

Environmental Interface Limited

JOHN D. COWAN P.Eng, M.B.A, C.M.V.P.

CAREER HIGHLIGHTS

1. **Energy management consulting** to direct industrial and commercial facility owners towards energy or environmental objectives. Consulting expertise encompasses strategic planning, financing, procurement and management of engineering and/or installation services, contract negotiation and arbitration, review and monitoring, training of staff. Work has featured consultations on the Energy Performance Contracting industry around the world.
2. **Practical business management** for energy services contractors (ESCOs):
 - Co-founded and managed Rose Technology Group (now Optimira Energy Solutions) and developed it into a leading energy service company (1984 - 1989).
 - Management consultant for new ESCOs in Canada, USA, China, Brazil, Thailand, Poland and Croatia.
3. **Energy management results** through designing and directing numerous successful energy management projects. Early personal successes included projects realizing annual savings of \$1,000,000/yr in 25 High Schools (1982 - 1984) and \$350,000/yr in 2 hospitals (1986 - 1988). Subsequent more extensive real savings have been through training and direction of staff or management guidance for clients.
4. **Verification of energy savings claims** and monitoring methods. Advice for utilities and governments on the state of the art, and leadership in drafting two industry standards for reporting energy savings. Developed and currently presenting a technical training course on Measurement & Verification. On a special board for certifying M&V professionals.
5. **Emission trade facilitation and verification** of emission reduction credit claims for a wide variety of industries, in partnership with technology specialists. Recognized as a Verifier under the Ontario Emission Trading Code.

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EMPLOYMENT SUMMARY

Current Businesses Founded and Owned by John Cowan:

Environmental Interface Limited, Toronto (since 1996) Owner. Independent management consultant directing buildings and industrial plants in reducing their environmental impacts through effective strategies and management processes for energy use.

Kaladar Enersave Management Inc., Ottawa (since 1998) Co-founder of a specialist firm providing energy management process consulting for institutional building owners in Canada (www.kaladar.ca).

ERVCO LLC, Oakland, California, (since 2003) Co-founder of a specialist firm verifying emission reduction claims in the United States.

1989-2000 Cowan Quality Buildings, Toronto, Owner

Independent consultant aimed at making commercial and institutional buildings more Healthy for occupants and more Energy Efficient.

1984-1989 Rose Technology Group Ltd, Toronto, Vice President

Founding partner of this leading Energy Services Company (now named Optimira Energy Solutions). A variety of senior management objectives were met in developing this consulting firm into an industry leading design-build contractor.

1978-1984 Engineering Interface Ltd, Toronto, Principal

An energy management consulting engineering firm. Beginning as a junior engineer, rapidly developed to become a Principal and Assistant Director of Engineering in the Operations Division.

1974-1978 Trans-Northern Pipe Line Co. Ltd, Toronto, Engineer

Hydraulic and metering engineering to improve pipeline efficiency.

1972-1974 Imperial Oil Enterprises Ltd, Edmonton - Drilling Engineer in training.

Calgary - Engineer in training, pipeline and oil field automation installation, supervision, and commissioning.

EDUCATION SUMMARY

1981 M.B.A. York University Focused on Finance, Accounting, and Economics

1972 B.A.Sc., Mechanical Engineering, with honours, University of Toronto

1968 Ontario Scholar and Science Medal, Grade 13, Upper Canada College, Toronto
First Prize, Metro Toronto Science Fair

SPECIAL TECHNICAL TRAINING

1990 Successful Air System Design and Retrofit, ASHRAE, Correspondence Course

1987 Project Management, York University, Faculty of Administrative Studies

1985 Boiler Efficiency, Boiler Efficiency Institute, Toronto

1979 Lighting Retrofit Design, General Electric, Cleveland, Ohio

1973 Oil Drilling Engineering, EXXON, Houston, Texas

SKILLS

- Listening to the needs of senior management and plant operating personnel.
- Business strategic planning and management for energy service companies or their investors.
- Analytical review of technical reports and clear and precise reporting of variances from good standards. This review skill is applied to energy and emission reduction claims, predictions and proposals.
- Energy retrofit project management including economic evaluations.
- Interpretation of building energy usage patterns.
- Mechanical and lighting retrofit design for improved space quality and energy efficiency.
- HVAC load calculation and basic design for air handling, heating, and cooling systems.
- Adult education, on the job and in a classroom setting.
- Direction of volunteer industry committees.
- Verifier under the Ontario Emission Trading Code.

MAJOR CLIENTS (References available on request)

Association of Energy Engineers, Atlanta, U.S.A.
Boiler Inspection and Insurance Company of Canada, Toronto
British Columbia Ministry of Education, Victoria
Canadian International Development Agency, Hull
Centennial College, Toronto
Central Mortgage and Housing Corporation, Ottawa
City of Kingston, Parks and Recreation Department
City of Toronto, Planning and Development Department
Consumers Gas (now Enbridge Gas Distribution), Toronto
Department of National Defence, Ottawa, Toronto, Winnipeg
Environment Canada, Hull
European Bank for Reconstruction and Development, London, U.K.
Hastings County Board of Education, Belleville
Highmark Properties, Toronto
Metropolitan Toronto School Board
Municipality of Metropolitan Toronto
Natural Resources Canada, Ottawa
Ontario Hydro and Ontario Power Generation, Toronto
Ontario Ministry of Agriculture Food and Rural Affairs, Guelph
Ontario Ministry of Colleges and Universities, Toronto
Ontario Ministry of Community and Social Services, Toronto
Ontario Management Board Secretariat, Toronto, London
Public Works Canada, Facilities Maintenance, National and Ontario Region
Queensway-Carleton Hospital, Ottawa
Saskatchewan Department of Government Services, Regina
Scarborough Board of Education, Toronto
Slough Estates Canada Ltd, Toronto
The Toronto Hospital (now University Health Network)
West Park Hospital, Toronto
The World Bank, Washington, D.C., U.S.A.

PROFESSIONAL ACTIVITIES & MEMBERSHIPS

Current

- Efficiency Valuation Organization (EVO), a non-profit corporation publishing industry guidance on methods of evaluating the effectiveness of energy efficiency activities (“IPMVP”) and financing energy efficiency projects (www.evo-world.org):
 - Chair of the Board
 - Member of the Executive and Website Committees
 - Member, joint EVO/AEE “Measurement and Verification Professional” Certification board.
- American Society of Heating Refrigerating and Air Conditioning Engineers (ASHRAE):
 - ASHRAE Guideline 14 2002, Measurement of Energy and Demand Savings, revision committee.
 - Corresponding Member TC 7.6, a committee focused on building energy use.
- Professional Engineers of Ontario (PEO), Member.
- Environmental Markets Association (EMA), Member, Canadian Chapter.
- Association of Energy Engineers, Member internationally and Southern Ontario Chapter.
- Sustainable Buildings Canada, Member

Past

- EVO: Chair or co-chair of the Technical Committee for the publication the International Performance Measurement and Verification Protocol (IPMVP) (1998-2007)
 - Member of the Revisions and Emissions sub-committees of the Technical Committee
- ASHRAE: Environmental Health Committee, chair of Education sub-committee
 - TC 7.6, member and chair of Research and Program sub-committees
 - Toronto Chapter - Board of Governors and TEGA Committee Chair.
 - Guideline 14 preparation committee 2002: Measurement of Energy and Demand Savings
- Greenhouse Gas Protocol – assisted in drafting and review of the Corporate and Project Accounting modules, and the Grid Electricity module
- Pilot Emission Reduction Trading (PERT), Toronto – various committees.
- Canadian Energy Efficiency Alliance, Member.
- International Society for Indoor Air Quality
- Air and Waste Management Association

PUBLICATIONS

- Canadian Property Management, November 2001, Something Has Got to Give: Asset Management & Carbon Credits
- ASHRAE Journal, August 1997, "Measuring" Energy Savings For Modernization Projects (peer reviewed)
- Energy Manager, September 1996, The "Art" of Measuring Savings
- Canadian Hospital Engineering Society Quarterly Journal, July 1994, IAQ Pitfalls of Energy Management Programs
- Federal Buildings Initiative publication, 1994, Managing Energy Performance Contracts in Federal Buildings
- Federal Buildings Initiative publication for Crown buildings, 1992, Health and Safety Guidelines
- Construction Canada, Sept/Oct 1991, Indoor Air Quality Checklist
- Health in the Workplace, March 1991, How to Improve Office Air Quality Through Energy Management.
- Indoor Air '90, Precedings of the 5th International Conference on Indoor Air Quality and Climate, Toronto 1990, Vol 3, Page 431, The Partnership of Indoor Air Quality and Energy Management. (peer reviewed)
- Air and Waste Management Association 1985, Energy Impact of Outdoor Air Ventilation Rates, A Specialty Conference Presentation.
- ASHRAE IAQ '86, Implications of Providing Required Outdoor Air Quantities in Office Buildings.
- ASHRAE Transactions, 1984, Component Analysis of Utility Bills, A Tool For The Energy Auditor. (peer reviewed)
- Canadian Consulting Engineer, 1982, An article on communications between Retrofit Design Engineers and building owners and operators.