute resolution for market stakeholders***
- ***Reinforce sustainability of the market through the maximization of access to Carbon Offset Credit Protocols***
- ***Promote market transactional clarity and new market development***



COTA Alberta Offset Market Goods and Services Assurance Technology Project

- **Market Demand**

- *The market is seeking solutions to sustainability.*
- *COTA is uniquely positioned with the expertise to provide some of solutions and in fact recover revenues for those solutions*
- *The new environmental market may be more sensitive to the consequences of dispute than established markets such as commodities and traditional goods and services.*
- *There is strong demand for a dispute resolution solution.*
- **The fundamental premise of the project is that protecting the value of the market and creating a business platform for the market to support the sustainability of the market for participants, stake holders, and investors is a new market opportunity to be developed and commercialized.**

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COTA Will Anchor the Alberta Carbon Offsets Market

- **The COTA solution....**
 - **holds the critical market practitioners to business and transactional standards**
 - through a process of certification and annual renewal
 - **advocates for sufficient offset credit yield through protocol promotion**
 - **drives efficient offset protocol implementation**
 - through review and preview against market application
 - **communicates market worth, transactional transparency, and function clarity to all internal and external market stakeholders**

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COTA Alberta Offset Market Goods and Services Assurance Technology Project

- ***Project Objectives***

- **To establish Alberta Offset commercial market transactional and governance standards.**
- **Synchronize the market standards with Regulatory guidance**
- **Design and commercialize a dispute resolution mechanism that may be applied to the market**
- **To design and commercialize a COTA operated business system that will allow the market standards and dispute resolution to be applied in a certification process**

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COTA Alberta Offset Market Goods and Services Assurance Technology Project

- ***Project Expected Outcomes and Deliverables***

- ***COTA membership and concept will be broadened to that of a wider trade association in order to include all mission critical market participants***
- ***A portfolio of commercial market standards will have been developed***
- ***A market dispute resolution process will have been developed.***
- ***A commercial business system will have been developed to allow commercial market standards to be applied to the Alberta Offsets Market through COTA***



Alberta Regulatory Framework

- *Rules to govern the System:*
 - *Standards – (quantification protocols) defines the supply of credits (what counts and how much and since when - protocols)*
 - *Rules around monitoring, verification and reporting on Carbon reducing projects*
 - *System Design*



Why Protocols?

- *Approved Protocols – a set of formulas and coefficients for the project*
 - *Science-based*
 - *International compatibility*
 - *Streamlined use*
 - *Automatic eligibility*
 - *Reduced costs and administration*
 - *Provides certainty for practice – GHG tonnes reduced*



Alberta Offset System Protocols

- *GHG Removals -Carbon Sinks (remove GHGs from atmosphere):*
 - *Tillage Management*
 - *Planting Trees (afforestation)*
- *GHG Emission Reductions:*
 - *Pork Operations*
 - *Anaerobic Digestion*
 - *Beef:*
 - *Feeding (edible oils)*
 - *Lifecycle (age at slaughter)*
- *Others:*
 - *Energy Efficiency (pork, dairy, poultry)*
 - *Biofuels*
 - *Enhanced Oil Recovery*
 - *Biomass Combustion*
 - *Composting (non Ag Materials)*
 - *Land Fill Gas*
 - *Waste Heat Recovery*



Alberta Protocols in Development

- *Buildings*
 - *Energy Efficiency Retrofit (new construction of residential, commercial and institutional)*
 - *Renewable Energy (residential and commercial)*
- *Renewable Energy*
 - *Wind*
 - *Run of the river*
 - *Solar*
- *Intermodal Switching*
- *Fly-Ash*
- *Recycling Plastics*
- *Land fill Bioreactors*
- *Acid Gas Injection*
- *Forest Carbon Management*
- *And perhaps others... we'll know on the 15th.*



Intent of the Offset System

- *Project-based*
- *Real emission reductions/removals from*
 - *Actions not covered by regulations*
 - *Actions that go beyond normal business operations*
- *Principles driven*
- *Effective and Efficient in Design and Implementation*

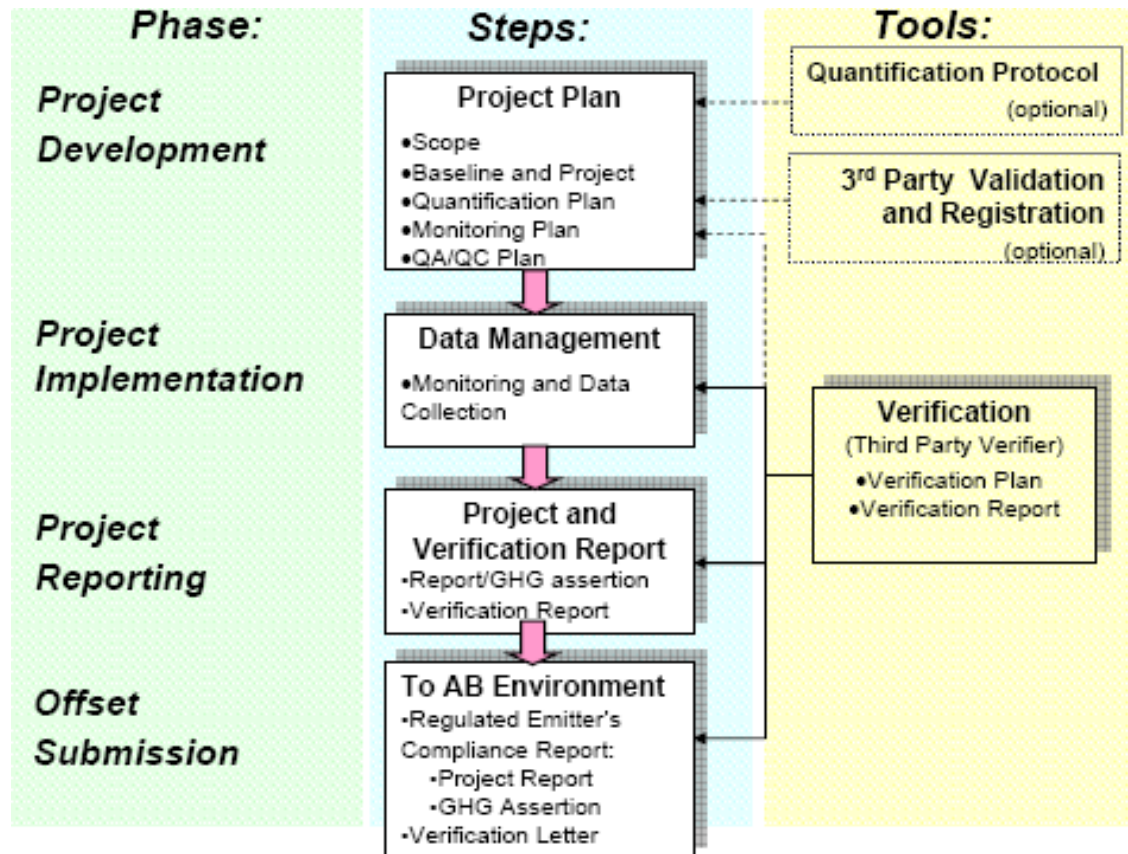


Project Eligibility Criteria

- *Specified Gas Regulation – Emission Offsets*
 - *Result from activities on or after Jan 1, 2002;*
 - *Be real, demonstrable, quantifiable, measurable;*
 - *Occur from actions not otherwise required by law;*
 - *Have clearly established ownership;*
 - *Be counted once for compliance purposes;*
 - *Be verified by a qualified third party;*
 - *Occur in Alberta.*



Offset System Design



Offset System Design (2)

- *Ex Poste Verification System*
 - *Need strong government approved protocols*
- *Registration – mandatory*
 - *Business Risk management tool*
- *Protocols*
 - *Developed on ISO 14064 Part 2 framework*
 - *Considered scientific and technical review*
 - *Basis for linking and building when other markets are developed*

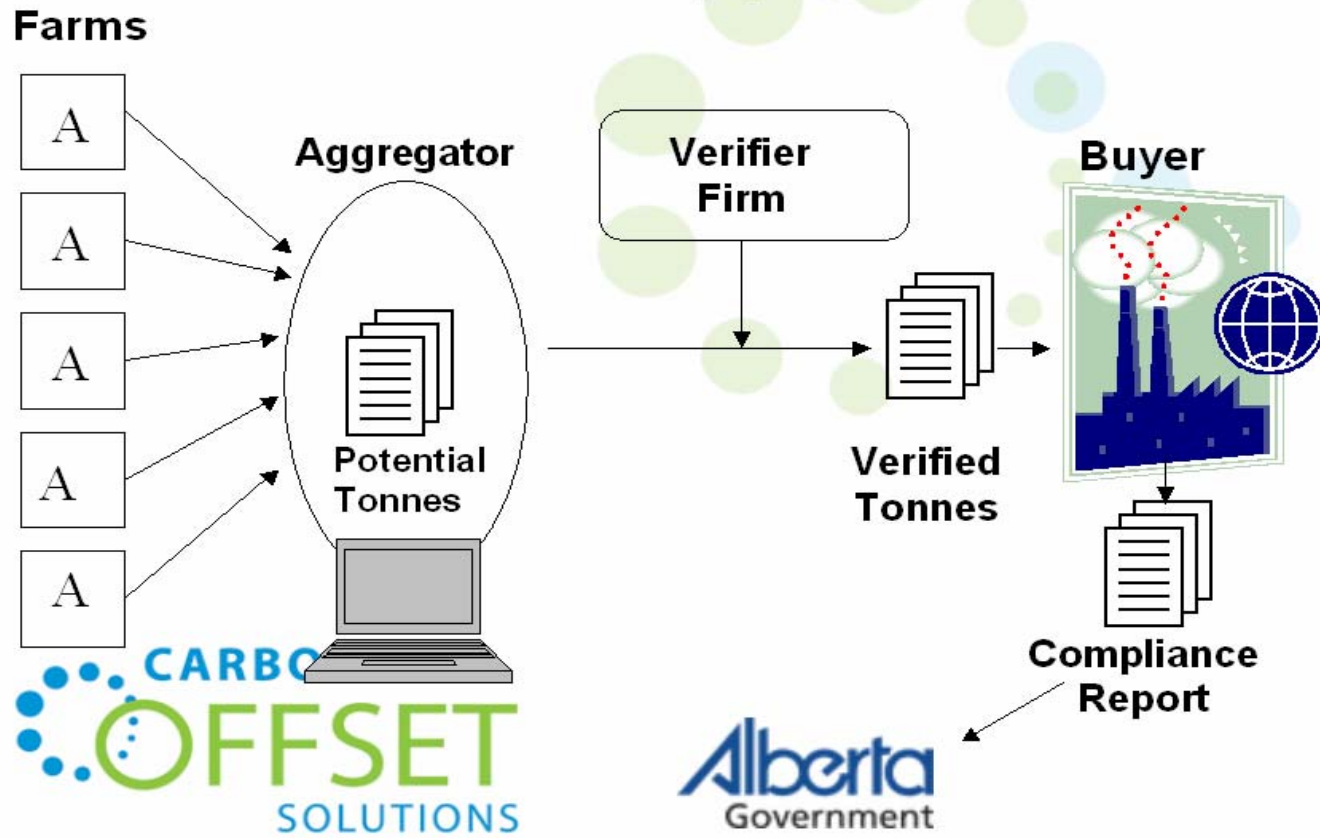


Purpose of the Registry

- *Showcase Alberta offsets projects and facilitate link with regulated emitters;*
- *Registry acts mainly as a bulletin board for project and VERR (offset) information;*
- *The Registry is not:*
 - *An exchange or a sight for brokers to initiate transactions;*
 - *A place that shows who transacted what, transactions will still be done on a bilateral basis;*
 - *A place to find out what price was paid for a unit.*



The C Supply Chain



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Role of Aggregation

- Any given farm – modest amounts
- Buyers seeking 50 to 100,000 tonnes
- Transaction Costs prohibitive for small projects
- Aggregators can provide cost and risk management for farmers



Role of Verification (Past-oriented/Must Have for credits)

- Assesses calculations of actual GHGs
- Consistency - Protocol/Offset Project Plan
- Occurs periodically – credit claim
- Answers:
 - Did all go according to plan?
 - Data complete and accurate?
 - Did something go awry?
 - Calculations correct?



Risks – Two Categories

Project Risk

- Ownership
- Quantification
- Creditworthiness
- Data and record management
- Intangible Commodity
- Default on delivery

Contract Risk

- Liability
- Reserve Holdbacks
- Transaction Cost Sharing
- Pricing



Transactions

- Seller relinquishing rights and title to verified emission reductions/removals achieved through their project
- Buyer purchasing right to use offsets created by someone else to meet their compliance requirement under the *Regulation*
- Bilateral agreement is the instrument of choice



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Delivery

- Transfers all ownership and rights to the Offset through the GHG Assertion and Verification Report
- Seller can no longer claim the Offset Credit
- Buyer uses GHG Assertion and Verification Report in their compliance report for compliance under the *Specified Gas Emitters Regulation*



When Can Trading Take Place?

- At any point in the offset credit creation process:
 - Prior to the start of the project
 - Following validation
 - After verification
- Timing impacts value and deal structure



Pricing

- Artificial cap on price = \$15/tonne
- Some selling for below this
- Price reflects risk in contract and value
- Will likely be last thing negotiated



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The Rules of the Market for Aggregation

- *A project structure with protocols and data management that will meet the requirements of the Alberta Offset System now and the Federal Offset System in the future*
- *The use of default or custom protocols*
- *A data management system to meet the needs for project and data verification*



Data Management Systems

- ***Institute DMS to connect monitored parameters with reported offset values***
 - ***Ensure the data are complete and accurate***
 - ***Consider opportunity for deliberate and unintentional corruption***
- ***Data controls are integral to DMS ensure:***
 - ***Completeness***
 - ***Accuracy***
 - ***Validity***
 - » ***Importance for verification***
 - ***Security***
- ***Data retention/working document requirements***

Alberta Environment,

Climate Change Central



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Expectations Have Been Created

- ***LFEs expected a robust and real offsets market***
- ***Investors in market services expected a return on investment***
- ***Agriculture and small business expected a new and long term market opportunity***
- ***Government expected a new and sustainable goods and services opportunity for Albertans***
- ***Real and sustainable GHG Mitigation would be achieved.***
 - ***Carbon offsets are now recognized world wide as a critical element for GHG reduction***
- ***Other constituencies are closely monitoring the lessons of the Alberta Market***



The Market

"It's All About the Data"

- ***The value of the Carbon Offset market depends upon the quality of the data management systems...***
 - *providing the emission reduction data and the business and environmental assurance systems that support them.*
- ***Both the business and the environmental assurance need to meet guaranteed standards...***
 - *in order for the market to reach sustainable levels of value.*
- ***Both assurance systems must work together...***
 - *or sustainable levels of market value will be difficult to achieve let alone maintain*
 - *This is not yet happening in the Alberta Offset market.*
- ***It is the goal of COTA to apply standards of environmental and business assurance.***



References

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- http://www.carbonoffsetsolutions.ca/offset_protocols/finalAB.html
- <http://www.climatechangecentral.com/>
- http://www.ghgregistries.ca/cleanprojects/index_e.cfm

