

Corporate Profile



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www.strategywest.com

Introduction

Strategy West Inc. is a premier Calgary-based consulting firm with a focus on Canada's oil sands industry.

Strategy West's mission is to help its clients make effective energy industry strategic decisions.

The firm was established in 1998 by its co-founders Bob Dunbar and Gillian Hobbs. Bob continues the firm's consulting practice following Gillian's retirement.

Consulting Services and Oil Sands Industry Training

Strategy West's oil sands industry consulting services include:

- Strategic studies related to industry technology, economics, impacts and risks
- Development of long-term industry outlooks with regard for technical, economic, market, personnel and environmental issues/challenges
- Objective advice for new entrants and potential industry investors
- Board, executive and senior management briefings
- Alberta representation, retainer services and business development for out-of-industry, out-of-province and out-of-country clients

Introduction to the Canadian Oil Sands

Bob Dunbar developed the very popular 2-day course "Introduction to the Canadian Oil Sands" that he delivers through the Petroleum Institute for Continuing Education (PEICE). Further information including a course description, course outline, scheduled course dates and on-line registration is available at <http://www.peice.com/coursedetails.aspx?course=1879>

Bob Dunbar began oil sands industry training in 2001. Since that time he has delivered this and a predecessor course to approximately 2,000 industry and non-industry personnel. Participant course ratings have been excellent and are available upon request.

Customized In-House Oil Sands Industry Training Courses

In addition to the 2-day public course offered through PEICE, Strategy West is pleased to offer customized in-house oil sands industry training services. Bob Dunbar has delivered customized courses to a broad cross-section of industry and non-industry clients in Canada, the United States and Europe. They have included 1-hour, 2-hour, half-day, full-day and 2-day sessions.

Assignments

Recent consulting assignments carried out by Strategy West include:

- Preparation of long-term bitumen production, synthetic crude oil production and unprocessed bitumen supply outlooks for the oil sands industry
- Preparation of a long-term outlook for Western Canadian upgrading projects
- Examination of long-term oil sands industry energy, natural gas and hydrogen requirements
- Evaluation of the economic feasibility and development of regulatory applications for the developer of a proposed commercial oil shale project
- Assessment of the technical and economic feasibility of various fuel and product options for a world-scale polygeneration facility in the Province of Saskatchewan
- Assistance and advice to the developer of a new grass-roots oil sands upgrading project
- Evaluation of long-term base aggregate requirements for the oil sands industry
- Assessment of oil sands industry requirements for chemical reagents for gasification, flue gas desulphurization and boiler feedwater treating processes
- Examination of cogeneration opportunities for Canadian oil sands projects
- Development of the feedstock supply outlook for a proposed bitumen upgrading project
- Modelling of the potential for production of hydrogen from natural gas for fuel cell vehicles in Canada

- Documentation of federal and Alberta provincial oil sands regulatory requirements
- Development of a procedure manual, process flow diagrams, and industry training materials for the Alberta oil sands royalty approval process
- Assistance with the preparation of regulatory applications for a proposed oil sands project
- Evaluation of supply costs and economic returns for various oil sands in situ and mining/extraction recovery technologies and upgrading facilities
- Estimation of the local, regional, provincial and national economic impact of a proposed oil sands development
- Estimation of tax revenues for a proposed oil sands development
- Briefing on the oil sands industry to the Investment Committee of a large Canadian private equity fund
- Briefings on the oil sands industry to Boards of Directors and senior management
- Providing oil sands industry, company and project information to capital providers/investors

Biography: Bob Dunbar

Bob Dunbar, President, Strategy West Inc., has more than 40 years of Canadian and international energy industry experience including more than 15 years as an energy industry consultant. His consulting focus is on Canadian oil sands industry business and technical issues and training. Bob's expertise and knowledge of the Canadian oil sands industry is widely recognized. He is frequently contacted by the print media for his views on the industry and has been quoted in the New York Times, The Economist, Fortune, Oilsands Review, Oilweek, Alberta Oil, the Globe and Mail, the National Post, the Calgary Herald and others. He has been interviewed on Canadian television and radio including BNN and CBC. Bob has made presentations on Canada's oil sands industry at conferences in Canada, the United States, Europe and Asia.

On a leave of absence from his consulting practice, Bob worked for the Canadian Energy Research Institute (CERI) from 2002 to 2004 as Senior Director, Research. While at CERI, he led the completion of several oil sands industry studies including CERI's Oil Sands Supply Outlook, released in March 2004. Prior to establishing his consulting practice in 1992, Bob was employed by Petro-Canada for 12 years in senior management positions related to strategic planning, gas marketing and project development. Prior to joining Petro-Canada, he worked for the Alberta Energy Resources Conservation Board (ERCB) for ten years. He held various senior positions at the ERCB including Manager, Oil Sands Department. Before joining the ERCB, he worked for Shell Canada for four years.

Mr. Dunbar has an M.S. in Mechanical Engineering from the California Institute of Technology and a B.Sc. in Mechanical Engineering from the University of Alberta. He has completed management programs at the University of Calgary, Queen's University and the Banff Centre, and has completed the Canadian Securities Course. Bob is a registered Professional Engineer in the Province of Alberta.

Presentations: Bob Dunbar

Bob is a frequent presenter at oil sands industry conferences. His recent public presentations are listed below:

- *"Dirty Oil" to "Green Bitumen": Can CCS Make this Happen?; 2009 Canadian Heavy Oil Association Fall Business Conference; Hanging on for the Ride; Calgary, Alberta; November 10, 2009*
- *Oil Sands and its Future; 31st Canadian Association of Petroleum Landmen Conference; Negotiating the Road Ahead; Lake Louise, Alberta; September 30, 2009*
- *Oil Sands Outlook: How will the Challenges Facing the Industry affect Growth?; 2009 Global Petroleum Conference; Calgary, Alberta; June 9, 2009*
- *Will Canada's Oil Sands Industry Survive the Market Turmoil?; 6th Annual Canadian Oil Sands Summit; Insight Information; Calgary, Alberta; January 13, 2009*
- *Canada's Oil Sands: Challenges and Opportunities; Certified Management Accountants of Alberta - Calgary Chapter Luncheon Meeting; Calgary, Alberta; September 16, 2008*

- *The Economic Implications of the Challenges Facing Canada's Oil Sands Industry*; 2008 Global Petroleum Conference; Calgary, Alberta; June 12, 2008
- *The Oil Sands: What is Needed to Realize the Potential?*; National Buyer/Seller Forum; Canadian Manufacturers & Exporters; Edmonton, Alberta; March 27, 2008
- *Outlook and Issues for Canadian Oil Supply: Natural Gas and Oil Sands Production*; Canada's Energy Future: 2008 Workshop; National Energy Board; Ottawa, Canada; January 22, 2008
- *Key Economic Challenges Facing the Canadian Oil Sands Industry*; 5th Annual Canadian Oil Sands Summit; Insight Information; Calgary, Alberta; January 16-17, 2008
- *Will the Challenges Facing the Oil Sands Industry Limit Growth?*; Canadian Association of Petroleum Land Administration; Calgary, Alberta; May 16, 2007
- *Oil Sands Outlook: How will the Challenges Facing the Industry affect Growth?*; 4th Annual Canadian Oil Sands Summit; Calgary, Alberta; January 16-17, 2007
- *Will the Challenges Facing Oil Sands Projects Curtail Industry Growth?*; Canadian Society for Engineering Management; Calgary, Alberta; December 11, 2006
- *The Oil Sands: Canada's World Scale Hydrocarbon Resource*; Kuala Lumpur Explorationists; Technical Meeting; Kuala Lumpur, Malaysia; June 13, 2006
- *Canada's Oil Sands: A World-Scale Hydrocarbon Resource*; 11th Annual Asia Oil & Gas Conference; Balancing the Interests of Consumers and Producers; Kuala Lumpur, Malaysia; June 13, 2006
- *Oil Sands Industry Outlook*; Presentation to the National Energy Board 2007 Energy Futures Working Group; Calgary, Alberta; May 5, 2006
- *Oil Sands Industry Energy, Hydrogen and Cogeneration*; Cogeneration, Gasification and Steam Generation for the Oil Sands and Other Applications; COGENCanada Seminar; Calgary, Alberta; April 5, 2006
- *The Contribution of Canada's Oil Sands to World Oil Supply*; Washington State University – Conference on Global Oil Depletion and Implications for the Pacific Northwest; Spokane Washington; October 4-5, 2005

- *Will Canada's Oil Sands Make a Difference?* Centre for Global Energy Studies - 26th Executive Retreat Meeting; Bagshot, Surrey, England; September 29-30, 2005
- *Updated Oil Sands Supply Outlook*; Canadian Energy Research Institute 2005 Oil Conference; Kananaskis Village, Alberta; May 3, 2005
- *The Oil Sands: Canada's World-Scale Hydrocarbon Resource*; Alaska Support Industry Alliance; Anchorage, Alaska; March 10, 2005
- *Energy and Hydrogen for Alberta's Oil Sands*; Canadian Institute; Oil Sands Supply and Infrastructure Conference; Calgary, Alberta; February 10, 2005
- *Oil Sands Supply and Investment Needs in the Coming Years*; China-Canada Energy Cooperation Conference; Edmonton, Alberta; November 26, 2004
- *Oil Sands Supply Outlook*; Canadian Energy Research Institute 2004 Oil Conference; Kananaskis Village, Alberta; March 30, 2004
- *Oil Sands Supply Outlook - Potential Supply and Costs of Crude Bitumen and Synthetic Crude Oil in Canada, 2013-2017*; Canadian Energy Research Institute Breakfast Seminar; Calgary Petroleum Club; March 10, 2004
- *Oil Sands Supply Outlook - Potential Supply and Costs of Crude Bitumen and Synthetic Crude Oil in Canada, 2013-2017*; Canadian Energy Research Institute Media Briefing; March 3, 2004
- *Natural Gas Use in Alberta's Oil Sands Industry*; Canadian Energy Research Institute North American Natural Gas Conference; Calgary, Alberta; March 1, 2004
- *Potential for Nuclear Energy in Canada's Oil Sands*; Canadian Heavy Oil Association Annual Conference; Calgary, Alberta; November 18, 2003
- *Oil Sands Construction Outlook*; Reed Construction Data Construction Industry Forecasts Conference; Toronto, Ontario; September 17, 2003
- *Economic Risks Facing Athabasca SAGD Bitumen Production*; Third Annual Athabasca Oil Sands Conference; Canadian Heavy Oil Association; Fort McMurray, Alberta; September 3, 2003

- *Is There a Role for Nuclear Energy in Alberta's Oil Sands?* Joint meeting of the Canadian Society of Chemical Engineering and the American Institute of Chemical Engineers; Edmonton, Alberta; August 14, 2003
- *Does Nuclear Energy Have a Role in the Development of Canada's Oil Sands?* Canadian International Petroleum Conference 2003; Calgary, Alberta; June 10 – 12, 2003

Copies of these presentations are available at www.strategywest.com

CERI Projects: Bob Dunbar

During the period September 2002 to December 2004, Bob Dunbar held the position Senior Director Research, at the Canadian Energy Research Institute (CERI). He led the following studies at CERI:

- *Oil Sands Supply Outlook: Potential Supply and Costs of Crude Bitumen and Synthetic Crude Oil in Canada; 2003-2017* (Multi-client CERI Study No. 108): Estimation of oil sands industry supply costs, identification of the major issues facing the industry, and development of crude bitumen and synthetic crude oil supply outlooks under five different development scenarios.
- *Economic Value Analysis; Aggregate and Quicklime Demand Outlook (Client Specific Study)*: Development of a long-term outlook (2003-2070) for crude bitumen and synthetic crude oil production from the Athabasca and Cold Lake Oil Sands Areas. The study was used to provide a long-term outlook for the client's limestone and quicklime products.
- *Comparative Economics of Nuclear and Gas-Fired Steam Generation for SAGD Applications (Client Specific Study)*: Analysis of costs of supplying steam to a hypothetical steam assisted gravity drainage (SAGD) in situ recovery project, comparing conventional gas-fired generators and an Advanced CANDU ACR-700 nuclear facility.
- *Co-generation at a Major SAGD Oil Sands Project (Client Specific Study)*: Evaluation of co-generation opportunities for a proposed commercial SAGD *in situ* recovery project in the Athabasca oil sands. The steam generated would be used for SAGD bitumen recovery. The electricity generated would be used to satisfy the project's internal needs with the surplus sold into the Alberta Interconnected Electric System.

- *Supply Costs for the Steam Assisted Gravity Drainage Process (Client Specific Study):* Evaluation of the economics a hypothetical SAGD bitumen production project located in northeastern Alberta. The study provided the client with an update of CERI Study No. 99, published in September 1999.
- *Development of CO₂ Storage Economic Model (IEA Weyburn CO₂ Enhanced Oil Recovery Monitoring and Storage Project):* Development of a fit-for-purpose CO₂ Economic Model that provides the ability to evaluate the economics of a specific CO₂ capture, transportation and storage facility (for either sequestration or enhanced oil recovery).

Alliances and Associates

Strategy West has a formal strategic alliance with the Canadian Centre for Energy Information of Calgary, Alberta as a “Partner in Energy”. Additionally, Bob Dunbar is an oil sands, liquefied natural gas, business strategy and training “Advisor” to the Centre.

The Centre is a Calgary-based non-profit organization created in 2002 to meet an urgent need for information about all parts of the Canadian energy sector from oil, natural gas, coal, thermal and hydroelectric power through to nuclear, solar, wind and other sources of energy. Through its print publications and web portal, the Centre delivers accurate, factual and current information on Canadian energy. The Centre creates an aggregated forum in which to increase awareness and understanding of energy-related issues among North American audiences.

Strategy West also has a formal strategic alliance with the FACTS Global Energy Group of Honolulu, Hawaii. Additionally, Bob Dunbar is a “Distinguished Associate” of FACTS.

In addition to its head office in Honolulu, FACTS has offices in Beijing, London and Singapore. FACTS was founded by Dr. Fereidun Fesharaki in 1983. The company was the first consulting firm to exclusively focus on oil and gas markets East of Suez. FACTS' operation is supported by its Senior Associates, a network of consultants that include more than twenty experts/specialists in the key areas of the oil and gas sector. FACTS Senior Associates' have expertise in the following areas:

- Crude oil and petroleum product markets
- Petroleum refining: techno-economic and financial analysis
- Natural gas markets, liquefied natural gas (LNG) supply and demand outlook
- Geo-politics of oil and OPEC behavior

- Energy policy issues in individual countries: economic reforms, deregulation, and privatization.

Strategy West also has associations and in many cases has carried out consulting assignments with the following firms and organizations:

- Advantage Insight Group Inc. of Calgary, Alberta
- Global Business Consultants, LAA (GBC) of Caracas, Venezuela
- LeapFrog Energy Group of Mississauga, Ontario
- Lenef Consulting (1994) Limited of Calgary, Alberta
- S2S (Scenarios to Strategy) of Calgary, Alberta

In 1996, Bob Dunbar was a co-founder of Governance West Inc., a consulting firm specializing in assisting boards of directors to achieve excellence in the governance of their organizations. From its headquarters in Calgary, Alberta, Governance West serves clients in the business, public and not-for-profit sectors. While no longer a Principal, Bob continues as an Associate and maintains a close relationship with its other co-founders and Principals, Stella Thompson and Gillian Hobbs.

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