



Energy Regulatory Reform: An Atlantic Canadian Imperative

A Discussion Paper
September 2021

Message from the Chair



Across the nation, Atlantic Canada stands as a leader in reducing greenhouse gas emissions. As governments, citizens and industry alike take action in the face of climate change, this region stands as a beacon.

Amid significant strides, there are barriers that impede greater success. These are barriers that stand in the way of progress that is crucial to Canada achieving its net-zero ambitions.

In extensive consultations with leaders in the energy sector in the region, it is clear that outdated government policies and regulations loom as significant obstacles to progress.

As these leaders seek to make changes to their own operations and pursue innovative paths toward a clean energy future, they find themselves confronted by policies and regulations designed for a different era.

With challenge presents opportunity. This succinct paper outlines the key challenges the energy sector in this region faces in the current regulatory environment while attempting to lead the transformation to a cleaner energy future. It presents the opportunities for reform that would enable, rather than impede, that transformation.

In moving forward, we need an agile regulatory environment – one that is progressive, responsive and modernized.

Central among the recommendations in this paper is a cohesive regional effort, bolstered by a task force empowered by the premiers of the Atlantic provinces, to pursue leading clean energy innovations – innovations that are enabled by modern energy policies and regulations that are aligned, clear and efficient.

That task force would also serve as a champion in clearly communicating the leadership Atlantic Canada is demonstrating in building a clear energy future – a future we are creating not only for our citizens and our region, but for our nation and our planet.

Sincerely,



Stephen MacMackin
Chair, Atlantica Centre for Energy

1.0 Introduction

The Atlantica Centre for Energy has prepared recommendations on regulatory reform in the Atlantic region in response to the need to update the region’s energy-related regulatory systems and enabling government policies.

Societal expectations are pushing governments and utilities to deliver “next generation” clean energy, yet energy regulations are unclear, or even prohibitive, to carrying out these changes.

Our comments recognize the increasing convergence of energy and environmental policies, evolving customer expectations, and the development of transformational clean energy technologies. The focus of this discussion paper is on Atlantic Canadian energy policies, regulations and regulatory processes that directly impact energy customers and ratepayers.

There are opportunities to improve energy regulation and associated regulatory processes and standards in Atlantic Canada with a focus on: navigating the complex patchwork of energy regulation within each province and across the region; removing hurdles for innovation; managing rising ratepayer and taxpayer costs; reducing the cost, burden and timelines associated with regulatory applications; facilitating regional cooperation and alignment; becoming more responsive and efficient; simplified public and stakeholder participation through virtual communications and written submissions; and allowing energy utilities, producers and distributors to adjust business models to reflect evolving consumer demands and emerging technologies. The goal is to enable, rather than impede, innovation by energy sector participants while being fully transparent with respect to who will bear the cost of reducing emissions. Opportunities also lie in aligning federal and provincial regulations and regulatory processes here in Atlantic Canada.

Specific drivers in support of a responsive approach to energy regulation in the region include:

- The ability for the region’s energy utilities, producers and distributors to engage in **energy innovation and pivot to new business models**, while remaining competitive and respecting the evolving interests of their customers/ratepayers.
- The ability to attract, support and benefit from **research, development, and technology commercialization** efforts (including testing and pilot projects). Examples of emerging energy technologies in Atlantic Canada include smart grid and energy storage applications, distributed generation and micro-grids, bioenergy and the co-processing of biofuels, geothermal energy, carbon capture and utilization, marine renewables (including tidal energy and offshore wind), hydrogen, and small modular reactors.

- The opportunity to facilitate **greater regional regulatory alignment**, cooperation and efficiencies.
- The opportunity to encourage enhanced public engagement and involvement in regulatory processes through dedicated energy **literacy, education, and awareness** initiatives.
- The reality is that **Atlantic Canada will be more heavily impacted by decarbonization efforts and the drive to ‘net zero’ than any other region in Canada** given our current reliance on petroleum products and the highest level of energy poverty in the country. Escalating energy costs will have a massive impact on our region’s economy, with significant citizen, ratepayer and taxpayer implications.

Energy and environmental policies are increasingly driven by the federal government yet must be managed at the provincial level and implemented by the region’s utilities, energy producers and energy distributors.

As a region, we need to engage in an informed discussion on who will ultimately pay for the costs associated with achieving ‘net zero’ by 2050, and how the societal benefits associated with carbon neutrality will ultimately flow to Atlantic Canadians.

The strategic recommendations in this document are provided to government, energy regulators, the public and industry in support of the ‘agile regulations’ theme with a goal of enhancing regional cooperation to modernize regulatory practices in Atlantic Canada. Five case studies have been incorporated to illustrate both challenges and opportunities.

There is no short-term finish line in our collective (governments, regulators and industry) efforts and commitment to modernizing the legislation and regulations that govern our region’s energy sector, particularly during a period of unprecedented economic and environmental transformation.

2.0 Background

The theme of regulatory reform has been a focus of government, academics, and industry associations for well over a decade but has reached a new level of urgency due to the recent national commitment to reduce greenhouse gas emissions by 40 to 45 per cent by 2030. The path to achieving

these reductions will require innovative energy technologies, utility models and regulatory practices.

CASE STUDY 1: The Smart Grid Nova Scotia Project

The Smart Grid Nova Scotia project, which was the first to be submitted under the Nova Scotia Utility and Review Board (NSUARB) innovation criteria, includes on-site (i.e., behind the customer's meter) energy assets to better understand their potential benefits to the power grid and, consequently, all customers. In this way, Nova Scotia Power and the NSUARB can both begin to consider new ways to integrate emerging technologies into the grid.

Similar approaches will be used to explore ways to optimize the benefits associated with electric buses, emerging battery storage technologies and in-home energy management tools.

Given the pace of change, there is an increasing decoupling between rapidly evolving government energy and environmental policies and supporting regulatory mandates and authorities.

Atlantic Canada is also challenged in terms of geography, population and energy markets – this is reflected in a fragmented provincial approach to energy policy development and regulatory approaches and national energy policies that do not easily reflect the unique issues, challenges and compliance costs facing our region.

To successfully address the challenges and urgency associated with the societal objective of 'net zero', our energy systems must quickly evolve, requiring enabling and aligned regional energy policies.

Our region's energy regulators must also be empowered to evolve beyond traditional regulatory approaches as a reflection of rapidly emerging economic and environmental considerations, as well as the introduction and adoption of new energy technologies.

3.0 Short-Term Regulatory Modernization Opportunities

1. **Improve Regulatory Efficiency:** Implementation of streamlined and more flexible / adaptable multi-year regulatory decision time frames (rather than one-year increments) that help smooth rates at a consistent level over several years, the introduction of minimum rate review thresholds, the adoption of performance or outcome-based regulations, and the utilization of virtual or alternative hearing processes that minimize required travel and encourage broad-based, yet efficient and cost-effective, ratepayer and stakeholder participation.
2. **Regional Regulatory Cooperation:** The opportunity for enhanced regional regulatory cooperation and alignment with a focus on issues ranging from regulated petroleum product pricing to the impacts of electrification, efforts to improve the reliability and capacity of inter-provincial electricity interties and the on-going evolution of the region's clean and renewable energy technologies.

CASE STUDY 2: Alternative Clean Energy Production Opportunities

There are emerging alternative clean energy production opportunities that have short-term commercial potential here in Atlantic Canada but currently lack enabling policy and regulatory clarity. Examples include bioenergy, geothermal energy, landfill gas and anaerobic digestion.

Utilities and developers are prepared to invest in these emerging technologies but require greater regulatory process clarity and a fair and balanced path to cost recovery that reflects both investor and ratepayer interests.

The opportunity also exists to leverage policy and regulatory best practices from other jurisdictions.

CASE STUDY 3: Petroleum Price Regulation in Atlantic Canada

Atlantic Canada is unique in the existence of regulated petroleum product pricing (each province with a slightly different system).

Originally, regulations were established to avoid market volatility and mimic a competitive marketplace. However, new factors such as the Nova Scotia cap and trade program and the proposed federal clean fuel regulations, along with other emerging environmental obligations, are severely impacting the transparency and effectiveness of regulated pricing.

These factors support a timely strategic review and regional regulatory approach.

3. **Leveraging Emerging Regulatory Best Practises:** The review and adoption of emerging North American regulatory best practices, where applicable. Example: Time-varying pricing initiatives that address the challenges of seasonal and daily peak and valley energy demand, energy supply, and cost allocation issues.
4. **Energy Literacy and Education:** The need for enhanced ratepayer and citizen awareness and understanding with respect to their energy choices, evolving energy policies and the role and function of energy regulation. By way of example, the Atlantica Centre for Energy actively partners in the delivery of energy literacy programs with the University of New Brunswick and the New Brunswick Centre of Excellence for Energy.

4.0 Medium-Term Regulatory Modernization Opportunities

1. **Facilitating Technology Adaptation:** The unimpeded ability to attract, support and benefit from research, development, and technology innovation and commercialization efforts, as well as the ability to deal with potential future issues relating to stranded debt associated with obsolete energy technologies or investments resulting from legislated decarbonization requirements.
2. **Responsive Energy Regulation:** A cooperative network of Atlantic Canadian energy regulators that remains responsive to emerging environmental and decarbonization policy objectives, facilitates energy innovation and helps protect the interests of our region’s ratepayers and energy customers from the longer-term impacts of rapidly increasing energy costs.

CASE STUDY 4: Hydrogen

The Feasibility Study of Hydrogen Production, Storage, Distribution, and Use in the Maritimes, October 2020.

Based on the study, hydrogen can become an essential part of the region’s energy mix to reach net-zero carbon emissions by 2050 and increase energy independence.

Heritage Gas and Liberty Utilities are currently leading a collaborative regional initiative to implement the Feasibility Study’s key recommendations, including efforts to address enabling policy and regulatory issues.

CASE STUDY 5: Small Modular Reactors

Federal and provincial agencies and NB Power are partnering with ARC Clean Energy and Moltex Energy in development of two 4th generation, advanced small modular reactor (SMR) designs. Development in New Brunswick includes demonstration units at the Point Lepreau Nuclear Generating Station.

The demonstration projects create research, innovation, manufacturing, and supply chain opportunities. Through enabling government policy and efficient regulations, Atlantic Canada has the potential to be a leader in the advanced generation SMR field.

3. **Enhanced Regulatory Agility is Required for Environmental Compliance:** While traditional energy regulation has focused on keeping rates low, there is a need for energy regulators to also incorporate emerging environmental and decarbonization objectives as part of transparent regulatory decision-making processes.

4. **Facilitating the Evolution of Energy Delivery Systems:** Our region’s energy producers and distributors are tasked with managing the increasing costs of complying

with evolving federal and provincial climate change mandates. As such, our region’s energy systems will need to evolve to new and in some cases integrated energy delivery models rather than today’s siloed energy systems (i.e., hydrogen development may require the integration of electricity and natural gas distribution networks to optimize outputs and environmental benefits). Our region’s energy regulators will require the flexibility to facilitate new and innovative energy delivery and cost recovery models, systems, and partnerships.

5.0 Conclusion and Recommended Actions

There is undisputed consensus in creating a regulatory system that facilitates energy and environmental innovation.

Working together, it is time for the four Atlantic provinces, the Government of Canada, and our region's energy utilities to forge a shared energy vision, specific to our region, that addresses our economic realities while proactively planning the transition to a sustainable clean energy future. We also need to ensure that our industries and businesses remain both relevant and competitive on a North American and global stage – our region's economic viability lies in our ability to export products and services, with energy as a critical business input.

The vision for Atlantic Canada's energy future must include a plan for greater regional energy policy and regulatory alignment.

The Atlantica Centre for Energy recommends four key regional actions based on stakeholder discussions held during 2020 and 2021, including the successful energy series, “Atlantic Canada's Energy Future” organized in partnership with the Atlantic Provinces Economic Council. The webinar series is available at: [Atlantic Canada's Energy Future \(apec-econ.ca\)](https://apec-econ.ca)

1. **Clean energy innovation in new and existing sectors:** Atlantic Canada needs to continue reducing emissions through leadership in energy efficiency, non-emitting electricity generation and our ability to store and move clean energy around the region. This will require steps to leverage and grow our region's capacity in emerging technologies. Marine renewables, smart grid, small modular reactors, and the Atlantic Loop initiative provide important benchmarks with respect to the region's capacity and capability to innovate.

As Atlantic Canada transitions to cleaner energy production and use, it should continue to advance our region's upstream and downstream oil and gas activities. Atlantic Canada's oil and gas sector continues to innovate and reduce its carbon footprint. It supports regional economic activity and is an important part of the global transition to sustainable business practices and the introduction of low-carbon transportation and sustainable hydrogen fuels. This is particularly important given our region's rural, dispersed population base, and the cost of migrating from a reliance on refined petroleum products.

Develop regulatory rules that enable efficiency in the process; clarity of scope; and ability of utilities and producers to pivot to new technologies/processes as they are developed.

2. **A shared regional clean energy vision with policy and regulatory alignment:** The four Atlantic provinces, the Government of Canada, and our region's major energy producers, distributors and utilities must forge a shared energy vision and plan for our region that addresses our economic realities while positioning for a sustainable clean energy future. This will require

much greater regional energy policy and regulatory alignment to fulfill our region's shared energy potential, as well as a dedicated commitment to streamlining regulations. The Atlantic Canadian provincial governments need to proactively engage the region's citizens and business community with respect to our emerging energy choices and associated ratepayer and taxpayer impacts.

The Atlantica Centre for Energy recommends that the **Council of Atlantic Premiers (CAP) initiate a regional clean energy task force** consisting of representatives from all four Atlantic Provinces, the Government of Canada, and the region's energy utilities/producers to focus specifically on clean energy innovation and potential areas for energy policy alignment, regulatory clarity, regulatory efficiency, regulatory transparency and regional regulatory alignment. The task force should also be mandated to communicate Atlantic Canada's significant progress in **leading** the country in reducing greenhouse emissions and achieving emerging national and international decarbonization targets.

Our region requires a commitment to much greater policy and regulatory alignment to remain relevant from a regional and national energy perspective. We must also proactively communicate our region's success in reducing GHG emissions and project a unified voice in Ottawa.

- 3. A shared commitment to accurate and aligned energy data and regional modelling inputs:** As the pace of decarbonization increases, there is a critical need to access credible and objective data for input into federal, regional and provincial energy planning models, including federal Regulatory Impact Analysis Statements (RIASs), the on-going modelling associated with the Atlantic Link project, utility-based Integrated Resource Plans (IRPs) and the recently launched Atlantic Canada Energy System Modelling Framework by Nova Scotia-based OERA.

The ability to make informed and effective short-term, medium-term and longer-term regional energy decisions/choices requires access to credible and objective energy and environmental data for modelling purposes.

- 4. Energy literacy, education, and awareness:** Atlantic Canada would benefit from an enhanced investment in energy education, awareness, and literacy efforts for a greater exposure to the costs associated with the transformation taking place in the region's energy sector.

The ability to make informed and effective short-term and longer-term regional energy decisions/choices is imperative.

This discussion paper was produced by the Atlantica Centre for Energy.

The Centre provides a unique forum for government, the education and research sectors, industry, and the community at large to foster partnerships and proactively engage in energy-related issues in Atlantic Canada. Energy education is an important priority.

More information about the Atlantica Centre is available at www.atlanticaenergy.org.

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