

## ECONALYSIS CONSULTING SERVICES

### Roger M.R. Higgin

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Roger Higgin brings over 30 years of senior executive experience in the energy and environment sectors in both the public and private sectors. He combines his policy, strategic business planning and regulatory experience in his consulting work. His recent appointments include regulation of gas and electric utilities with the Ontario Energy Board. His other executive positions include COO in a high-tech firm, CEO in natural gas R&D, Assistant Deputy Minister of Energy Ontario Government, Deputy Commissioner of Environmental Services City of Toronto.

### EXPERIENCE

#### **Econalysis Consulting Services- Senior Associate Consultant 2000 to present**

- Provision of consulting and advisory services and regulatory intervention support for Electricity, Gas and Telecommunications Regulatory Proceedings
- Electricity
  - Hydro Quebec Interruptible Power Rate
  - OEB RUD Model for Distribution Rates
  - Stakeholder Consultative-Independent Market Operator (IMO)
  - Review of IMO 2002 Fees Submission
  - Review of IMO 2004 Fees Submission
  - Review of Manitoba Hydro Wuskwatim Project\*
  - Review of Ontario 2006 EDR
- Natural Gas
  - OEB Gas Distribution Access Rule
  - OEB Natural Gas Forum 2004
  - Enbridge Consumers Gas (OEB)
    - Consultative on Comprehensive PBR Plan
    - Quarterly Rate Adjustment Mechanism Applications
    - Consultative on Demand Side Management
    - Review of 2002 Rates
    - Review of 2003 Rates
    - Review of 2004 Rates
    - Review of 2005 Rates
  - Union Gas (OEB)
    - Unbundling of Rates and Services
    - Consultative on Demand Side Management
    - Quarterly Gas Cost Adjustment Mechanism Applications
    - Review of 2004 Rates

- Other
  - Societe en Commandite Gaz Metropolitan (SCGM) Unbundling \*
  - Natural Resource Gas 2001 and 2002 rates ADR Settlement
  - BCUC Gas- Gas Cost Adjustment Mechanism Staff Paper
  - BCUC Outsourcing of Customer Care to CustomerWorks LLP
  - Sithe Energies Canada Application for natural gas Supply Pipeline
  - ATCO Gas/Electric Transfer of Default Supply to Direct Energy \*
  - BCUC ICBC Cost allocation 2004 (public auto insurance)
- Telecommunications Sector
  - CRTC PN 00 27 Restructured Bands
  - CRTC PN 00 99 Scope of Price Cap Review
  - CRTC PN 01 125 Monitoring Canadian Telecommunications Industry

\* Expert Witness

## **Ontario Energy Board**

### **Board Member 1996 to 2000 (Retired June 2000)**

- Regulation of gas and electric utilities in Ontario. Holding proceedings, writing and rendering Decisions and Orders. Scope included facilities, rates, gas cost and generic proceedings. Examples are rates for Enbridge Consumers Gas and Union Gas, PBR plan for Enbridge Consumers Gas, standard supply service for electricity distributors, revenue requirement and transmission rates for Ontario Hydro Services Company (now Hydro One).
- Member of Rates and Licensing Committees of Board and team member for development of Codes.
- Deregulation
  - Chaired/Participated in the Following Regulatory Proceedings:
    - 1999 and 2000 revenue requirements and rates for Ontario Hydro Networks (now Hydro One) – Transmission and Distribution
    - Hearing on Standard Supply Service (SSS)
    - Rates for unbundled Transmission tariffs for Hydro One
  - Member of Internal Committee on Codes and Standards:
    - Transmission Access Code
    - Retail Settlement Code
    - Affiliate Relations Code
    - Performance Based Regulation for Electricity Distributors
- Cost of Service Regulation
  - Review of Ontario Hydro Rates 1988-91
  - Presided over and wrote numerous Rates and Facilities Decisions
  - Targeted PBR Decision for Enbridge Consumers Gas
  - Outsourcing of CIS-Union Gas Limited
  - Separation of Ancillary Programs – Union Gas Limited
  - Merger of Union Gas and Centra Gas Ontario
  - Affiliate Relations Rule
  - Gas Marketing Code
  - Member Internal Rates Committee

**Unisearch Associates Inc.****General Manager and Chief Operating Officer 1995 to 1996**

- Responsible for Business Planning, Reorganization, Refinancing and Restructuring of \$2 million high technology environmental instrumentation and service growth company. Establishment of marketing, production, financial management and securing new bank and equity financing. Strategic & Distribution alliances.

**Gas Technology Canada and CGRI****President and Chief Executive Officer 1992 to 1995**

- On behalf of Canadian Natural Gas Distribution Sector, operated \$8 million Natural Gas Research and Development program including Canadian Gas Research Institute Laboratory and the Gas Technology Canada technology development investment portfolio.

**Toronto Department of Public Works and the Environment****Deputy Commissioner Environmental Services Division****1991 to 1992**

- Responsible for new Environmental Services Division with 600 staff dealing with waste management, air and water quality, transportation systems management, infrastructure planning and development, energy efficiency, departmental IT planning and capital budgeting.

**Ontario Energy Board****Board Member 1988 to 1991**

- Regulatory/Administrative Commissioner. Chairing Public Hearings-Electric & Gas Utilities. Review of Ontario Hydro Rates and Capital Plans.
- Writing Decisions and Orders.
- Representing Board at meetings & conferences.

**Ministry of Energy****Assistant Deputy Minister- Programs & Technology Division****1984 to 1988**

- Staff complement 74, annual budget - \$35 million.
- Input to Policy and Strategy on all aspects of Energy Supply and Demand Allocation of over 80% of the Ministry's budget to program priorities.
- Organizational design and organizational development in the Division.
- Federal/Provincial relations. Representing the Ministry at numerous public events involving speaking engagements, TV and radio.

**Ontario Energy Ventures****President 1986 to 1988**

- In charge of the wind-up of Ontario Energy Corporation's subsidiary (OEV) and \$100 Million in venture capital investments in technology companies.

- Director of eight of the subsidiary companies. Responsible for portfolio management, strategy and negotiations leading to divestiture, conversion of investments into carried interest or folding of companies.

**Ontario Ministry of Energy  
Executive Coordinator 1980 to 1984**

- Alternative and Renewable Energy Group.

**Ontario Ministry of Energy  
Senior Advisor 1974 to 1980**

- Special Studies and Renewable Energy.

**Ontario Ministry of Environment  
1973 to 1974 Branch Head**

- Special Studies and Program Planning, Air Resources Branch.

**Ontario Ministry of Environment  
1971 to 1973 District Engineer**

- Air Pollution Abatement Section

**1970 to 1971-Consulting Engineer**

**1968 to 1970 Univ. of Toronto Post-graduate Research Fellow and Lecturer**

- Chemical Engineering Department

**Directorships & Committee Memberships Held**

**1995-96 Director**-Unisearch Associates Inc.

**1991-1995 Director** -Gas Technology Canada, CGRI,

**1984-88 Director** - Ontario Energy Ventures

**1984-88 Chairman of the Board**-Ontario Energy Consortium Kenya/Canada Energy Project

**1991 Chairman Energy and Minerals Task Force**

Ontario Round Table Environment and Economy

**1982-1988 Member**-University Research Incentive Fund Selection Committee

**Scientific Advisor**-Premiers Council Tech Fund and NSERC

**Professional Affiliations**

Professional Engineers of Ontario

**Education**

**Masters of Business Administration**

University of Toronto, Faculty of Management Studies, Dean's List 1986

## **Ph.D.**

Fuel Science and Applied Chemistry, University of Leeds, England, 1968.  
Thesis: "Shock Tube Ignition of Hydrocarbon Fuels" - high speed chemical reactions and computer simulation of reactions.

## **B.Sc. with 1st Class Honours**

Fuel Science and Combustion Engineering, University of Leeds, England, 1965.  
Majors: Heat Transfer, Chemical Reactions, Coal, Oil and Gas Production and Utilization.

## **Selected Publications/Presentations**

- Demand Side Management A Customer Perspective. CAMPUT Educational Conference Whistler BC April 2003
- Higgin, R.M.R., Dean, D.A., "Integrated Resource Planning", Presented at the Annual Meeting of the Ontario Natural Gas Association, Toronto, September 1990
- Higgin, R.M.R., "Non Utility Generation In Ontario", Presented at CAMPUT Educational Conference, Lake Louise, Alberta, May 1990
- Higgin, R.M.R., "Regulation of the Crown Owned Electric Utility In Ontario", Presented at CAMPUT Educational Conference, Lake Louise, Alberta, May 1990
- Higgin, R.M.R., "Conversion of Refuse to Energy in Ontario Canada and the Provincial Energy from Waste Program", Conversion of Refuse to Energy Conference, Berlin, West Germany, October 1979
- Higgin, R.M.R., "Ontario Biomass/Energy from Waste Program", CSChE Conference, Halifax, 1978
- Orgill, J.F. and Higgin, R.M.R., "The Effect of Component Costs on Solar Systems Design", Renewable Alternatives Conference, Solar Energy Society of Canada, London, 1978
- Higgin, R.M.R., "Windpower Applications in Ontario", CSME Annual Meeting, Toronto, 1978
- Higgin, R.M.R., "Novel Energy Sources", 26th CSChE Conference, Toronto, 1976
- Higgin, R.M.R., "Solar Heating for Buildings in Ontario", Sharing the Sun, Joint ISES/SESCI Conference, Winnipeg, 1976
- Higgin, R.M.R. and Brown, C.K., "Preliminary Assessment of the Potential of Wind Generators as Fuel Savers in A.C. Community Diesel Power Systems in Ontario", Sharing the Sun, Joint ISES/SESCI Conference, Winnipeg, 1976
- Chisamore, G.C. and Higgin, R.M.R., "Ontario Resources Recovery Program", Conversion of Refuse to Energy Conference, Montreaux, Switzerland, 1975
- Higgin, R.M.R., Ogner, D.J. and Shenfeld, L., "Frequency and Particle Size Distribution of Lead in the Toronto Urban Aerosol", 1975
- Higgin, R.M.R., "Shock Tube Studies of the Dissociation of Ammonia and Methane", Joint ACS/CSChE Conference, 1970
- Higgin, R.M.R. and Williams, A., "Ignition Delay of Methane/Oxygen Methane/Oxygen/Butane Mixtures in Shock Tubes", 12th International Symposium on Combustion, Poitiers, France, 1968

## Articles

- Northern Miner, September 18, 1976; Renewable Energy Resources Merit Continuing Study"
- Conservationist, March 1977
- Ontario's Energy from Waste Program: Perspective March 1981
- Time for Reassessment of Alternatives: Oil Week July 1982