Articles

The Contributions of Utilities Regulation to Electricity Systems Transformation: the Case of Nova Scotia

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Introduction

Nova Scotia's electricity system is undergoing significant change, particularly when measured against the history of Nova Scotia energy policy and politics.[2] In 2007, when a renewable energy goal was first enacted into law, 90 per cent of the province's electricity supply came from fossil fuels, mostly coal. The system is now on track to meet a Renewable Energy Standard (RES) of having 40 per cent of electricity come from renewable sources by 2020. Nova Scotia is also becoming a Canadian leader in electricity system demand-side management (DSM). From doing little on energy efficiency before 2008, the system now relies on energy efficiency to reduce its annual need for electricity by more than 5 per cent.

Nova Scotia's independent electricity regulator, the Utility and Review Board (the UARB or Board), has been at the centre of these developments. This article considers the role of the UARB with two objectives in mind; first, to bring attention to the role that one utilities regulator has played in a significant multi-year process of electricity system change and second, to illustrate the importance of an independent and respected regulatory process to electricity transformation at a time when such transformations are taking place – or being called for – across Canada and beyond.

The article pursues these objectives by considering the work of the UARB over the last decade in significant renewable energy, demand-side management and rate-setting cases. In general terms, this review shows how the UARB has helped to keep the process of transformation on track while ensuring it is conducted with transparency and accountability in the best interests of ratepayers. In some respects, it shows the UARB playing a catalytic role in prompting necessary policy development. It also demonstrates the UARB's responsiveness to the real challenges that Nova Scotia has faced in greening its electricity system under high electricity costs during and in the aftermath of a recession and in the midst of growing anxiety about the province's long-term economic future. Finally, and perhaps most fundamentally, the review shows how the UARB has conducted a system of regulation that enjoys the kind of credibility and respect that a regulatory system needs if it is to have the trust and confidence of those it regulates, those it protects, and ultimately of government. This depends on the substance of the Board's decision-making but equally on the Board's process, including its transparent reliance on expert advisors, the obligation to engage meaningfully with stakeholders that it places on those it regulates and the clear, detailed and thorough reasons it provides for its decisions.

In these respects, the suggestion here is not that the UARB has been exceptional or especially innovative or creative. The point instead is to emphasize that it has consistently demonstrated the mundane but core attributes of effective regulators, including fairness, objectivity, technical competency, dependability, predictability, responsiveness, practicality, judgment and accountability. In consequence, the role the UARB has played in Nova Scotia illustrates the crucial contribution that good and stable regulation can

make to the successful implementation of large-scale change in energy system policy (in this case major changes to electricity system policy) that can only be implemented over the mandates of different governments, in the face of considerable uncertainty and despite significant and often contested changes in the economic, technological, environmental and social conditions under which policy is originally established. At the same time, the success of the UARB shows that the governance of the electrical system in Nova Scotia has benefited significantly from the confidence it has placed in the UARB. This perhaps serves as a reminder that the effectiveness with which regulators discharge their mandates is the best contribution they can make to the preservation of the independent mandates on which effective regulation ultimately depends.

The Electricity System, UARB, Legislative Framework and System Transformation

Nova Scotia's Electricity System

Nova Scotia's electricity system serves 400,000 customers who consume 10,467 gigawatt hours (GWh) of electricity.[3] Roughly 90 per cent of the system, which has an installed capacity of 2,730 megawatts (MW), is owned and operated by Nova Scotia Power (NSP). NSP is a vertically integrated utility that is investor owned through the holding company called Emera. Until recently, the system obtained roughly 90 per cent of its power from burning coal and other fossil fuels in generating stations owned by NSP. The system has only limited connection to the North American grid through an intertie at Nova Scotia's border with New Brunswick which is used, among other things, to manage peak demand in each of those provinces.

Since 2010, the electricity sector has included Efficiency Nova Scotia Corporation (ENSC). It is a statutory corporation established by the *Efficiency Nova Scotia Corporation Act*[4] with the mandate to administer energy efficiency and conservation programs, including DSM programs in the electricity sector.[5]

The Utility and Review Board

NSP and ENSC are both regulated by the UARB, a quasi-judicial regulatory body established under the *Utilities and Review Board Act*.[6] By any measure, the UARB qualifies as a "super-regulator". In addition to being the regulator in the electricity sector, it is also the regulator of gas and water utilities. It also has regulatory responsibilities in auto insurance, liquor licensing, gaming, pay day loans, retail petroleum pricing, public passenger carriers, and provincial railways. It has adjudicative functions in the fields of property assessment, criminal injuries, expropriation, film classification, fire safety, municipal and school board boundaries and municipal planning.

For both NSP and ENSC, the UARB is given its regulatory mandate by the *Public Utilities Act*,[7] supplemented in the case of NSP by provisions of the *Electricity Act*[8] and its *Regulations* and in the case of ENSC by the provisions of the *Efficiency Nova Scotia Corporation Act*.[9] This will soon change when the proclamation of recently passed restructuring legislation adds provisions to the *Public Utilities Act* and the *Electricity Act* to make the franchisee of the Efficiency Nova Scotia brand into an energy efficiency utility and a supplier of cost-effective energy-efficiency to NSP under the oversight of the UARB.[10]

Within these statutory parameters, the mandate of the UARB is that of a traditional economic regulator of

monopolistic suppliers of utility services. Its core responsibility is to pre-approve the "schedule of rates, tolls and charges" that can be charged to customers for utility services.[11] In carrying out this responsibility, the UARB uses the "cost-of-service" model of economic regulation[12] subject to a statutory requirement that tolls, rates and charges be charged equally to all persons under "substantially similar circumstances" as determined by regulations made by the UARB.[13] The approval of the UARB is also required for capital expenditures greater than $250,000.[14] The UARB also has the responsibility to fix and determine the rate base of a public utility and to determine the "just and reasonable" rate of the annual return the utility is entitled to earn on its rate base.[15] More broadly, the UARB has the "general supervision of all public utilities"[16] and the authority to make such orders "as it deems just in respect of tolls, rates and charges to be paid to any public utility for services rendered or facilities provided".[17] In respect of DSM, these responsibilities and powers were supplemented by the requirement placed on ENSC by the ENSC Act to submit an "electricity demand-side management program" to the UARB for its approval.[18]

The Legislative Framework of Energy Policy

The transformation of the electricity system is being driven by the combined effect of environmental and electricity system legislation. Since 2005, NSP has been subject under *Air Quality Regulations*[19] made under the *Environment Act*[20] to escalating emission limits out to the year 2020 and beyond for sulphur dioxide, nitrogen oxide and mercury. In 2007, the goal of having at least 18.5 per cent of electricity generated from renewable sources by 2013 was included in the list of twenty-one environmental performance goals set out in the *Environmental Goals and Sustainable Prosperity Act*.[21] In 2009, *Greenhouse Gas Emissions Regulations*[22] made under the *Environment Act*[23] imposed increasing greenhouse gas emission caps on NSP out to the year 2030. Renewable Energy Standards became applicable to NSP in 2010 under regulations made under the *Electricity Act*.[24] These require 10 per cent or more of the total electricity supplied in 2013 and 2014 to be "renewable low-impact electricity" produced by "renewable low-impact generation facilities";[25] 25 per cent or more of the total electricity supplied from 2015 to 2020 to be renewable electricity, including an additional 300 GWh to be acquired from independent power producers;[26] and 40 per cent or more of the total electricity supplied in 2020 and in each subsequent year to be from renewable electricity.[27]

Another critical piece of the legislative framework is the *Equivalency Agreement* between Nova Scotia and Canada that was negotiated in 2012 and executed in 2014.[28] Under this Agreement, what is required of Nova Scotia's electricity system relative to the reduction of greenhouse gas emissions by Nova Scotia laws, particularly the *Environment Act* and the *Greenhouse Gas Emission Regulations*, is stipulated to be equivalent to what would be required of Nova Scotia's electricity system by the provisions of the *Canadian Environmental Protection Act*[29] and the *Reduction of Carbon Dioxide Emissions from Coal-Fired Generation of Electricity Regulations*[30] made under that Act. This has given the policy of electricity system transformation under way in Nova Scotia an additional level of non-negotiability. It has also avoided a significant cost to ratepayers that would have otherwise been incurred to close coal-fired generating plants that compliance with the federal regulations would otherwise have required.

Electricity System Transformation in Nova Scotia

Currently, the system uses slightly more than 1,000 GWh of renewable energy that is compliant with the province's 10 per cent renewable energy standard for 2013.[31] To meet the 2020 target, more than 4,000 GWh of RES compliant renewable energy will be required. It is projected to come from multiple supply

sources including more than 1,300 GWh from wind projects built after 2001, 357 GWh from a single significant biomass project, and at least 1,135 GWh of hydro-electric power which will be transmitted from the Muskrat Falls project in Labrador to Nova Scotia by the Maritime Link, a transmission cable being laid between Newfoundland and Nova Scotia. The Muskrat Falls\Maritime Link project will be transformational in another respect: it will end Nova Scotia's isolation as an "electricity island" by interconnecting it more fully into the North American grid. It therefore creates the potential for further and perhaps deeper transformational change beyond 2020.

In parallel to this significant action on the sourcing of electricity, Nova Scotia has rapidly become a Canadian leader on energy efficiency and conservation in the electricity sector.[32] From doing little efficiency and conservation before 2008, Nova Scotia's electricity system has since 2011 been investing roughly $40 million per year into efficiency and conservation programs that are administered by ENSC. These programs are now producing a level of electricity savings as a proportion of electricity consumed that is the highest in Canada and comparable to that being produced in leading American jurisdictions, most of which have been working on energy efficiency and conservation on a sustained basis for much longer. These savings have been produced at a unit cost that is comparable or below the unit cost of savings in other jurisdictions. By 2013, due to efficiency and conservation efforts, electricity use in Nova Scotia was 5.5 per cent below what it would otherwise have been.[33]

The Role of the UARB and of the Regulatory Process in System Transformation

Setting the Stage – The 2005 and 2006 General Rate Increase Decisions

The transformation of the Nova Scotia electricity system can be dated from the adoption of the *Air Quality Regulations* in 2005. These marked not only a shift in the content of Nova Scotia's environmental policy in relation to NSP but also a shift in approach to implementation of that policy. For the first time, Nova Scotia had put policy commitments that entailed significant change in how electricity was to be produced into law.

It therefore makes sense to start any consideration of the role that the UARB has played in system transformation from that same year, 2005. In that year, the UARB made the first of two significant decisions on back-to-back applications by NSP for general rate increases in the vicinity of 10 per cent.[34] Neither application dealt very directly with the shift to renewable energy or with DSM but, like the subsequent rate increase applications to come in 2008 and 2012, those of 2005 and 2006 focused attention on the vulnerability of electricity consumers to significant rate increases driven inexorably by increases in the cost of coal and other fossil fuels. They therefore focused attention on the economic and consumer protection rationales for diversified generation and DSM.

The 2005 and 2006 applications also tested the capacity of the regulatory system to deal with economic realities in the context of wide-spread anger with NSP as well as government over the rising cost of electricity to households and businesses and growing frustration with the limited progress on environmental issues and the impact of electricity prices on low-income households. This context was brought directly to bear on the work of the UARB. For example, there were 37 formal intervenors in the Board's hearing on the 2005 rate application, all but two opposing the application.[35] In that hearing and the hearing on the 2006 application, as well as in subsequent hearings, significant roles were played by intervenors focused on the environmental, low income and consumer issues.

In both the 2005 and 2006 decisions, the UARB approved significant rate increases for NSP that were at

the same time, significantly below the increases applied for. In both, it subjected NSP to strong criticism of its fuel purchasing practices and more generally to detailed scrutiny of the company's expenditures in areas such as OM&G expenses and executive compensation. For the purpose of this article, the more immediate interest are the steps that the UARB took in these decisions towards establishing a process or model of regulation that the Board has continued to develop while being guided by it in subsequent cases, including cases on renewable energy and DSM. For example, in the hearing leading up to the 2005 decision, the Board appointed a Consumer Advocate who immediately played a significant role in the hearing.[36] Soon afterwards, the position of Consumer Advocate was established in legislation[37] and since has become a leading player in all of the Board's hearings on electricity matters and in the broader process of consultations and engagement that the Board now routinely expects of both NSP and ENSC.

The 2005 decision was also significant for the Board's rejection of a proposed settlement agreement between NSP and the majority of intervenors, including the Province.[38] The reason was substantive: the inconsistency of the proposed settlement with the Board's assessment of the evidence before it, including the evidence on the prudence of NSP's fuel purchasing practices. But the Board also endorsed the concerns of some intervernors, including those representing consumers and low-income ratepayers, on the under-inclusiveness of the process by which the agreement has been negotiated. In subsequent proceedings, the Board has encouraged settlement discussions and the broader process of open and transparent engagement with stakeholders that can lead to settlement agreements, but subject to the parameters laid out in the 2005 and later decisions. Where it has approved a settlement agreement, it has done so because it approves of how the agreement addresses the issues that would otherwise be in dispute.[39]

Demand-Side Management

In the 2006 rate decision, the UARB declined NSP's application for funding to implement a DSM plan and instead determined that a separate hearing on DSM was needed.[40] This responded to a generally critical reception among intervenors on the plan which NSP had proposed, including of the process that NSP had used to develop its plan. One of the questions raised, including by the Consumer Advocate and environmental and low-income advocates, was whether NSP would be in a conflict of interest as the administrator of DSM given its core business was to sell electricity.

Before the planned hearing on DSM could occur, the UARB directed NSP to complete an Integrated Resource Plan (IRP).[41] The rationale was to give the Board and stakeholders a sense of the overall strategic plan under which to consider NSPI's applications for capital projects and DSM. The UARB-approved Terms of Reference for the development of the IRP stipulated that "stakeholders" were to be an "integral part" of the process. The IRP concluded that the most cost-effective options for reducing emissions and meeting forecasted increases in customer load were investments in DSM and renewable energy as well as upgrades to the utility's existing facilities. This led to a DSM program development process under UARB-approved Terms of Reference that called for collaboration between NSP, Board staff and consultants and stakeholders. The strength of stakeholder opposition to NSP assuming the role of DSM administrator became obvious. A separate stakeholder engagement process on the question of how DSM programming was to be administered and governed was established by the Province. The outcome was a recommendation for the creation of a new stand-alone independent DSM administrator.[42] The legislation establishing ENSC was passed in 2009 and proclaimed in 2010.

Meanwhile, in 2008 the UARB approved a $12.9 million DSM Plan developed by NSP for 2008-2009 by approving a Settlement Agreement which described NSP "temporary DSM administrator".[43] One of the significant elements of the approved settlement was the formation of a DSM Program Development

Working Group to be chaired by a consultant to the UARB. This Working Group, now chaired by ENSC, has ensured a high level of input into subsequent DSM Plans by participants in the regulatory process and consequently a high level of stakeholder confidence in the DSM planning process. Another significant outcome of the 2008 decision was the UARB's acceptance of submissions from the Consumer Advocate and the Ecology Action Centre that performance of DSM programs be subject to evaluation by an independent evaluator appointed by the DSM administrator and verified by a UARB consultant. Together, these two outcomes of the 2008 DSM decision have done much to ensure rigour and accountability in the planning and administration of DSM and stakeholder confidence in the energy savings achieved. Since the 2008 decision, the UARB has approved five further DSM plans.[44]

Renewable Energy

UARB decisions have also played a critical role in guiding the development of renewable energy. For example, under the *Renewable Energy Regulations* made under the *Electricity Act*,[45] it issued a major policy-setting decision on renewable energy community based feed-in tariffs and one on tidal energy feed-in tariffs in 2013.[46] In both, the hearing flowed from a successful consultative tariff development process conducted by UARB consultants, Synapse. Cases on the standard form of Power Purchase Agreements and on significant wind projects have also come before the Board.[47]

The Board's most significant renewable energy decision has been its decision on the Maritime Link Project, which has already been discussed in this Journal.[48] It presented the UARB with difficult and challenging issues at the intersection of regulation, policy and politics.

The project involves the laying of a transmission line between Newfoundland and Nova Scotia.[49] It will have the capacity to carry more than 4 terawatt hours (TWh) of electricity produced by new hydro-electric damns in Labrador, including one being built at Muskrat Falls, from Newfoundland to Nova Scotia. More than 3 TWh of the electricity will probably be transmitted through New Brunswick to New England. Under agreements with Nalcor, Newfoundland's crown-owned utility, an affiliate of NSP called NSP Maritime Link Incorporated (NSPML) is paying 20 per cent of the cost of Muskrat Falls and of the Maritime Link. In exchange, Nalcor is committed for 35 years to providing Nova Scotia with 20 per cent of the electricity produced by Muskrat Falls plus an additional 240 of gigawatt-hours (GWh) of electricity per year in the first five years of the Link's operation for use in Nova Scotia.

The issue for the UARB was whether NSPML's investment into the project should be recoverable from Nova Scotia ratepayers. This was put to the Board under the *Maritime Link Act*[50] and the *Maritime Link Cost Recovery Process Regulations* which stipulated that the UARB was to approve the project if satisfied of two matters: that the project represented the lowest long-term cost alternative for electricity for Nova Scotia ratepayers and that the project was consistent with NSP's legislated obligations under the *Electricity Act*, the *Environment Act*, the *Canadian Environmental Protection Act*.[51] The Regulations also imposed a mandatory timeline on the Board's consideration of the project of 180 days from the date of its submission.

The UARB concluded that the Maritime Link project was consistent with NSP's obligations under the specified legislation.[52] It also concluded that the project was the lowest long-term cost alternative for ratepayers "but not on an overwhelming basis".[53] This was because there were other alternatives for meeting the legislated obligations that performed as well or even better on some future scenarios. Nevertheless, the Board concluded that the Maritime Link project was "slightly more robust than the various alternatives" and it "does edge out other alternatives".[54] Approval was however subject to an important condition: that NSPML obtain a right to access market-priced energy from Nalcor in addition

to the energy that would be supplied under the "20 for 20 principle" when it was needed to economically serve NSP ratepayers.[55] This condition reflected the Board's conclusion that the availability of market-priced energy via the Link was "crucial to the viability of the ML project as against the other alternatives".[56] It was also consistent with the evidence presented by NSPML, which was that additional market-priced energy would be available to Nova Scotia if the Link was constructed.

The Premier of Newfoundland and Labrador, which did not submit the larger project to its regulator, and the Premier of Nova Scotia responded to the UARB's conditional approval of the ML project by stating that the project did not depend on UARB approval. Despite this, Emera, Nalcor and NSPI negotiated an Energy Access Agreement (EEA) to address the condition that Nova Scotia have a right of access to market-priced energy from Nalcor. It was submitted to the UARB as a compliance filing by NSPML in late 2013. Essentially, the Agreement obligates Nalcor to make available a cumulative total over 24 years of 28.8 TWh of market energy and a yearly average of 1.2TWh by offering up to 1.8 TWh in any given year.[57] Among the many more specific concerns about the Agreement raised before the UARB, two were fundamental: first, that Nalcor's cumulative obligation to supply market energy could be exhausted in as few as 16 year and second, that the agreement gave no assurance of the availability of market energy in the last 11 years of the 35 years of the project. On the first concern, the UARB accepted the testimony of experts called by its counsel who emphasized that the Agreement essentially gave NSPI a right-of-first-refusal on additional market energy throughout the 24 years of the agreement by obligating Nalcor to bid into annual NSPI solicitations for market energy.[58] On the second concern, the Board simply reiterated the conclusion reached in its initial decision, that the availability of market energy could be assumed after the expiry of the Churchill Falls Agreement between Newfoundland and Labrador and Quebec in 2041.[59]

The UARB's review of the Maritime Link project was constrained by the timeline for the review imposed by legislation. In its initial decision on the project, the Board noted it had not been able to fully consider an alternative to the Maritime Link which NSPML had not analyzed, under which renewable energy requirements would be met by combining renewable energy from multiple sources.[60] It may therefore be an open question as to whether the Board's conclusion might have been different after a more fulsome review. Because of this and concerns raised about the terms of the EAA, it may be possible to question whether the terms on which the Maritime Link project was approved give enough protection to Nova Scotia ratepayers. It is however harder to question that the regulatory process provided them with significant additional protection they would not otherwise have had. It also provided them with transparency and accountability on the justification for the project, its expected benefits and costs.

On a different scale, the same applies to the UARB's 2009 and 2010 decisions on the co-generation biomass project at the Port Hawkesbury pulp and paper mill, then owned by New Page and now owned by Pacific West Commercial Corporation. The project called for installation of a steam generator and condenser at the mill so that the wood-fibre-burning boiler already at the mill could be used to produce renewable electricity for NSP while continuing to provide steam for the mill.[61] It clearly and obviously had as much to do with the viability of the mill, which would soon be in receivership, as it did with NSPI's need for additional sources of renewable electricity. This perhaps explains why it first came to the UARB in 2009 as an application by NSP for pre-approval of the prudency of the proposed project – or rather, of the power purchase agreement that NSP would sign with the company created to operate the project – as well as a waiver of requirements dealing with competitive solicitation of purchased power set out in NSP's Fuel Manual.

The UARB ruled it had no jurisdiction to pre-approve the prudency of the power purchase agreement, for the same reason it had ruled in earlier decisions it had no jurisdiction to determine the price and conditions offered by NSP in soliciting bids from independent wind power producers: its jurisdiction was

over the rates and charges which NSPI proposed to charge customers, not the prices which NSPI paid to its suppliers.[62] The Board used emphatic language to make the point that a clear line had to be maintained between utility management and regulation. Thus, contrary to what was suggested in evidence by NSP, it was not the role of the UARB to "partner" with NSP. Instead, it had to ensure its ability to independently and rigorously review the prudency of NSP's management of its business in the context of an application for approval of rates and charges was not compromised by its own prior involvement in the very managerial decisions that had to be scrutinized to determine if proposed rates and charges were just and reasonable. It was stressed further that the alternative approach would transfer the risk of ensuring the prudency of business decisions – a significant portion of the justification for NSP's allowable rate of return – from shareholders to customers. It would also reduce the incentive which the regulatory process imposed on NSP to ensure it managed to the prudency standard.

In short order, the project came back to the UARB under a different ownership structure as an application for approval of a capital work order, something clearly within the Board's mandate.[63] After purchasing the mill's boiler and related assets and purchasing and paying the mill to install the necessary generator, NSP would own the proposed "utility plant" and all of its produced electricity and pay the pulp mill for fuel and management services on a continuing basis.

The UARB was blunt in disapproving NSP's "unusual aversion to shareholder risk" in restructuring the project so that it required UARB approval.[64] It expressed frustration with the lack of justification provided by NSP for some aspects of the project, such as the soundness of the 30 year old assets that NSP was purchasing for a 40 year project.[65] It nevertheless approved the project. It did so because it accepted the view of NSP that a biomass project would add predictable renewable energy to the considerable intermittent wind power that NSP was building or purchasing to meet the "transformation in energy mix" required by the government policy of having 25 percent of electricity generated from renewable sources by 2015.[66] The outstanding issue was the $80 million up-front payment (on a $208.6 million project) to a "financially troubled partner for assets for which the Board has received no valuation". To address this concern, the board stipulated that the project was to be built for the overall cost indicated in the application and that any additional cost caused by the failure of the mill due to its financial situation was to be for NSP's account, not that of ratepayers.[67] In addition, the board stipulated that capital cost overruns would not be handled as "normal and routine requests for authority to over spend" but would have to be "applied for, debated and ruled upon in a public hearing process".

Load Retention Tariff Decisions

The broader context for the Board's consideration of the Port Hawkesbury biomass project are the multiple occasions on which it has been called on to address the impact of electricity costs on Nova Scotia's troubled pulp and paper industry. Several of these decisions intersect with the Board's decisions on DSM and renewable energy and provide further illustration of the balance the Board has struck between "traditional ratemaking" and the economic, social and political realities that must be accommodated within regulation.

The UARB's "pulp and paper" decisions include the approval in 2000 of a Load Retention Tariff (LRT) for the Port Hawkesbury mill and the Liverpool mill owned by Bowater on the basis of the options each had to sole-source its electricity.[68] In 2011, when the Port Hawkesbury mill was under protection from creditors and the Liverpool mill was facing imminent closure, the Board approved amendments to the LRT.[69] One was to make it applicable in situations of "economic distress". Another was to fix the LRT for three years at rates designed to help the mills survive while maintaining fairness for other ratepayers. The Board concluded it was "reluctantly prepared to depart from traditional ratemaking … and provide

an opportunity for [the mills] to stay on the system and make, on the Board's best judgment, a contribution to the fixed costs of the system".[70] The three-year LRT rate approved was a Board designed alternative to the five-year rate proposed by the mills which the Board concluded transferred unacceptable fuel costs risk to other ratepayers. The Board opted for this course instead of rejecting the application because rejection "would not contribute to meeting the financial challenge that the two mills face" or "provide other customers at least some opportunity to receive a contribution" to system costs "from the continued operation of the two mills".[71]

The same responsiveness to the difficulties of the province's pulp industry was displayed in 2012 when the Board approved a LRT rate specifically for the Port Hawkesbury mill.[72] By then the Liverpool mill had closed and the Port Hawkesbury mill was in the process of being purchased under a restructuring plan calling for significant reduction in labour, tax and electricity costs. The LRT was presented as necessary for the completion of the purchase and reopening of the mill. It proposed a rate based, like the one approved in 2011, on NSP's incremental cost of supplying the mill but that, unlike the 2011 rate, did not include the costs of DSM or of meeting Renewable Energy Standards.[73] The proposed rate would be fixed, subject to a five-year reopener, for more than seven years and include a lower "adder" for fixed costs than the one included in the three-year rate approved in 2011.

The UARB approved the new LRT on the usual basis: ratepayers were better off with the mill on the system contributing to fixed costs than they would be otherwise. Several specific considerations were critical to the decision. The pricing mechanism, unlike the rate proposed in 2011, included actual fuel costs on a week to week basis.[74] The Province made two key commitments on the record: first, that ratepayers would not be required to pay incremental costs of any additional RES obligation triggered by operation of the mill and second, that the Province would adopt regulations making the biomass plant a "must run" facility to prevent its operation for the mill when it was not needed for the system being counted as incremental cost to the system.[75] The broader consideration was simply the Board's acceptance of the submission, backed by financial information filed in confidence, that the mill would not be purchased and reopened without the proposed LRT.[76]

Observations and Reflections

Although it is not possible to definitely evaluate the impact of the UARB on the transformation of Nova Scotia's electricity system solely by reading its decisions, a number of specific conclusions can be offered. First, in ordering an IRP in 2007, the Board was a catalyst for the rapid development of DSM and renewable energy. Second, the Board has developed a regulatory framework for DSM that ensures it delivers the energy savings that provide its core rationale. Third, the Board has contributed to the development of a workable framework for the development of renewable energy and applied rigorous scrutiny to the major renewable energy projects that have come before it, including the transformational Maritime Link project. Fourth, the Board has managed the difficult task of protecting ratepayers and the core principles of economic regulation while being sensitive and responsive to the challenges that the cost of energy poses in a small, electrically-isolated province with a soft economy where electricity is largely produced by burning expensive coal and where significant investments have to be made in renewable energy and DSM if the dependency on coal is to be reduced in the future.

More tentatively and broadly, it can also be said that the UARB has helped to keep the process of electricity system transformation under way and on track. It has done this by subjecting the process, particularly its economic aspects, to effective and accountable regulation that is sensibly conducted.

Importance of the Legislative Framework

It of course matters to the role that the UARB has played in electricity system transformation that successive Nova Scotia governments have put their central policy choices into legislation. This has given the Board the statutory mandate to require the management and development of the electricity system in compliance with those policy objectives.

It has probably also mattered that successive governments have largely resisted the temptation to prescribe the specific plans and measures to be taken to achieve the legislated goals and objectives.[77] This has allowed the UARB, on behalf of ratepayers, to hold NSP (and ENSC on DSM) accountable for the development and implementation of those plans and measures. It has also meant that the plans and measures have been vetted and tested in a process that has been rigorous, open, transparent and accountable. In addition, a non-prescriptive legislative framework has also left the UARB with flexibility to keep the regulatory system responsive to changing conditions and evolving stakeholder expectations, as well as to the particular accommodations "traditional ratemaking" has had to make with Nova Scotia realities.

At the same time, Nova Scotia's legislative framework has been prescriptive enough to ensure that the complex and contested choices that the Province had to face to even begin the process of transforming its electricity system have for the most part been faced. They have not been deferred, as they might have been in a governance process more internalized to government, as "inconvenient truths". Here, the independence of the UARB and its accountability to deal with the matters that have to be addressed if the system is to be transformed in accordance with law in a manner that is cost-effective for ratepayers and otherwise in the public interest, has been of critical importance. In some cases, it has helped to ensure that attention is brought to matters on which further decisions have been required from government. In this way, the legislative framework has facilitated an iterative dynamic between the policy and regulatory processes.

Critically, UARB outcomes have enjoyed enough support to be a dependable basis for decisions and actions of a scale that are called for by the multi-year transformation that has been legislatively mandated. It has probably mattered in this regard that successive governments have not only respected the formal institutional independence of the UARB but also largely resisted the temptation to tilt the UARB's mandate in favour of proposals or plans that government may favour. Government has also largely left the process of the Board to be decided by the Board. Government has largely contributed to the regulatory process by appearing before the UARB to express its views on substantive and procedural matters on the record.

The exception to this "hands off" approach was a significant one: the legislation passed in 2013 to focus the scope and to limit the duration of the Board's review of the Maritime Link project. This was however, by any measure, an exceptional project. The choice of the government to have it reviewed by the UARB was at least as significant as its choice to limit the scope of that review. Moreover, the legislation adopted left the Board with a meaningful jurisdiction to conduct an independent and rigorous review of a project that was the subject of politically important intergovernmental agreements and foundational policy on energy, the economy and the environment.

Multiple factors, not all of them laudatory, may explain why Nova Scotia governments have not elaborated on the jurisdiction of the UARB to more explicitly align it with the electricity policy outcomes that the same governments have put into legislation. Nor is it clear that the UARB has, in all respects, benefited from the "hands off" approach that government has taken. Reading the decisions of the Board, one can easily suspect that on a range of matters, the Board may have wished for clearer legislative direction of the kind that is enjoyed by counterparts in other jurisdictions.[78] At the same time, it is possible that the perceived independence, objectivity and fairness of the UARB process -and thus of its decisions – have benefited from the fact the Board works largely within an economic regulator

mandate.[79]

Importance of the UARB's Performance

Important as the legislative framework has been in creating the conditions for the UARB to play the role it has, how the UARB has carried out that role matters at least as much. Indeed, the UARB's performance may have as much to do with its non-prescriptive legislative mandate as its legislative mandate has to do with its performance. Four elements of the UARB's approach warrant emphasis.

The first is simply the quality of the UARB's decisions as regulatory products. Each decision contains detailed and rigorous consideration of the arguments and the evidence presented on all of the substantive issues raised in the associated hearing. Consistently, conclusions are based on analysis that is thorough, detailed and comprehensive. Each hearing, circumstances allowing, provides ample opportunity to all participants to present their case and examine that of others. Each hearing is the culminating event in a process of information sharing that enables all parties to participate at the hearing on an informed basis. From an administrative law perspective, the reasons the UARB gives for its decisions do what the law says reasons for decision are supposed to do:[80] they clearly show the basis on which the Board has reached its decision; they show that the Board has carefully considered all of the issues and made informed choices on each of them; they provide clear direction or guidance as to what is to be done to implement or follow up on the Board's decision; and they clearly state the regulatory jurisprudence that the Board has relied upon and is therefore likely to rely on in the future.

Second, the Board has taken a clear but nuanced approach on the line between policy and regulation. On the one hand, it has taken its role as an agent of government policy very seriously, while at the same time being insistent that government express its policy in legislation. One aspect of this is the carefulness with which the Board has addressed questions about its jurisdiction, both in cases where it has concluded that it lacked it and in cases in which it has concluded that it had it.

On the other hand, the UARB has been sensitive to the broader policy context that surrounds the issues that come before it, whether that context is the exposure of ratepayers to rate shock, the importance of pulp mills in the economy of rural communities, the broader benefits of the Maritime Link project in integrating Nova Scotia into the North American grid, the importance of public awareness of energy efficiency to the success of those programs or the economic development rationale for development of tidal power. Such considerations may be outside of the Board's formal jurisdiction but they have informed what the Board has done within its jurisdiction. In addition, these broader policy considerations have been referenced and explained in UARB decisions, allowing those decisions to play a didactic function in explaining the context, importance and implications of policy and regulatory choices.

Third, on a related note, the Board has been careful to stay on the right side of the line between regulation and management. This is clearest in its first decision on the Port Hawkesbury biomass project but it is also reflected in the response of the Board to a range of proposals that are often made for the attachment of conditions to approvals and in the Board's willingness to shift the regulation of DSM in a less prescriptive direction. As the Board explained in the first biomass project decision, it is very aware that its ability to regulate depends on a separation between its role as regulator and the role of the management of regulated entities in making the decisions or developing the plans the Board must review. It understands, in other words, that a regulator who enjoys trust and confidence must be independent from those it regulates as well as the government.

Fourth, the UARB believes in and practices process which is not only fair but inclusive and collaborative. It has made it clear that it expects those it regulates to work with their stakeholders, or rather with the representatives of their stakeholders who typically intervene in hearings. While making it

clear that it will not subjugate its role to protect the public interest to negotiated settlements, the Board has also made it clear that a generally supported settlement based on defensible resolution of issues is an important indicator of where the public interest lies.[81] More generally, the Board has clearly manifested the expectation that meaningful consultation with stakeholders should normally be built into the applications that come before it for resolution by way of a hearing. In addition, the Board has instituted several standing consultation processes, such as a Fuel Adjustment Mechanism and the DSM Working Group.

In all of these respects, the UARB has made the highly technical process of economic regulation relatively inclusive. It has provided those with "skin in the game" who might otherwise go to government considerable incentive to participate in the regulatory process. At the same time, the insistence of the UARB on engagement has given government a highly defensible rational for leaving regulatory matters to the regulatory process. It also seems likely that the Board's commitment to stakeholder engagement has strengthened the functionality of the regulatory process by giving it a significant element of the tri-partism that is associated with "responsive regulation" and more broadly with modern approaches to regulation in multiple sectors.[82]

1. Associate Professor, Schulich School of Law, School of Health Administration and College of Sustainability, Dalhousie University and Chair of the Board of Directors of Efficiency Nova Scotia and of EfficiencyOne.
2. Richard Starr, Power Failure? (Halifax: Formac Publishing, 2011).
3. For information in this paragraph, see London Economics, Nova Scotia power sector: Current Situation, recent developments and challenges, and SWOT analysis, a paper prepared for the Nova Scotia Department of Energy, online: Nova Scotia Department of Energy <

   http://energy.novascotia.ca/sites/default/files/files/Overview%20web2.pdf
   >.
4. Efficiency Nova Scotia Corporation Act, SNS 2009, c 3.
5. Under recently adopted restructuring legislation, the administration of DSM programs for the electricity sector will be franchised by the Province to a franchisee that will conduct business as an energy efficiency utility under the brand Efficiency Nova Scotia. ENSC is in the process of being reconfigured as a corporation under the Canada Not-for-Profit Corporations Act, called EfficiencyOne, in the expectation it will be awarded the franchise to carry on as the administrator of demand-side management programs as Efficiency Nova Scotia. It will do so as the supplier of energy savings to NSP which NSP will be obligated under the Electricity Act to purchase to the extent energy savings are shown to be the most cost-effective energy resource for ratepayers.
6. Utilities and Review Board Act, SNS 1992, c 11.
7. Public Utilities Act, RSNS 1989, c 380[PUA].
8. Electricity Act, SNS 2004, c 25.
9. Supra note 3.
10. Electricity Efficiency and Conservation Restructuring (2014) Act, SNS 2014, c 5.
11. PUA, supra note 6 s 64.
12. Re Nova Scotia Power Inc., 2005 NSUARB 27 at para 24.
13. Ibid at para 67.
14. Ibid at para 35.
15. Ibid at para 45.
16. Ibid at para 18.
17. Ibid at para 44.
18. Supra note 3 s 35.
19. Air Quality Regulations, OIC 2005-87, NS Reg 28/2005.
20. Environment Act, SNS 1994-95, c 1.
21. Environmental Goals and Sustainable Prosperity Act, SNS 2007, c 7.
22. Gas Emissions Regulations, OIC 2009-341, N.S Reg 260/2013.
23. Supra note 19.
24. Renewable Electricity Regulations, OIC 2010-381, NS Reg 155/2010 [Renewable Electricity Regulations]. See also Nova Scotia Department of Energy, Renewable Electricity Plan: A Pathto Good Jobs, Stable Prices, and a Cleaner Environment, April, 2010.
25. The planning to meet this obligation is required to exclude electricity from "distribution system connected renewable energy generators". The 10% of supplied renewable electricity is required to include 5% of its total annual sales from independent power producers. See Renewable Electricity Regulations, Supra note 23, s 5.

26. As with the 2011 standard, the planning to meet this obligation must exclude electricity from "distribution system connected renewable energy generators", although such electricity can be taken into account in meeting the obligation. The 25 per cent of supplied renewable electricity is required to include 5 per cent of total annual sales purchased from independent power producers. Renewable Electricity Regulations, Supra note 23 s 6.
27. The 40 per cent must include renewable energy acquired through continuing compliance with obligations from the earlier phases requiring the purchase of renewable energy from independent producers. The 40 per cent is required to include 20 per cent of the electricity generated by the Muskrat Falls Generating Station if the station and associated transmission infrastructure has been completed and if an assessment against NSP in relation to the Maritime Link project has been approved by the UARB. Renewable Electricity Regulations, supra note 23 s 6A.
28. An Agreement on the Equivalency of Federal and Nova Scotia Regulations for the Control of Greenhouse Gas Emissions from Electricity Producers in Nova Scotia, online: <

    http://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=1ADECEDE-1
    >.
29. Canadian Environmental Protection Act, SC 1999, c 33.
30. Reduction of Carbon Dioxide Emissions from Coal-Fired Generation of Electricity Regulations, SOR/2010-138.
31. See London Economics, Nova Scotia power sector: Current Situation, recent developments and challenges, as SWOT analysis – Prepared for the Nova Scotia Department of Energy (2014), throughout but especially at 31-34.
32. ICF International, Emerging Electricity Technologies in Nova Scotia (2014), 1-2 and 41-47.
33. Efficiency Nova Scotia Corporation, 2013 Annual Report, 6.
34. Re Nova Scotia Power Inc., 2005 NSUARB 27 (CanLII).
35. Ibid at para 6.
36. Ibid at para 29.
37. PUA, supra note 6 s 91.
38. Re Nova Scotia Power Inc., 2005 NSUARB 27 (CanLII), at paras 37-46.
39. Re Nova Scotia Power Inc., 2008 NSUARB 140 (CanLII), at paras 9-22.
40. Re Nova Scotia Power Inc., 2006 NSUARB 23 (CanLII), at paras 437-76.
41. These developments are summarized in Re Nova Scotia Power Incorporated's Demand Side Management Plan, 2008 BSUARB 47 (Can LII).
42. David Wheeler, Stakeholder Consultation Process for an Administrative Model for DSM Delivery in Nova Scotia – Final Report (Dalhousie University, 2008), online: <

    http://0-fs01.cito.gov.ns.ca.legcat.gov.ns.ca/deposit/b10579424.pdf
    >.
43. Re Nova Scotia Power Incorporated's Demand Side Management Plan, 2008 BSUARB 47 (Can LII).
44. Re Nova Scotia Power Incorporated, 2009 NSUARB 166 (CanLII); Re Nova Scotia Power Incorporated, 2010 NSUARB 155; Re Efficiency Nova Scotia Corporation, 2011 NSUARB 99 (CanLII); Re Efficiency Nova Scotia Corporation, 2012 NSUARB 209 (CanLII); and Re Efficiency Nova Scotia Corporation, 2014 NSUARB 144 (CanLII). Due to the fact that ENSC was not established in law until 2010 and did not become operational until relatively late in 2010, DSM Plans for 2010 and 2011 were also developed and submitted for UARB approval by NSP: see.
45. Renewable Electricity Regulations, supra note 23. .
46. Re Renewable Energy Community Based Feed-In Tariffs, 2011 NSUARB 100 (CanLII); Re Tidal Energy Feed-In Tariffs, 2013 NSUARB 214 (CanLII).
47. Re Standard Form Power Purchase Agreement for 300 GWh of Renewable Energy from Independent Power Producers, 2012 NSUARB 49 (CanLII); Re Nova Scotia Power Inc., 2013 NSUARB 92 (CanLII). The latter was for approval of capital expenditure on the South Canoe wind project. In the case on the Power Purchase Agreements and in the cases on feed-in tariffs, the UARB has reviewed the work of the Renewable Energy Administrator, including its procedural aspects. The Renewable Energy Administrator's statutory mandate is to oversee the competitive bidding process for the procurement of renewable sources of power from Independent Power Producers.
48. Rowland Harrison, Nova Scotia Maritime Link Decision" (2013) 1 Energy Regulation Quarterly, 65.
49. Re NSP Maritime Link Incorporated, 2013 NSUARB 154 (CanLII), at paras 9-47.
50. Maritime Link Act, SNS 2012, c 9.
51. Canadian Environmental Protection Act, OIC 2012-326, NS Reg 189/2012 s 5.
52. Re NSP Maritime Link Incorporated, 2013 NSUARB 154 (CanLII), at paras 232-40.
53. Ibid at paras 170-72.
54. Ibid at para 173.
55. Ibid at paras 226-30.
56. Ibid at paras 223.
57. Re NSP Maritime Link Incorporated, 2013 NSUARB 242 (CanLII), at paras 13-17.
58. Ibidat paras 19-24; 31.
59. Ibid at para 33.
60. Re NSP Maritime Link Incorporated, 2013 NSUARB 154 (CanLII), at paras 147-52.

61. Re Nova Scotia Power Incorporated, 2009 NSUARB 111 (CanLII), at paras 1-12.
62. Ibid at paras 28-47. The earlier decisions are Re Nova Scotia Power Incorporated, 2004 NSUARB 118 and Re Nova scotia Power Incorporated, 2005 NSUARB 98.
63. Re Nova Scotia Power Incorporated, 2010 NSUARB 196 (CanLII).
64. Ibid at paras 86-93.
65. Ibid at paras 62-65; 81-82.
66. Ibid at paras 108-12.
67. Ibid at para 162.
68. Re Nova Scotia Power Inc., 2000 NSUARB 72 (CanLII). In addition, in 2003, it approved a non-cost-based rate for the two mills, initially called the Extra Large Industrial Interruptible Rate and subsequently called the Extra Large Industrial Two-Part Real Time Pricing rate.
69. Re Nova Scotia Power Incorporated, 2011 NSUARB 184 (CanLII).
70. Ibid at para 213.
71. Ibid at para 204.
72. Re Pacific West Commercial Corporation, 2012 NSUARB126 (CanLII).
73. It also proposed a "Pricing and Dividend Calculation Mechanism" under which, for tax reasons, NSP would unusually be paid for the electricity it supplied to the mill largely through the dividends it would receive as a partner in the partnership formed to operate the mill. The Board concluded that such a payment mechanism was within its jurisdiction to approve "charges" for electricity. This aspect of the LRT proposal was subsequently dropped when the prospective purchase failed to obtain a favourable Advance Tax Ruling from the Canada Revenue Agency.
74. Ibid at para 152.
75. Ibid at paras 172-79.
76. Ibid at paras 67, 76-86.
77. See George Vegh, Energy Planning: The Case for a Less Prescriptive Approach (McCarthy Tétrault LLP, 2013).
78. See Rowland Harrison, "Tribunal Independence: In Quest of a New Model" (2014) 2 Energy Regulation Quarterly 183.
79. Nova Scotia is currently considering a shift from cost-of-service regulation to performance-based ratemaking. See Nova Scotia Department of energy, Regulating Electric Utilities – Discussion Paper (2014), online: <

    http://energy.novascotia.ca/sites/default/files/files/Summary_Report_Regulating_Electric_Utilities.pdf
    >, and London Economics, Literature review: regulatory economics and performance-based ratemaking (2014), online: <

    http://energy.novascotia.ca/sites/default/files/files/Literature%20Review%20-%20LEI%20Consolidated.pdf
    >.
80. Baker v Canada (Minister of Citizenship and Immigration), [1999] 2 SCR 817.
81. For example, see Re Nova Scotia Power Incorporated, 2008 NSUARB 140 (CanLII), in which a settlement on a general rate increase was accepted. See also Re Renewable Energy Community Based Feed-In Tariffs, 2011 NSUARB 100 (CanLII); Re Tidal Energy Feed-In Tariffs, 2013 NSUARB214 (CanLII).
82. Ian Ayres and John Braithwaite, Responsive Regulation: Transcending the Deregulation Debate (New York and Oxford: Oxford University Press, 1992); Neil Gunningham, Peter Grabosky (with Darren Sinclair), Smart Regulation: Designing Environmental Policy (Oxford: Clarendon Press, 1998).