

PROFILE

In 1990, Mr. Fleming founded DEMAND SIDE ENERGY Consultants Inc. (DSE), Canadian-based energy management firm specializing in commercial and industrial energy audits, energy action plans and Greenhouse Gas Emission Inventories and Reporting. More than 340 projects have been successfully completed under his direction and the firm's unique and successful approach to technology transfer and Demand Side Management programs is widely recognized.

Mr. Fleming brings to projects over 20 years experience in commercial facility energy audits, energy use verification and engineering reviews for energy performance contracts. An energy auditor and modeller by training Alex has experience in DOE 2 , BESA, Blast Visual DOE, and Carrier's HAP program. Energy auditing for existing facilities is conducted on an in-house model spreadsheet using ASHRAE bin method for heating/cooling load calculations

As an Energy Manager and Planner for government and major industry, Mr. Fleming has an ongoing role for design, implementation and operation of electric and gas energy management programs, including technology based initiatives aimed at efficiency improvement for boilers, motors, adjustable speed drives, fans and pumps.

EXPERTISE

Mr. Fleming's work on DSM program design, development and delivery is well regarded throughout both Canada and the United States. Some of his recent publications and presentations are regarded as being among the most thoroughly discussed. He has contributed widely to the development of Canadian and international utility efficiency programs.

- *Studies into energy and GHG reduction opportunities for Governments*
- *Electric and Gas Utility DSM Programs*
- *Electric & Gas Utility Conservation Studies*
- *Large Scale Commercial Energy Studies*
- *Evaluations: Impact and Process Evaluation.*

Commercial Energy/GHG Assessments With over 500 energy audits completed and extensive commercial sector audit and training experiences in Jamaica,

Slovakia, Malaysia, Brazil and India, Mr. Fleming and his team of professionals are an asset to any project that emphasizes end-use rationalization and energy impact realization.

- *BC Hydro Conservation Potential Study – Sector Expert 2003; 2006.*
- *BOMA Go-Green Energy and Water Audit Service Provider: Creit, The Forks; Winnipeg Convention Centre*
- *Integrated Design Professional LEED –2004- 2006*
- *Measurement and Verification Professional-CMVP – Health Science Centre; Safeway; Brandon University 2004-2006*
- *First Nations Heating System Option Modelling (2006)*
- *Controls Retro-commissioning Provider – Manitoba Hydro 2006*
- *Technical and financial review of Project energy Performance Contracts. NRCan 2002-*
- *BC Hydro Energy Manager (2005-6)*
- *First Nations Energy Mapping (2005)*
- *Energy Audits and Modelling:*
 - *Federal Government Sustainability Audits (3) 2006*
 - *Seven Oaks Hospital(2006)*
 - *St. Mary's Academy School(2005)*
 - *MTS Communications (2005)*
 - *Winnipeg Convention Centre (2005)*
 - *Brandon University (2004)*
 - *Winnipeg Technical College (2004)*
 - *Mount Carmel Clinic (2004)*
 - *Holy Rosary Church (2004)*
 - *Winnipeg Health Science Centre (2003)*
- *Manitoba Hydro DSM Potential Study 2002/03*
- *Manitoba Transportation and Government Services GHG buildings Assessments. -2002*
- *City of Winnipeg Building Retrofit - 2001-2002*
- *Health Sciences Centre: Winnipeg 2000*
- *ESCo Service Development project India*
- *Environment Canada (House In Order)*
- *BCBC Green buildings Assessment (BC)*
- *Earl's restaurants (Tin Palace Retrofit)*
- *Tanaga National Malaysia: National Assessment*
- *Jamaica Public Service: National Assessment*

PRESIDENT

Energy Performance Reviews: Mr. Fleming's key role is to provide objective technical evaluations and monitoring to validate energy savings for both the commercial and industrial sectors. As a Bridging Consultant, Owners representative or an Engineering Project reviewer, Alex brings a wealth of experience from commercial/industrial facility energy cost avoidance opportunities to energy reviews for project insurance services.

- Teracen Boiler Tune BTU program (BC)
- SCDCSO School Division (ON)
- Peel School Division (ON)
- Massachusetts Bay College
- Coquitlam School Division (BC)
- Delta School Division (BC)
- Regina School Division: *NRCAN Sponsored*
- DSFM School Division (MB) *NRCAN Sponsored*
- Brandon School Division: *NRCAN Sponsored*
- Massachusetts Bay College: Ameresco

RELEVANT PROJECT EXPERIENCE

Birk's Building (2006)- Provided IDP and Modelling Services this LEED registered project. (2006)

New Construction Baseline Study – MB Hydro 2006. Performed an investigation into building energy performance relative to MNECB and CBIP, in addition to a sustainability assessment of materials used for 20 newly constructed facilities in Manitoba.

Brandon University: (2004-6) Assessment of energy savings opportunities/measures and baseline energy savings calculations. Completed a campus wide Energy Retrofit Assessment (ERA) and a successful application for federal government funding under the implementation phase of the program.

First Nations Energy Mapping (2005-2006): Baseline energy assessment and community awareness for 20 First Nations in Saskatchewan and Manitoba.

Municipal Energy Assessments: Provided energy assessment for municipal building stocking compete with modelling for hockey and ice recreation centres, municipal offices, swimming pools.

Winnipeg Convention Centre (2005): Energy baseline and identification of substantial cost saving measures. Building and equipment condition report for a financial analysis in preparation for a future facility expansion of Canada's first convention facility.

St. Mary's Academy (2005): Baseline energy use and savings opportunity assessment of this Winnipeg heritage site.

Winnipeg Health Science Centre: (2003/04) Assess and quantify the energy savings opportunities/measures for Manitoba's largest health care facility. Delivered a "Gold Award" winning energy conservation and greenhouse gas long-term plan published at:
www.vcr-mvr.ca/registry/out/C3028-WHSC-03-PDF.PDF

St. James-Assiniboia School Division (2003/04) Recommendations for Energy retrofit assistance programs through NRCan.

Manitoba Hydro Conservation Potential Review, 1999 - 2003:

Performed all technical and market analysis for the Industrial, Commercial and residential Sectors in Manitoba. Provide the utility with Manitoba's residential, commercial and industrial sector energy use and conservation potential. The Study reconciled utility energy sales at the sector, segment and technology levels.

PROFESSIONAL ASSOCIATIONS

Association of Professional Engineers, Manitoba

BC Association of Professional Engineers,
Association of Energy Engineers

American Society of Heating, Refrigerating and Air Conditioning Engineers

Chair, Manitoba Energy Management Task Force

Chair, Building Energy Management Manitoba