

## Bruce Cameron

**Bruce Cameron**  
Principal Consultant

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### Professional History

- President PAMEC.Energy Association 2018 to present
- Vice President PACE Atlantic 2020-2021
- Senior Associate, Quality Urban Systems of Tomorrow (QUEST) 2017 to present
- Adjunct Fellow, University of Southampton 2016 to present
- Province of Nova Scotia 1996-2016, Director and Executive Director, Acting Deputy Minister
- Offshore Energy Research Association (OREA) 2006-2016 Board Director/Officer
- Carbon Capture and Storage Research Association of Nova Scotia, CCSC of Nova Scotia 2013-2014 Board Director
- Canadian Broadcasting Corporation 1974-1996 Editor, Reporter, Producer

### Education

- Carleton University, B.A. Sociology and Psychology, 1973
- Carleton University, B.A. Journalism, 1975 (Hon)
- Dalhousie University, M.B.A, 1985

Bruce Cameron is Principal Consultant for Envigour Policy Consulting Inc. Envigour serves clients with diverse needs for strategic energy policy advice; stakeholder engagement, and economic opportunities, particularly from projects that support sustainability. Over the past four years, Envigour has carried out work for clients in the following areas: efficiency financing, energy data collection and management for accountability and innovation; the role of innovation and the pace of change in Canada's legislative regulatory frameworks, carbon pricing, strategic market analysis for New England and Atlantic Canada electricity markets, advancement of marine renewable energy in Asian, USA and Latin American markets, evaluation of organizational models to deliver energy services including a collaborative model with NS Power, advice on design of PACE programs in Ontario, and strategic growth opportunities in the Atlantic Canada cleantech sector. Envigour is also participating in the NS Power Integrated Resource Planning process representing clients in marine renewable energy and smart energy communities/DER.

Prior to his retirement in early 2016, Mr. Cameron was Executive Director of Electricity, Renewables and Efficiency with the Nova Scotia Department of Energy. In this role, Mr. Cameron was a leader in energy policy strategy development and application in Nova Scotia and across Canada.

He served on the Canadian Energy Ministers ADM-Level Steering Committee for 8 years and was recognized for his expertise by his colleagues across Canada. Globally he is a recognized leader in marine renewable energy through a lengthy history speaking engagements around the world. In 2017 he led a project to establish a Pan American Marine Energy Conference (PAMEC) and network in the Americas to complement networks in Europe and Asia. The first PAMEC was held in Costa Rica, January 2020 with more than 170 participants.

During his 16 years with the NS Department of Energy, Mr. Cameron led the department's initiatives and programs for electrical and renewable energy research, efficiency, regulatory development, policy and programs, as well as energy planning for sustainability.

Those responsibilities included leading the work to develop and implement Nova Scotia's strategies, policies, plans, and legislation, including the establishment first of Conserve Nova Scotia, and later the legislation to create Canada's first efficiency utility – Efficiency Nova Scotia. He also led the work to amend legislation to enable Local Improvement Charges (LIC/PACE) to finance distributed energy resources including efficiency and solar (Halifax's Solar City).

Mr. Cameron has deep experience in strategy development and execution. For example, he led in the development of the Province's Marine Renewable Energy Strategy and subsequent Marine Renewable Energy Legislation. In his capacity as Executive Lead on the Marine Renewable Energy Strategy, he consulted widely with public stakeholders, government departments, industry developers and Canadian supply chain players to understand the opportunities and public interests to be advanced in development of the sector. As Executive Lead in the implementation of the Strategy, he developed a strong relationship with federal partners and regulators, global developers and supply chain players.

He was also lead for Nova Scotia on federal-provincial energy matters (2007-2016). In addition, Mr. Cameron had significant responsibility and leadership for offshore energy regulatory development (petroleum and later renewables) for both the Department and Canada in the areas of fisheries, environmental assessment, regulatory integration, and safety.

### **Energy Policy Development and Expertise**

Mr. Cameron's informal energy policy development expertise informally began when he was appointed as Business and Energy Reporter with CBC News in Halifax, following his graduation from Dalhousie University with an MBA in 1985. In 2000, his formal expertise in energy policy began through his role in the development of the Province's 2001 Energy Strategy which included leadership in designing and implementing stakeholder engagement as well as extensive comparative jurisdictional analysis. In 2002, he was given responsibility for implementing the strategy, particularly with respect to energy policy development, stakeholder engagement and regulatory policy.

In 2003, He was appointed Director of Energy Policy and Analysis and had responsibility for development and coordination of technical expertise on energy policy for all aspects of energy production, transformation, transportation, and consumption. The realm of responsibility was expanded in 2005 when he became Director Strategic Policy, Planning, and Services. Following this appointment, Mr. Cameron led in the development of the Province's 2009 Energy Strategy, which set the stage for an increased emphasis on renewable energy and a strong commitment to energy efficiency.

Later in 2009, Mr. Cameron was appointed Acting Deputy Minister and led in the development of the Renewable Electricity Plan, which included key measures such as a requirement for 40% of electricity supplies to come from renewable electricity by 2020; the COMFIT Program and an independent competitive selection process for renewable electricity supplies.

In 2010/11 the Department was reorganized with an Executive Director for Petroleum and another for all other forms of energy. Mr. Cameron served as Executive Director, Electricity, Renewables, and Efficiency until his retirement in February 2016. While in this role, he led the development and implementation (including program development, legislation and regulations) of all major energy policies in Nova Scotia including, the Cleaner Energy Framework, the Marine Renewable Energy Strategy, the establishment of Efficiency Nova Scotia as a “negawatts” utility and the 2015 Electricity Plan. The 2015 Electricity Plan remains the foundation of energy policy in Nova Scotia and set an objective of understanding the impact and opportunities from the growth in distributed energy resources (renewables, storage, demand management, electric vehicles and efficiency)

### **Regulatory Development and Stakeholder Engagement Expertise**

Regulatory development experience includes knowledge of the Canadian regulatory and environmental assessment systems, including the role of science and public engagement. The expertise includes the establishment of broad public policy objects through to detailed drafting of regulations and implementation of regulatory systems, primarily in the marine environment, based upon Canadian and international science and best practice.

Regulatory development for energy in the marine environment is based upon experience as the Nova Scotia team-lead on development of Offshore Occupational Health and Safety Accord Act amendments to create a comprehensive OHS regime (2001-2009) for offshore petroleum activities. A key element in this work was to maintain an integrated approach to the regulation of operational safety as well as a unique Accord Act Occupational Health and Safety Regime. The outcome was substantial completion of all policy and legal issues during that period.

Activities to develop expertise in the role of public and stakeholder confidence in regulatory systems is based upon experience as Provincial member of the Cape Breton Ad Hoc Committee charged with building consensus among a variety of stakeholders on the conduct of petroleum activities offshore Cape Breton. (2002-03) Outcome did not result in desired consensus but fishing and environmental members came to a more positive understanding of the regulatory system and the work of the committee led to a strong provincial commitment to fund the research necessary to build public confidence.

Public confidence building expertise also resulted from experience as Provincial lead on initiatives to build knowledge in the Nova Scotia fishing community about international practices for co-existence between fishing and offshore petroleum interests, including direct dialogue with Norway and Scotland regulators in 2003. Outcome was a consensus report on building closer relations between offshore energy and fishing industry sector.

Understanding the integration of regulatory and environmental assessment regimes came through experience as Chair of the Atlantic Energy Roundtable's Regulatory Improvement Working Committee tasked with identifying ways to improve the effectiveness and efficiency of offshore

petroleum approvals (2003 - 2005). This work included supervising a multiple-jurisdiction global review of Performance Based Regulation.

The outcomes from this work included the development of a model to integrates environmental with other regulatory process, which is now used on a national basis. Also experience and expertise was gained as a founding member of the Frontier and Offshore Regulatory Improvement initiative (2005-10). Key outcomes included the development of a framework approach to modernization of Offshore Petroleum Regulations and the development of Performance-Based Regulations for Offshore Drilling and Production Regulations.

In addition, he has seen significant engagement on environmental regulations and establishing research questions through participation in conferences on Sound in the Marine Environment, leading the establishment of an environmental research agenda for marine renewable energy impacts, and participating on the Minister of Environment's (Canada) Oil and Gas Issues Sub-Committee of his Regulatory Advisory Committee.

General regulatory oversight, theory and practice was gained as a key member of the Canadian Institute of Public Affairs committee on Regulatory Improvement Models (2006 - 2008) and as Co-Chair of the Canadian Energy and Mines Minister's Regulatory Improvement Committee (2011 - 2014).

This background and expertise led to lead responsibility for development of new integrated regulatory and environmental approach for marine renewable energy in Nova Scotia. Work over the period 2009 to 2015 included extensive contacts and dialogue with regulators in the UK on environmental and regulation of offshore renewable energy (wave, wind and tidal). The outcome was sector-specific Marine Renewable Energy legislation (2015), which incorporated stakeholder suggested models on special planning, a new licensing system, and measures to integrate federal and provincial regulatory responsibilities. The Act includes offshore wind as well as wave and tidal energy sources.

In addition, regulatory development experience was gained through the development and implementation of the Province's Renewable Electricity Plan (2010), including supervision and lead on development of regulations as well as the design, consultation, drafting and implementation of Province's Electricity Plan (2015).

### **Energy Efficiency Program and Policy Design**

Energy efficiency expertise is grounded in the evolution of energy efficiency program and delivery models in Nova Scotia. From a Department Branch to a Special Operating Agency to a separate Agency under legislation to the creation of an Efficiency Utility, conducted the policy analysis and model development evaluations. As Acting Deputy Minister worked with the City of Halifax to amend legislation to enable the adoption of Property Assessed Clean Energy (PACE) programs where financing for efficiency and building level renewables was secured through a property lien.

An evaluation of alternative financing across Canada was Envigour's first policy contract and the results were used as a foundation of best practices for efficiency financing by Canadian Energy Ministers in 2016.

In 2020, partnered with the manager of the very successful Halifax Solar City Project to co-found PACE Atlantic CIC as a hybrid private public enterprise to offer efficiency program services to municipalities. PACE Atlantic secured \$20 million in capital and \$9 million in grants for municipalities in Nova Scotia, PEI, and Ontario. The programs in the Maritimes launched in the summer of 2021 and within six months had more than 500 household level projects underway or completed with a conversion rate of 50% for customer contacts following through to projects.

The core of the program design and approach is simplicity with customer help each step of the way. The experience of successful program and systems design to implementation has resulted in deep and comprehensive understanding of how efficiency incentives, financing and program assistance can be used to deliver large-scale action.

### **Global Speaking Engagements on Renewable Energy and Regulatory Development**

OMAE, International Conference on Ocean, Offshore and Arctic Engineering 2010, 2013, 2014, 2015 (Shanghai, Rotterdam, San Francisco, St. John's)

South Korea Green Conference 2010, 2012 (Incheon)

DFO Marine Renewables Workshop 2012 (Ottawa)

World Renewable Energy Conference 2012 (Denver)

International Conference on Ocean Energy 2012, 2014, 2015, 2018 (Dublin, Halifax, Edinburgh, Cherbourg) Planned 2020 Washington

Singapore Energy Week, Singapore (2013, 2015)

European Wave and Tidal Conference, 2013, 2015, 2017 (Aalborg, Nantes, Cork)

Asian Wave and Tidal Energy Conference 2012, 2016, 2018 (Jeju, Singapore, Taipei). Planned 2020 Hobart

IEA Forum on Ocean Energy in Islandic Communities 2017 (Singapore)

Pan American Marine Renewable Energy Association 2018, 2019, 2020 (Santiago, Buenos Aires and San Jose, Costa Rica)

In addition, he led missions on energy policy research and regulatory development on marine renewables to Scotland (3x), London, Berlin and Santiago, Chile.

