

ALBERTA
FOREST
GROWTH
ORGANIZATION

Forests and Energy:

Growing Towards a Carbon Neutral Alberta

OCTOBER 20-21, 2010



Canadian Institute of Forestry
Institut forestier du Canada  ROCKY MOUNTAIN SECTION



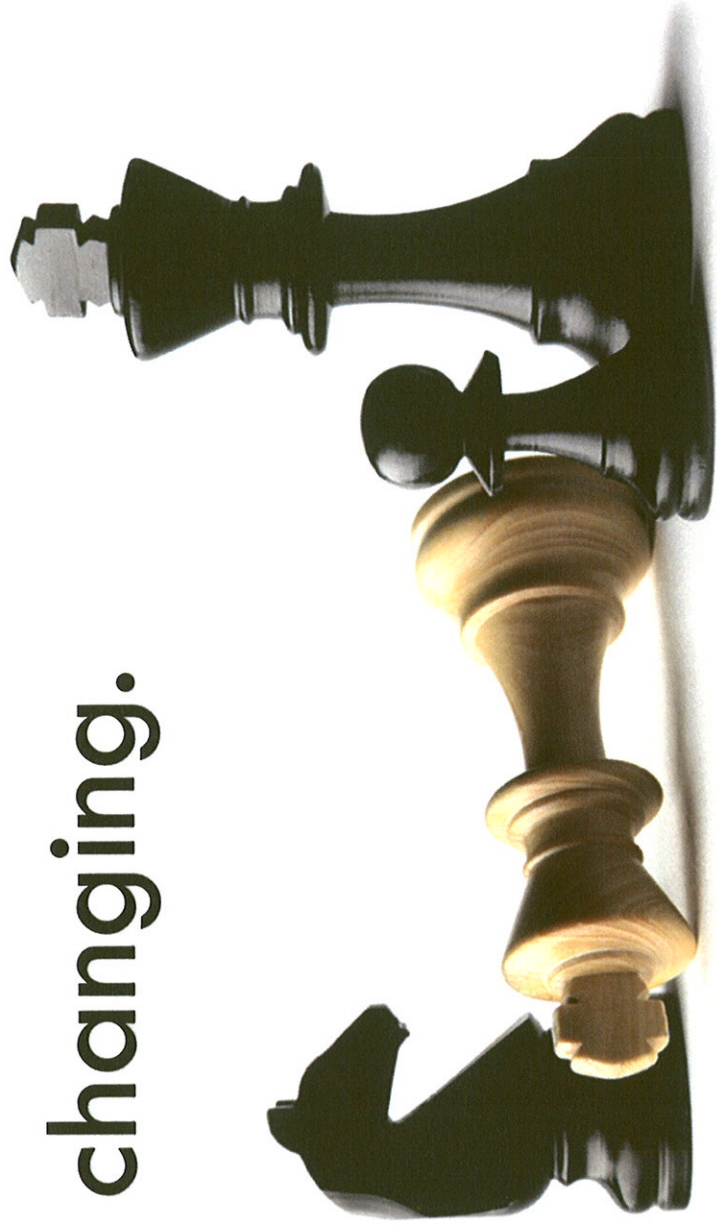
Growing Forward 

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RESEARCH
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*research growing
into practice.*

 CCEMC

 **TransCanada**
In business to deliver

The game is changing.



Be ready.

The **Alberta Forest Growth Organization (AFGO)** proudly invites the forest sector, energy sector, governments and others interested in forest-based carbon to attend the **third in a series of conferences** aimed at understanding, quantifying and certifying greenhouse gas (GHG) emission offset credits from Alberta's extensive forest area.

Focusing on the **business opportunities and challenges** in the **carbon trading market for forestry and other natural resource sectors, particularly oil and gas**, this conference has been designed to coordinate current and anticipated initiatives among players active on Alberta's forested landscape, and to foster **collaboration between forest and energy sector players**.

Simply put, this conference will examine the role Alberta's forests can play in helping drive the province and its energy sector towards a **carbon-neutral future**.

"While forest-based carbon capture will not address the entire current demand for emission offsets, even incremental offsets from the extensive forested lands in Alberta will likely be **significant** when accrued across the landbase," says Barry Waito, Executive Director of AFGO. "There's currently a lack of knowledge about the future of carbon trading in Canada's forestry sector, and with so much going on we need to **start working and learning together to understand the issues and maximize the opportunities that exist.**"

AFGO is a coalition of progressive forest companies and was created to **expand this knowledge and advance its application in Alberta**.

"**We've got a robust agenda covering nearly every facet of this emerging market,**" says Waito. "This conference will examine **carbon trading practices** from Europe and across North America, federal legislation and potential support for the forestry and partner sectors, and an overview of the global carbon market, carbon finances and standards."

The conference is intended to **foster collaboration across sectors** with common interests in the value of **forest-based carbon**. Success will be measured by the extent of **multi-jurisdictional cooperation** and **collaborative initiatives** arising after the conference.

"**Through our moderators and panel discussions, we expect a number of good ideas and solutions to arise as we bring these diverse partners together,**" says Waito. "**More important, we're going to foster the next generation of questions we can start answering together.**"

Book the date today. For more information or to register, visit the conference website at www.afgoconference2010.ca.

Confirmed speakers at the 2010 AFGO Conference include:

Vic Adamowicz
University of Alberta

Gary Bull
University of British Columbia

Kirk Andries
Climate Change Emissions Management Corporation

Jim McCammon
Alberta Newsprint Company

Milo Mihajlovich
Incremental Forest Technologies Inc.

Stan Blade
Alberta Innovates – Bio Solutions

Aldyen Donnelly
GEMCO

Andrew Hall
Capital Power

Karen Haugen-Kozyra
KHK Consulting

Werner Kurz
National Resources Canada,
Canadian Forest Service

Cindy MacDonald
West Fraser

Bob Savage
Alberta Environment

Alberta Sustainable
Resource Development

Moriz Vohrer
CarbonFixe – Germany

Srikanth Venugopal
TransCanada Energy Ltd.



Alberta Forest Growth Organization

Forests and Energy

Growing Towards a Carbon Neutral Alberta

October 20th - 21st, 2010

Maple Leaf Room, Lister Conference Centre, U of A

AGENDA

Day 1: Wednesday, October 20th, 2010

Carbon trading overview from Europe, North America and Canada.		
8:30 am	Registration and Continental Breakfast	
9:00 am	Opening Remarks	Barry Waito, AFGO
9:05 am	Welcome Comments	Evan Berger, Parliamentary Assistant and MLA for Livingston-MacLeod
9:20 am	Introductory Comments - Moderator	Milo Mihajlovich, Incremental Forest Technologies Inc.
9:35 am	Climate Forestation Projects - Overview on the current market activities	Moriz Vohrer , CarbonFix Standard, Germany
10:15 am	Coffee	
10:30 am	Canadian Forestry Overview	Juha Metsaranta, Canadian Forest Service
11:00 am	Voluntary Carbon Markets - A Participants Perspective	Rob Elms, North American Carbon
11:45 am	Questions	
12:00 pm	Lunch	
Comparison of regulatory environment in Canada and Alberta with global carbon markets.		
12:45 pm	Introductory Comments – Moderator	Willi Fast, Mixedwood Management Association (MWMA)
1:00 pm	1. North American Carbon Standard 2. Institutional Financial Arrangements for Forest Carbon Credit Transactions	Gary Bull, University of British Columbia
1:45 pm	Alberta's Offset System	Bob Savage, Alberta Environment
2:15 pm	Coffee	
2:30 pm	Forest Carbon Management Developments	Dan Wilkinson, Sustainable Resource Development
3:00 pm	Forest Industry Perspective	Bob Winship, Weyerhaeuser Company Ltd.
3:30 pm	Questions	
3:45 pm	Primer For Day 2	Willi Fast, MWMA

Day 2: Thursday October 21st, 2010

Carbon trading experiences from the industry sector		
8:30 am	Registration and Continental Breakfast	
9:00 am	Introductory Comments - Moderator	Steve Price, Bio Solutions
9:10 am	The North American Carbon Market: Slow And Easy Will Win The Race To Carbon Profits	Aldyen Donnelly, GEMCO
9:35 am	Carbon Management and the Alberta Newsprint Experience	Jim McCammon, Alberta Newsprint Company
10:00 am	To Be (Involved) Or Not To Be (Involved): An Industry Perspective On Forest Carbon Offsets	Cindy MacDonald, West Fraser
10:30 am	Coffee	
10:55 am	Forest Carbon Offsets – A Buyers Perspective	Andrew Hall, Capital Power
11:20 am	Questions	
11:45 pm	Lunch	
Carbon trading, current and future opportunities		
12:30 pm	Introductory Comments – Moderator	Vic Adamowicz, University of Alberta
12:45 pm	How To Leverage Innovation In The Pursuit Of GHG Emission Reductions – The CCEMC Experience	Kirk Andries, Climate Change Emissions Management Corporation
1:15 pm	Enhanced Forest Management & Afforestation Protocols	Milo Mihajlovich, Incremental Forest Technologies Inc.
1:45 pm	Biofuels, Biomass and Biochar	Karen Haugen-Kozyra, KHK Consulting & Keith Driver, Leading Carbon
2:15 pm	Coffee	
2:30 pm	Biochar – A Potential Carbon Sequestration Technology In Alberta	Anthony Anyia, Alberta Innovates – Technology Futures
3:00 pm	Carbon Trading Opportunities	Srikanth Venugopal, TransCanada Energy Ltd.
3:30 pm	Questions	
4:00 pm	Conference Summary	Vic Adamowicz, University of Alberta
4:15 pm	Closing Remarks	Barry Waito, AFGO

Speaker Biographies and
Presentation Abstracts

Barry Waito, President
Waito Resource Consulting, Manitoba, Canada



BIOGRAPHY

Barry is the President of Waito Resource Consulting.

Previous to this, he was employed with Louisiana Pacific Canada Ltd, as the Manager of Forest Policy and Sustainability with responsibilities across all operations in Canada. He has previously held positions of LP's Area Forest Manager in Manitoba and as Regional Forest Manager – Manitoba, and North-eastern British Columbia

Since graduating from Sault College in 1977, Barry has worked in government and the forest industry in Ontario, Manitoba and British Columbia. He has also worked as Assistant Manager, Maintenance Supervisor and Woodlands Superintendent for Chapleau Forest Products as well as Woodlands Manager for Lajambe Forest Products.

Through these positions, Barry has participated in the Class EA hearings in Ontario, negotiated Forest Management agreements in Manitoba and BC, developed Forest Management Plans and negotiated agreements with various First Nations in different provinces.

Barry chaired the 9th and 10th National Forest Congresses held in Ottawa, and was one of 20 people awarded the Queen's Golden Jubilee Medallion for his work in forest education within the sector.

He represented LP and was an active member on a number of local, regional and national committees and Boards including the Forest Industry Association of Manitoba, MESWG, Sustainable Forest Management Network, Forest Products Association of Canada, Canadian Forestry Association, National Forest Congress Committee, National Forest Strategy, Canadian Woodlands Forum, and the Manitoba Forestry Association.

Since starting his consulting company in 2008, Barry has worked on projects across Canada on subjects such as wood supply, strategic planning, project planning, management & implementation, biomass supply & opportunities and forest carbon workshops. He also serves as

the executive director of the Alberta Forest Growth Organization and has been instrumental in setting up the newly created Canada Land Resource Innovations non-profit entity. Barry is also a National Coordinator under the Canadian Boreal Forest Agreement with responsibilities for Working Groups covering Forest Practices and Climate Friendly Practices.

Waito Resource Consulting operates as a carbon neutral company and offsets the equivalent tonnes of CO₂ from vehicle and air travel through a tree planting program managed and verified by the Manitoba Forestry Association.

**Evan Berger, Parliamentary Assistant and MLA for Livingstone-MacLeod
Legislative Assembly of Alberta**



BIOGRAPHY

Mr. Evan Berger was elected to his first term as a Member of the Legislative Assembly for Livingstone-Macleod on March 3, 2008. On March 12, 2008, he was appointed parliamentary assistant to the Minister of Sustainable Resource Development. In addition Mr. Berger serves as a member of the Standing Committee on Resources and Environment and the Standing Committee on Privileges and Elections, Standing Orders and Printing.

Prior to serving with the Legislative Assembly of Alberta, Mr. Berger served as a member of council in the municipal district of Willow Creek, nine years of which were spent as reeve and six as chair of the Municipal Planning Commission and the Agricultural Service Board. Additionally, Mr. Berger has spent most of his life in the farming/ranching industry.

Active in his community, Mr. Berger has been a member of the following organizations:

- Mosquito Creek Foundation
- Nanton Recreation Board
- Nanton Curling Club
- Heritage Acres Antique Society
- Stavely Elks Club
- Willow Creek Regional Fire Services Committee

Mr. Berger and his wife, Laurie, live in Nanton with their three children: Talia, Brita and Joel.

**Milo Mihajlovich, RPF, Owner and Principal Consultant
Incremental Forest Technologies Ltd., Alberta, Canada**



BIOGRAPHY

Training and Accreditation:

Graduated from University of Alberta in 1976, Bachelor Science (Forestry)
Registered Professional Forester (Alberta - #0076)

Objective:

To work with people bringing science and public concerns together to resolve vegetation problems in a win – win environment.

Recent Experience:

Owner and Principal Consultant - Incremental Forest Technologies Ltd., 1996 to present.

Focus on incremental improvements in silviculture practice and vegetation management. Developed threshold based, risk managed approach to assessing need for and prescribing vegetation management treatments. Developed objective based prescription models using wildlife, environmental sensitivity and risk to as objectives equal to fiber production objectives. Participated in farmland afforestation in Western Australia remediating salt land and selling carbon offset credits in the late 1990's. Work with several First Nations peoples to understand and participate in forest vegetation program development and implementation.

Manager, Forestry Services – Ace Vegetation Control Services Ltd., 1994 – 1996.

Worked with forest industry, Monsanto Canada Inc., Dow AgroSciences Canada Inc., and Alberta Land and Forest Services to responsibly and thoughtfully introduce herbicides for forest management.

Vegetation Management Forester – Woods and Forest, South Australia. 1992 – 1994.

Conducted risk assessment on standardized vegetation management protocols. Suggested revisions to protocols and evaluated alternatives in research trials designed to evaluate risk reduction and effectiveness of treatments.

Previous Experience:

Research and Development experience in small grains, oilseeds and forestry with an agrochemical manufacturer.

Operational silviculture and land reclamation experience with the Alberta Forest Service.

**Moriz Vohrer, Chairman, Technical Board
Carbonfix Standard, Stuttgart, Germany**



BIOGRAPHY

Moriz Vohrer graduated in 2006 from the École Nationale des Eaux et Forêts in Nancy, France with a French-German double Diploma in forest sciences.

Since then he gained his professional experience working for the company of global-woods (Uganda, Paraguay) as directing forest manager and executed consultancy work for the Joanneum Research (Austria), the Timber-Forest-Trust (Vietnam), the GreenBeltMovement (Kenya) and the DPI Forestry Queensland (Australia).

Since 2008, Moriz Vohrer has been member of the technical board of the CarbonFix Standard and has been elected as its chairman.

In 2009 Moriz founded the company eFormic, which focuses on the development of online based software for markets which make the world more sustainable.

ABSTRACT

Climate Forestation Projects – Overview on the current market activities

The presentation aims to provide answers on four questions:

1. The current state of the carbon credit trading markets in Europe, specifically with respect to biological capture and storage.
2. European approaches to carbon offsets quantification and verification, especially from forest-based carbon capture initiatives – what are the important factors deemed essential for recognition and sale of forest-based carbon credits?
3. How are European approaches, and those of CarbonFix, different from current approaches being proposed in North America and elsewhere globally.
4. CarbonFix's outlook for forest-based carbon initiatives in Europe, North America and elsewhere globally: who will be the big buyers and sellers of biologically captured carbon credits (specifically forest-based), and how big will be the opportunities?

**Juha Metsaranta, Research Scientist
Northern Forestry Centre, Canadian Forest Service**



BIOGRAPHY

Juha Metsaranta is a Research Scientist at the Northern Forestry Centre in Edmonton, Alberta, where he conducts research on the interaction between forest carbon dynamics and climate change. He received his PhD in forest biology and management from the University of Alberta in 2008.

ABSTRACT

Forest Carbon Science and the Potential Role of Forests in Climate Mitigation

Forests remove carbon from the atmosphere and store it in the ecosystem in the form of trees, other vegetation, soils, and litter. Both climate change and forest management decisions will influence the magnitude and dynamics of the future carbon (C) and greenhouse gas (GHG) balance of forests. Understanding these processes is of scientific and policy interest because the extent to which forests are a C sink or source could influence the mitigation effort needed in other sectors to reach atmospheric CO₂ stabilization targets. In addition to their role as a C sink, forests also provide other ecosystem services and meet society's demands for products such as timber, wood fiber, and energy which can substitute more energy- and emissions-intensive products. Sustainable forest management seeks to find the balance between these often competing demands. Over the coming decades, the complexity of sustainable forest management will increase because it must now account for the role of forests in the global carbon cycle, how forests will respond to a changing climate, and how forests might be managed differently to contribute to mitigating climate change impacts and to adapt to these impacts.

**Rob Elms, P.Eng., Co-Founder and Chairman
Green Power Action Inc., Ontario, Canada**



BIOGRAPHY

Robert M. Elms, P.Eng. is a co-founder and Chairman of Green Power Action Inc. and the President and co-founder of North American Carbon Canada and coolAction.com Inc. Green Power Action is the Fund Manager for the Greening Canada Fund, one of Canada's first carbon offset funds. North American Carbon and coolAction.com were formed under Mr. Elms' leadership in the 1990s to participate in the emerging carbon markets. Many of Canada's initial greenhouse gas emission reduction trades were developed by North American Carbon. Mr. Elms holds a Bachelor of Engineering degree from Lakehead University. Mr. Elms is a registered professional engineer in the province of Ontario and a member of the Society of Automotive Engineers (SAE) and the Association of Energy Engineers (AEE).

ABSTRACT

Voluntary Carbon Markets - A Participant's Perspective

This presentation is an overview of the voluntary carbon offset markets based on the experience of North American Carbon Canada Inc. and its affiliate Green Power Action Inc. There will be a brief background on global climate change followed by a detailed review on the technology that produces offsets. There will also be reviews of quantification, verification and registration options, as well as due diligence, cost control and market motivators. Overall a presentation that should be informative for both buyers and sellers interested in voluntary carbon markets.

**Willi Fast, Scientific Director
MixedWood Management Association (MWMA)**



BIOGRAPHY

Since graduating from University of Alberta with Bachelor of Science in Forestry (1982) and Master of Science (1986) degrees, Willi has been practising as a forestry professional for almost thirty years. Past roles have included silviculture and tree improvement in Saskatchewan, timber management and forest genetics in BC, and silviculture research, forest growth and yield, and forest management planning in Alberta. For the past thirteen years, Willi has been a Principal with The Forestry Corp. in Edmonton. He serves as the Scientific Director for the Mixedwood Association of Alberta (MWMA), is a member of the Mixedwood Growth Model (MGM) Strategic Development Team, and helped create the Alberta Forest Growth Organization (AFGO).

**Gary Bull, Associate Professor
Department of Forest Resources Management
University of British Columbia, Faculty of Forestry**



BIOGRAPHY

Gary has spent most of his early career working in a consultative capacity with forest products companies, resource based communities, various government agencies and environmental non-governmental organizations. Internationally, he has worked with organizations such as the International Institute of Applied Systems Analysis in Vienna, the International Institute for Environment and Development in London, the Food and Agriculture Organization of the United Nations in Rome and the US Council on Foreign Relations in Washington. Recently, he has been supervising research projects with CIFOR, World Bank, Shell Canada, Wildlife Conservation Society, WWF, Iisaak Forest Resources Ltd., Forest Trends and FAO.

Gary has a background in commerce as well as three degrees in Forestry, specializing in economics and policy. He has an interest in global forestry policy issues and is currently studying forest and timber markets in Asia and ecosystem services markets in Afghanistan, Canada, China, Mozambique and Uganda . He is an advocate for interdisciplinary research.

**Bob Savage, Section Head, Regulatory and Mitigation Policy
Environment, Alberta, Canada**

BIOGRAPHY

Bob Savage has spent the past 20 years working in the field of integrated resource management and planning in Alberta. Currently, Bob serves as the Section Head of Regulatory and Mitigation Policy in Alberta Environment's Climate Change Secretariat where his responsibilities include the development and implementation of Alberta's climate change legislation and regulations, as well as developing policy related to greenhouse gas reporting, offset development, and the management of Alberta's Climate Change and Emissions Management Fund.

Bob's Educational background is in land use planning and resource economics and he holds an MBA in project management.

**Mr. Dan Wilkinson, Executive Director
Forest Economics Branch, Alberta Sustainable Resource Development**



BIOGRAPHY

Dan Wilkinson oversees activities dealing with forest industry competitiveness, the Canada/US softwood lumber agreement, forest tenure and fibre management and Alberta's new emerging bio-economy initiatives. In addition, Mr. Wilkinson represents the department on a number of cross-ministry committees.

He has more than 30 years of continuous experience with the Alberta Government, most with forestry. He has held positions as an Area Manager in Whitecourt and Peace River and various executive management positions within the forest service.

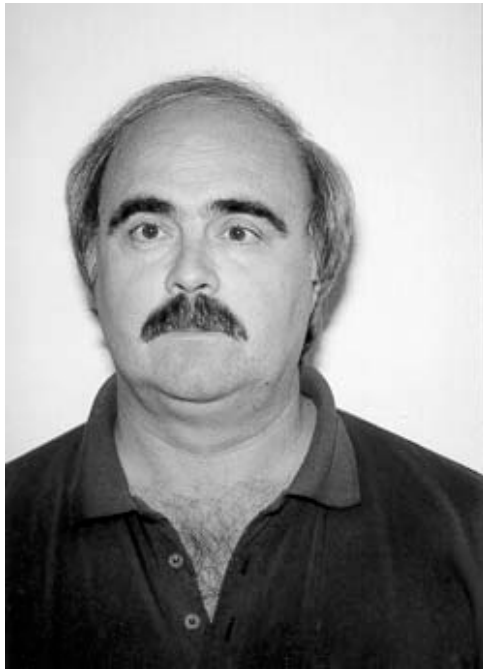
Mr. Wilkinson received his B.Sc. in Forestry with distinction from the University of Alberta in 1977 and is a member of the Canadian Institute of Forestry and the College of Alberta Professional Foresters.

**Bob Winship, Business Development Manager
Canadian Timberlands, Weyerhaeuser Company**

BIOGRAPHY

Bob Winship has a Bachelor of Science in Forestry and is a Registered Professional Forester. Bob currently works for Weyerhaeuser Company in a role supporting business development and strategic management. He has a long career in the forest industry involving all aspects of forest management and wood procurement. Bob has been involved in the management of many forest resource issues, on behalf of both Weyerhaeuser and the Alberta forest industry. His current role for Weyerhaeuser includes the pursuit of opportunities for bio-energy.

**Steve Price, Executive Team
Alberta Innovates – Bio Solutions**



BIOGRAPHY

Steve is a graduate of the University of Toronto. He commenced his career in Saskatchewan with the Department of Natural Resources, Forestry Branch. He held numerous positions with the Saskatchewan Government including Manager of Forest Inventory and Manager of Silviculture.

In 1983, Steve joined Forestry Canada as Senior Development Officer at the Northern Forestry Centre in Edmonton becoming Program Director, Regional Development in 1989. He served as the Director of Operations for the Canadian Forest Service in Ottawa returning to Edmonton in 1992 where his responsibilities included management of forestry research including climate change, fire systems, applied silviculture, social science and landscape management research units as well as management of operational programs including the Model Forest Program and the First Nations Forestry Program in Manitoba, Saskatchewan, Alberta and the NWT. Steve also managed several international projects in southern Africa and SE Asia.

In May 2007, Steve retired from the federal government. In June 2007, he joined Alberta Advanced Education and Technology as Executive Director, Alberta Forestry Research Institute. He is currently a member of the Alberta Innovates Bio Solutions executive team.

**Aldyen Donnelly, Founding President
Greenhouse Emissions Management Consortium (GEMCo)**



BIOGRAPHY

WDA Consulting Inc., with Ms. Donnelly as its Principal, is a Vancouver-based independent consulting practice that offers expertise in economic and financial analysis, with a principal focus on market adoption of new environmental technologies and business processes; environmental technology evaluation and marketing; and technology commercialization financing strategies.

In April 1996, Aldyen contracted to act as first and founding President of the Greenhouse Emissions Management Consortium (GEMCo). GEMCo was a “learning by doing” initiative designed to have a limited operating life. From 1996 through 2004, GEMCo members were private sector entities and Crown corporations who jointly developed and invested in speculative greenhouse gas emission reduction credit forward agreements with two principal goals: (1) developing new ways of financing innovation and (2) acquiring real market experience on which to base corporate policies and business strategies.

Aldyen currently acts as President of the Greenhouse Emissions Service Corporation (“GEMServ”). GEMServ manages long term GHG Emission Reduction Credit (ERC) supply agreements on behalf of original GEMCo investors. Corporations currently represented on GEMServ’s Board include: the ATCO group of companies, BC Hydro, Capital Power, New Brunswick Power, Nova Scotia Power Inc., Ontario Power Generation, SaskPower and TransCanada Energy. GEMServ will remain a going concern until the end of the terms or final disposition of the long term ERC supply agreements under management (roughly 2015).

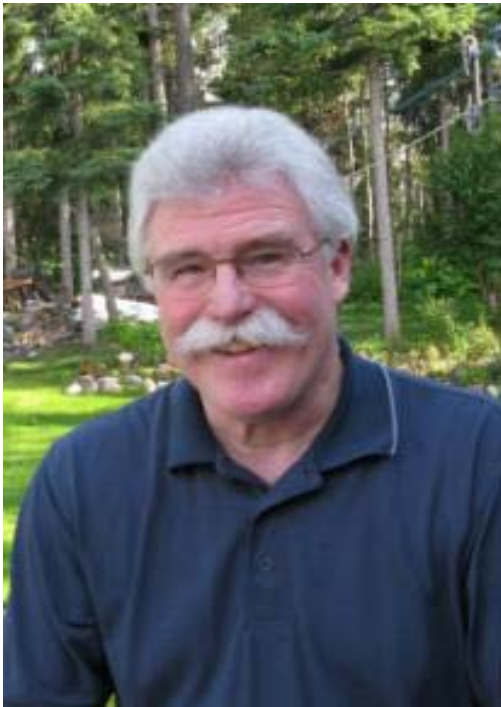
Outside of GEMCo/GEMServ, recent WDA Consulting Inc. clients served by Aldyen have included:

- Island Corridor Foundation (Vancouver Island, British Columbia)
- the Province of Nova Scotia, Ministries of Energy and Environment: assisting in the development of provincial greenhouse gas and pollution regulatory strategies;
- one of Canada’s largest renewable power producers,
- Encana Corporation (Calgary, Alberta);

- SaskPower (Regina, Saskatchewan);
- Southern Railway of British Columbia (New Westminster, British Columbia);
- TransCanada Energy (Calgary, Alberta).

From 1994 to 1996, Aldyen served on contract as Senior Economist in Westcoast Energy Inc.'s Sustainable Development Office. Westcoast was a founding member of GEMCo and GEMServ.

**Jim McCammon, Manager, Forest Resources
Alberta Newsprint Company, Alberta, Canada**



BIOGRAPHY

Jim is currently the Manager of Forest Resources at Alberta Newsprint Company and has been with ANC since their inception in 1989. Prior to that he held a number of forest management positions in West Central Alberta. He has a Bachelor of Business Administration and a Bachelor of Science in Forestry. He has been active on many strategic forest issues in Alberta in recent years (Woodland Caribou, Mountain Pine Beetle, Integrated Land Management, etc) and is now active in developing carbon management opportunities.

**Cindy Macdonald, Manager, Environmental Affairs
West Fraser Timber Co. Ltd., Vancouver, BC.**



BIOGRAPHY

For over 10 years, Cindy Macdonald has been actively involved on behalf of West Fraser and the forest products industry in BC and nationally, in greenhouse gas and climate change policy and regulatory development. She currently Chairs the Forest Products Association of Canada's (FPAC) Climate Change Committee and is a member of FPAC's Forest Carbon section. She is also a member of the industry/government Forest Sector Climate Action Steering Committee in BC.

Cindy holds a law degree and has been a member of the Law Society of BC for 20 years. In another life, she worked as a fisheries biologist and holds a Bachelor of Science.

Andrew Hall
Capital Power Corporation, Alberta Canada

BIOGRAPHY

Andrew Hall works for Capital Power Corporation in the Environment and Emissions Portfolio group where he is responsible for originating, developing and transacting carbon offset projects. Capital Power is one of the largest players in the Alberta offset market and has a carbon portfolio including forestry offsets, landfill gas and N₂O abatement spanning North America. Previously Andrew worked as a Senior Consultant at a US based carbon consulting firm providing carbon advisory services to the financial sector in Canada and the US. Prior to this Andrew spent six years at Lloyds Banking Group in Tokyo and London.

Andrew has a BSc in physical geography and an MBA specializing in finance/carbon finance from the University of Toronto's Rotman School of Business. He has presented on carbon related topics to industry, government and at international conferences. In addition, Andrew developed and instructs the post-graduate Carbon Finance course at the University of Toronto.

ABSTRACT

Forest Carbon Offsets: A Buyer's Perspective

Under the AB SGER regulation as well as proposed federal cap and trade regulations in Canada and the US, carbon offsets are a key flexibility mechanism and play an important role in cost containment. Given this there is increasing interest in how to procure offsets, what standards are most likely to qualify, what price to pay etc. One unifying theme in the offsets discussion is that bio-sequestration projects, notably forestry, are likely to qualify under most foreseeable regulatory regimes.

This discussion will focus on the opportunities for forestry offsets and why they are attractive from a buyer's perspective. Also covered will be some of the challenges that are posed by forestry projects, both from a regulatory and technical standpoint. Finally, suggested paths forward will be introduced focusing on collaborative opportunities between the forestry sector and industry.

**Dr. W.L. (Vic) Adamowicz, Professor, Department of Rural Economy
University of Alberta, Canada**



BIOGRAPHY

Vic Adamowicz is a Distinguished University Professor in the Department of Rural Economy, Faculty of Agricultural, Life & Environmental Sciences, University of Alberta. He obtained his BSc and MSc from the University of Alberta and his PhD from the University of Minnesota.

Adamowicz's research interests are in developing methods that integrate environmental goods and services into economic analysis and designing policies and institutions that help capture the importance of environmental services in economic decision-making. His main research areas include environmental valuation, economic assessment of environmental changes, and consumer choice modeling. His research interests also include the incorporation of economic perspectives into sustainable forest management and the development and implementation of economic instruments for environmental protection.

Adamowicz was the Scientific Director of the Sustainable Forest Management Network of Centres of Excellence, one of Canada's Networks of Centres of Excellence, from 1998 to 2004. He was awarded the J Gordin Kaplan Award for Excellence in Research in March 2005 and the Canadian Institute of Forestry's Canadian Forestry Scientific Achievement Award in October, 2004. He was elected to be a Fellow of the Royal Society of Canada, Academy II – Social Sciences, in 2007. In 2001-2002 Adamowicz was a Gilbert White Visiting Fellow at Resources for the Future in Washington DC and in 1998/99 he was a Killam Annual Professor at the University of Alberta.

Kirk Andries, Partner
URSUS Public Affairs Group, Alberta, Canada



BIOGRAPHY

Kirk Andries is a Partner in the URSUS Public Affairs Group, located in Edmonton, Alberta. Kirk is responsible for providing clients with strategies, programs and processes that enhance their ability to work with governments and improve their competitive position.

Kirk has more than 20 years experience in the public and private sector. He is an experienced natural resources manager who is adept at facilitating solutions for his clients that offer business and political advantage. He is currently Chair of the Operations Management Committee of the Climate Change and Emissions Management Corporation (CCEMC), Managing Director of the Alberta Biodiversity Monitoring Institute (ABMI), Project Manager for the Forest Industry Workforce Strategy and is actively working on policy for land use planning, forest industry sustainability and Integrated Land Management.

Prior to establishing his own business, Kirk was the Director of Public Affairs with Alberta Pacific Forest Industries, one of Alberta's leading forest companies. Kirk was also instrumental in establishing a government relations consultancy practice in Calgary, Alberta and served a broad array of energy and forestry clients and was the company's national forestry practice group leader.

Prior to joining the private sector, Kirk worked on both domestic and international policy issues from a public sector perspective. He was a lobbyist in Washington, D.C. representing Canadian interests in international resource management policy and programs. Kirk was also the Executive Assistant to the Minister of Forestry, Lands and Wildlife in Alberta, and a senior advisor to the department's Executive Committee.

Kirk is a Registered Professional Forester. He is a graduate of the University of Alberta where he earned a Certificate in Public Administration and a Bachelor of Science in Forestry. Kirk is a past member of the Environmental Protection Advisory Committee (Ministerial appointment) and past

Director of the Alberta Registered Professional Forester Association. He is also a member of the Canadian Institute of Foresters and the Canadian Public Relations Society.

ABSTRACT

The work of the CCEMC and the need to leverage innovation in pursuit of managing GHG emission reductions. What is the business, what do we do, what we will fund and how technology is an important strategy in addressing our climate change challenges. A description of the business model and what makes CCEMC unique and the importance of a technology fund as a compliance tool in achieving GHG reductions. Our interest in biological based contributions will also be described as well as our work in establishing a biological knowledge network.

**Karen Haugen Kozyra, President
KHK Consulting, Alberta, Canada**



BIOGRAPHY

Born in Edmonton, obtained Biological Sciences Diploma from NAIT, BSc in Plant Sciences and MSc in Soil Microbiology and Biochemistry from the University of Alberta

Between 1991 and 1997, ran an Environmental Consulting Business out of her home office, contracting with federal, provincial and university agencies.

For 13 years after that, Karen served in various sustainable policy, planning and technical positions within the Dept of Agriculture and Rural Development. She held the Environmental and Land Use Policy Member position with the Department and spent 5 of those years working at national level on shaping carbon market policy and opportunities for the agriculture sector.

Karen was seconded to Climate Change Central, a not-for-profit established by the Government of Alberta in 2000, in early 2007. There, she implemented the necessary market processes, infrastructure and tools needed to get the Carbon Offset Market off the ground. In that role, Karen and her Team leveraged the previous carbon offset national work to help build sound policies, quantification protocols, tools and infrastructure needed to facilitate the development of a Carbon Offset Market in Alberta.

Currently, Karen is working as a freelance consultant working with various groups in the US and Canada, active in the Carbon Offset space.

Karen is also an active member of the Alberta Institute of Agrologists.

**Anthony Anyia, Manager, Bioresource Technologies
Alberta Innovates – Technology Futures**



BIOGRAPHY

Dr. Anthony Anyia completed a Master of Science degree in Crop Science at the Ambrose Alli University in Nigeria and was a lecturer at Ambrose University from 1992 to 1996. He received his PhD in 2001 from Humboldt University, Berlin, Germany. He joined the Alberta Research Council (ARC) as a Research Scientist in 2002; and has risen to Senior Research Scientist and Manager of the Bioresource Technologies Business Unit of ARC now part of Alberta Innovates-Technology Futures (AITF). He is also an Adjunct Professor in the Department of Renewable Resources, University of Alberta. As a plant physiologist with interests in drought tolerance and water use efficiency, Dr. Anyia has presented results of his work in many national and international symposia and conferences. He is the author of several refereed journal articles, book chapters and conference proceedings. As the Manager of Bioresource Technologies at AITF, Dr. Anyia provides scientific and management leadership to programs in biomass feedstock development, waste management and land reclamation. He is responsible for developing the biomass pyrolysis and biochar R&D strategy in AITF.

ABSTRACT

Biochar – a potential carbon sequestration technology in Alberta

Biochar (defined as the non-fuel use of charcoal) is a carbon-rich residue produced by low-oxygen pyrolysis from biomass (agriculture/forest residues and waste biomass). There is good evidence that soil-applied biochar establishes a long-term, stable and easily measurable carbon sink. Therefore, by capturing carbon dioxide from the atmosphere in plant tissues, and by converting them into a highly stable form of carbon, a low cost and effective type of carbon storage emerges. Furthermore, the addition of biochar to poor soils, such as the extensive

marginal and solonchic soils of Alberta, hold the promise of increasing crop yields due to anticipated maintenance of soil fertility, quality and productivity.

Biochar is an emerging technology with global impact and considerable potential benefits for Alberta. Alberta Innovates – Technology Futures has conducted biochar work for the past three years. We have developed small-scale (batch and continuous types) pyrolyzers and have produced and tested biochar from different Alberta feedstock. This presentation will explore the potential benefits of large scale biochar production and use in Alberta and will also highlight the major technology and market gaps that must be filled to achieve these benefits.

**Srikanth Venugopal, Director, Environmental Risk & Trading
TranCanada Corporation**



BIOGRAPHY

Mr. Venugopal serves as the Director of Environmental Risk and Trading at TransCanada. In this role, he advises senior leaders on climate and air policy and is responsible for commercial management of environmental risks for energy assets.

Prior to his current role, he has worked in varying capacities at TransCanada that includes operations and engineering, business development, and corporate environment. He started his career as a consulting engineer.

Mr. Venugopal holds a Bachelors and Masters in Engineering with expertise in risk management and environmental policy. He is actively involved in industry associations such as Electric Power Research Institute, Canadian Electricity Association, Industry Provincial Offsets Group, Environmental Markets Association and the International Emissions Trading Association.

With more than 50 years' experience, TransCanada is a leader in the responsible development and reliable operation of North American energy infrastructure including natural gas and oil pipelines, power generation and gas storage facilities.

ABSTRACT

TransCanada has been an active participant in the development of the carbon market both regionally and federally. Regionally, it has been active in Alberta and RGGI. Nationally it is active in developing and transacting offsets in voluntary systems like CAR. Mr. Venugopal will discuss TransCanada's experience in carbon markets, from development, due diligence and transaction. He will also shed light on TransCanada's views on the potential of carbon markets in the forestry sector.

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**Forests and Energy: Growing
Towards a Carbon Neutral Alberta**

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