

ENERGY PROJECT DECISION SYSTEMS FOR NET ZERO:

.....
DESIGNING FOR FUNCTIONALITY,
ADAPTABILITY AND LEGITIMACY
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EXECUTIVE SUMMARY

Canada is committed to achieving net zero greenhouse gas emissions by 2050. Successfully charting this future will depend in considerable measure on whether public energy decision systems – including regulators – are up to the job. This is the final report for a Positive Energy research project exploring the relationships within public energy decision systems, specifically between regulators with responsibilities for the approval of resource development and infrastructure, and other actors in energy decision-making in Canada, including policymakers, courts, Indigenous and municipal governments, other regulatory authorities, and affected and interested parties. We examine these relationships through the lens of regulatory independence and, ultimately, effectiveness. We apply this lens through examination of historical case studies of five Canadian energy regulators—the Canada Energy Regulator, successor to the National Energy Board (CER/NEB); the British Columbia Oil and Gas Commission (BCOGC); the Alberta Energy Regulator (AER); the Ontario Energy Board (OEB); and the Nova Scotia Utility and Review Board (NSURB), whose mandates all encompass to varying degrees approvals of resource development and infrastructure.

This project identified and examined the following policy problems:

- What constitutes an effective energy decision system?
- What defines an independent regulator?
- How does regulatory independence influence – for good or ill – the effectiveness of an energy decision system?

The concepts of regulatory independence and effectiveness are under tremendous pressure. The emergence of an ever broader set of societal goals to be dealt with by energy decision-makers has accelerated in the past two to three decades with an ever increasing slate of economic, environmental and social issues. This has led to authorities facing growing calls for decision-making to take a more holistic and systemic approach, making more complex decisions that demand input from multiple sources including multiple government authorities and addressing a broad slate of questions that engage values as much as interests. Meanwhile, technology has rapidly evolved along with changing perspectives on business models for energy supply. All this is accompanied by a recent urgency on climate. Coherent policy to guide regulatory processes will be a key part of the solution.



In this report, we set out a framework for what makes a public energy decision system effective, what makes regulators within such a system more or less independent, and how independence bears on the question of effectiveness. The question of effectiveness rests on three essential elements: functionality (can it get the job done); adaptability (can it evolve with changing circumstances); and legitimacy (can it sustain broad public confidence). These three elements and their constituent parts together produce several tensions or unavoidable tradeoffs. There is no “right” answer, only the considered judgment of those who design and operate the systems.

Those responsible for shaping public energy decision systems in the coming years should take careful account of the conclusions that emerge from this research. There are many models and avenues for reform, but a number of broad recommendations are implicit in our conclusions.

First and foremost, **all reforms must be informed** by a careful assessment of the context, inherent tradeoffs and tensions, and intended and unintended consequences. The other conclusions and recommendations flow from this fundamental tenet.

We cannot afford to get the institutional arrangements wrong. A viable energy future in an age of climate change will require that public decision systems are able to act competently, act quickly, act judiciously and act in ways that build and balance the confidence of all parties.

But **fast public decision-making is not the way of things in the 21st century.** Political leaders face the dilemma of balancing the need for speed with the imperatives of careful planning and sound analysis, inclusiveness, stability and predictability, consultation, and meaningful accommodation.

To expedite project decisions without unduly compromising those competing goals, **Canada needs much more sophisticated policy and planning at federal, provincial and local levels and much more coherence across jurisdictions.** Every critical decision delayed until late in the process adds to both time and uncertainty for investors as well as affected communities. That means we need more policy and planning through a continuous and dynamic process that sketches possible futures while mindful of technological uncertainties and possibilities; taking energy planning to the regional level; engaging early on with Canadians and their communities, and creating signals to potential investors that they can count on.

In terms of system design, **democratic accountability is arguably better served when political decisions are made well upstream in the decision cycle and through formal means.** Governments should frame their broad intentions through legislation and regulations. Although made outside of the legislative process, regulations are normally subject to well-established procedures for analysis and consultation and done in plain sight of legislators. In contrast, late-stage cabinet decisions or ministerial directives often amount to regulation by stealth.



Where regulatory systems are ostensibly independent they should be in fact. Many systems are often described as “independent” even though they fail to meet many of the tests of independence. Policymakers need to decide what they really want and design systems accordingly.

In terms of day-to-day decision-making, **engagement must take place at multiple levels.** Communities, most especially Indigenous communities, will need to be active shapers of the energy future and partners in many cases on all manner of projects. Terms like “co-creation,” “co-production” and “co-development” aim to capture this change. Better defining what these terms mean, how they can be made practical and meaningful, and building the capacity to do this will be time and resource intensive. Policymakers will need to step up and support this work.

Finding economically and socially acceptable solutions with a growing slate of stakeholders and rights holders will entail greater interjurisdictional cooperation – from policy through planning to projects. For many reasons – from geography to resources to demographics to political culture – such cooperation has most often proved elusive in Canada. **We need much more interjurisdictional cooperation and jurisdictions need to learn what works and what doesn’t as rapidly as possible.**

Contemporary society demands that decision processes be holistic and transparent. They must take account of a multitude of societal goals while still arriving at viable conclusions.

Transparency – as hard as it can be for political actors – is essential for public confidence. Cabinet level decision-making is limited in its transparency by definition. When cabinet is involved in decision-making for individual projects or regulatory submissions, it will need to ensure the rationale for decisions and the processes and information used to arrive at them are clear and transparently communicated.

Regulators can act judiciously without being judicial. Regulators can be more flexible and open to new forms of evidence, engage with other parties and provide advice to governments. Provided these activities are done separate from specific applications and in plain sight, there is no reason why doing so would compromise regulator independence, objectivity, or transparency. Arguably it is quite the opposite.

Looking to the future, institutional innovation and informed reform will be essential to building public confidence on the way to net zero. This will require **balancing adaptability with stability**, to ensure responsiveness to changing conditions while enhancing trust, developing knowledge and expertise, and protecting the reputation of regulators.



The durability of decisions will matter more and more. If a decision is arrived at and a project approved or turned down then succeeding governments should be very cautious about overturning such decisions unless they are mindful of the costs and risks to reputation, public confidence and system stability and predictability.

There will always be tradeoffs and they will often be hard. Investor confidence – depending on expeditiousness, efficiency, and certainty – will always be in some degree of tension with local community confidence, which depends on balancing multiple needs, openness, and inclusion. This tension is inescapable and it will sometimes be painful. But confidence of all parties will most likely be enhanced by early and meaningful engagement, transparency, and institutional stability.

Confidence and trust of all parties will be a critical determinant of whether we succeed in meeting our energy and climate goals. Suppliers of capital will need to be confident that projects have a fair chance of succeeding and that costs and risks will not overwhelm reasonable returns on investment. Locally affected communities will need to have faith that their voices will be heard and their concerns attended to.

The choice of who decides what, when and how needs to be clear, understandable and stable. Without that, any aspirations to net zero emissions in 2050 will find themselves buried under uncertainty and a lack of public confidence.



INTRODUCTION

RESEARCH OBJECTIVES

This is the final report for a Positive Energy research project that aimed to explore the relationship between regulators with responsibilities for the approval of energy project development, and other actors in energy decision-making in Canada, including policymakers, courts, Indigenous and municipal governments, other regulatory authorities, and affected and interested parties. We examine these relationships through the lens of regulatory independence and, ultimately, effectiveness, specifically through historical case studies of five Canadian energy regulators and the policy systems within which they work.

As Canada defines important parameters for its energy future in an age of climate change, the scale of demands on public energy decision systems is set to grow, perhaps exponentially. Last year, the federal government committed to achieving net zero greenhouse gas emissions by 2050. Successfully charting Canada’s energy and climate future will depend in considerable measure on whether public energy decision systems – including regulators – are up to the job.

In the light of these challenges, this research identified and examined the following policy problem:

- What constitutes an effective energy project decision system?
- What defines an independent regulator?
- How does regulatory independence influence – for good or ill – the effectiveness of an energy project decision system?

This study is part of Positive Energy’s examination of the roles and responsibilities of decision-making authorities in Canada’s energy decision-making system (Box 1). Like all of the research and engagement in Positive Energy’s second three-year phase, this study is guided by the core concepts of *Informed Reform* and *Durable Balance*:

“Reforms need to strike a durable balance between competing priorities and tensions: demands of communities for engagement, involvement, transparency and representation; requirements of investors for adequate stability, timeliness and predictability in decision processes and outcomes; demands of consumers for safe, affordable, reliable energy. [...] ‘Informed reform,’ for its part, emerges from the fact that energy decision-making is a complex organic and ever-changing system of multiple component parts. It is in need of repair, but it requires informed reform that carefully considers both short- and long-term intended and unintended consequences from a systems perspective.” (Cleland and Gattinger, 2018, p. 4.)



METHODOLOGY

At the core of this research project are five historical case studies of Canadian energy regulators. The case studies examine how energy project decision-making systems and relevant institutional relationships in the five jurisdictions have evolved over time and what were and are the economic, environmental, social, political, and technological circumstances that may have shaped change.

The regulators included in the case studies are the Canada Energy Regulator, successor to the National Energy Board (NEB/CER); the British Columbia Oil and Gas Commission (BCOGC); the Alberta Energy Regulator (AER); the Ontario Energy Board (OEB); and the Nova Scotia Utility and Review Board (NSURB). The mandates of these regulators all encompass to varying degrees approvals of energy projects. Aside from that specific focus, we chose regulators in five different jurisdictions from coast to coast in Canada and whose structures, mandates and evolution vary widely. The complete historical case studies have been published as a separate document (Thomson, 2021).

Data collection for this project included several steps.

Step one involved a review of relevant literature respecting both the general concepts of regulatory independence and the specific regulators under examination. The general literature review has been published as a separate document (Thomson, 2020).

Step two involved a series of structured interviews with 27 individuals, knowledgeable about one or more of the five regulators selected for case studies, but with different perspectives – as policymakers, regulators, people with judicial experience, applicants and their industries, Indigenous representatives, other authorities such as municipal governments and other regulators and various stakeholders (interviewees are listed in Thomson, 2021).

Step three involved a virtual workshop held in October 2020 convening a diverse group of senior experts to discuss the project and to test and strengthen our emerging thinking. Their insights and feedback have been incorporated into our observations and suggestions for future directions.¹

Step four looked to various sources of primary documentary evidence – from legislation to policy statements to reports of advisory bodies.

A discussion paper that offered a preliminary assessment of findings was released in December 2020 (Cleland et al., 2020).

1. For more information on the workshop and the information presented, please visit the following link: <https://www.uottawa.ca/positive-energy/content/policymakers-regulators-and-courts-who-decides-what-when-and-how-evolution-regulatory>

BOX 1: POSITIVE ENERGY'S RESEARCH ON ROLES AND RESPONSIBILITIES

The second three-year phase of Positive Energy (2019-2021) aims to address the following question: How can Canada, an energy-intensive federal democracy with a large resource base, build and maintain public confidence in public authorities (federal, provincial, and territorial policymakers and regulators, Indigenous governments, municipal governments and the courts) making decisions about the country's energy future in an age of climate change?

Three fundamental questions form the research and engagement agenda. How can Canada effectively overcome polarization over its energy future? What are the respective roles and responsibilities among policymakers, regulators, the courts, municipalities and Indigenous governments, when it comes to decision-making about its energy future? What are the models of and limits to consensus-building on energy decisions?

Clearly articulating and strengthening roles and responsibilities between and among public authorities is one of the most pivotal but understudied factors shaping Canada's energy future in an age of climate change. Confidence of the public, investors and communities in government decision-makers – be they policymakers, regulators, courts, Indigenous governments or municipalities – is a critical success factor in Canada's ability to successfully chart its energy and emissions future.

Positive Energy's research and engagement over the last five years reveals that answering two questions will be fundamental to confidence in public institutions: Who decides? How to decide? Positive Energy's research and engagement also underscores that two core principles should inform answers to these questions: Informed Reform and Durable Balance.

The roles and responsibilities research programme includes projects in the following areas:

- Federal-provincial relations
 - [A research report examining evolving models and practices for intergovernmental relations over energy and climate](#)
 - [A comparative study of factors driving final investment decisions for liquefied natural gas facilities in British Columbia and Western Australia](#)
- Policy-regulatory-judicial relations
 - [A literature review on regulatory independence in Canada's energy systems: origins, rationales and key features](#)
 - Historical case studies of federal and provincial regulators exploring the evolution of regulatory independence over time: synthesis report (this report) and case studies
 - [Policy-regulatory relations: analyzing innovations in policy-regulatory relations to identify 'What Works?' \(research collaboration with CAMPUT\)](#)
 - [A case study of the expanded role of the federal cabinet in pipeline projects \(TC Energy's 2021 NGTL System Expansion\)](#)
- New imperatives in energy decision-making
 - Emerging technologies: interviews with provincial and municipal policymakers and regulators to identify the impact of emerging technologies on decision-making
 - [Public engagement: analyzing innovations in regulators' engagement practices to identify 'What works?' \(research collaboration with CAMPUT\)](#)





CONTEXT

THE TIMES THEY ARE A CHANGING

And they have been changing for several decades

The idea of ‘independent’ regulatory decision-making agencies in Canada goes back to the 19th century (Thomson, 2020). In the case of energy regulation, Alberta had a well-developed system, dating back at least to 1938 with the establishment of the Petroleum and Natural Gas Conservation Board. At the national level the most prominent event was the creation of the National Energy Board in 1959 following the ‘Great Pipeline Debate’. Under the *National Energy Board Act*, the regulator was granted considerable independence; notably, there was no provision allowing the government to provide general policy direction to the Board, nor could cabinet approve a certificate if the application had been rejected by the NEB or vary a certificate approved by the NEB. Over the years, similar sorts of agencies evolved in most provinces, all with varying functions but most still relatively “independent” (Thomson, 2020).

As revealed by the case studies, there are numerous models for such agencies, from ones with very broad mandates and high degrees of independent decision-making authority to others that are more narrowly focused or may be largely advisory – essentially extensions of the core public service. Most, but not all, function as tribunals, as triers of fact through formal procedures. All are supervised directly or indirectly by courts respecting matters of law.

The rationale for the agencies being in some way “independent” of the core of government has varied over time. One can identify several objectives: to afford a longer-term view of the matters in question beyond electoral cycles; to ground decisions in distinctive expertise and due process; and to ensure decision stability in part by distancing decisions from volatile partisan interests (Cleland et al., 2020). Put another way, the overall objective is more effective decision-making (Cleland et al., 2020) consistent with long term investment cycles, subject to expert consideration of a broad range of interests and undertaken through processes that are fair and open and not inappropriately influenced either by particular private interests or by short-term political interests.

Until recent decades, energy regulators had a relatively one-dimensional (economic), if sometimes controversial job (Thomson, 2020). They dealt with energy resource development, energy infrastructure approvals and oversight of utilities, all of it primarily from an economic perspective. Several critical questions were dominant: whether it was in the public interest to develop various publicly owned resources – from hydrocarbons to hydro; whether new infrastructure was needed to move resources to market; whether that infrastructure was economically viable and met tests of safety, security and reliability; and whether market failures such as natural monopoly and the existence of market power (and, therefore, the power imbalance between energy providers and users) were properly addressed.



Of course, it wasn't always quite that one-dimensional. Local environmental, social, and cultural impacts have long been part, albeit a secondary part, of the equation by which the public interest was determined (Simard, 2018; Fast, 2017). And the need to consult local communities is hardly new. The idea of public consultation in major capital project decisions of all sorts goes back many decades. And the idea of the inherent rights of Indigenous peoples has a history dating back at least as long. In the 1970s, the James Bay hydro complex was eventually developed only after a period of intense controversy involving the James Bay Cree whose lands were being encroached upon and who eventually were able to ensure that their interests and rights were accounted for (Craik, 2004). Somewhat later, an agreement between the Mackenzie Valley Environmental Impact Review Board, the Inuvialuit Game Council and the federal Minister of the Environment led to establishment of the Mackenzie Gas Project Joint Review Panel (Mackenzie JRP), a majority of whose members were Indigenous and which held hearings in 26 northern communities (Joint Review Panel, 2009).

Despite this evolutionary process, by the 1990's the world was becoming more complex and the balance among various interests and parties was shifting.

The past two decades in particular have seen steadily growing expectations for citizen involvement in decision-making and the consequent necessity for much broader and more open consultation, engagement and accommodation with a broad range of affected communities (Fast, 2017). In parallel with the emergence of broader societal demands for inclusion, the legal obligation of the Crown to consult with and, where appropriate, accommodate Indigenous peoples, has continued to evolve, with significant impacts on the regulatory process.

The emergence of broader societal goals beyond the traditional ones dealt with by regulators has occurred with particular speed in the past two to three decades with an ever-increasing slate of environmental and social issues. This has led to authorities facing growing calls for decision-making to take a more holistic and systemic approach, making decisions inherently much more complex, demanding input from multiple sources including multiple government authorities and addressing a broad slate of questions that engage values as much as interests (Cleland et al., 2016). These evolving societal conditions can lead to the conclusion that regulatory questions are in some way less technical, involving more subjective judgment and, in particular, political judgement.



And of course, the elephant in the room, starting in the 1990s and rapidly accelerating in the past two decades, has been the issue of climate change. Climate change raises questions whose scale and breadth of implications have, so far at least, not been matched by commensurate government policy responses and with a tendency at times to leave things unresolved until they reach the stage of approval of individual projects (Cleland and Gattinger, 2019). Governments have sought to intervene directly in decision processes, often without fully resolving the tensions respecting greenhouse gas emissions management, the adequacy of energy infrastructure or the cost implications for consumers.

Meanwhile, technology has rapidly evolved along with changing perspectives on business models for energy supply. These changes have been most striking in electricity markets where a growing slate of generation options combined with the realization that power generation is not a natural monopoly led to a radical restructuring of power markets in many jurisdictions. Regulation could thus be lighter handed at least until political realities intervened.

In some jurisdictions, energy providers were privatized and were no longer agencies of government, which has reduced direct policymaker control of those entities but may have helped spur the tendency to look for other forms of control through project decision processes.

All of these changes have occurred in an ever more turbulent societal context extending well beyond energy or energy regulation. Two factors are of particular note.

These emerging realities are set in a context where political fragmentation and polarization appear to be growing and there has been continuous volatility – if not outright erosion – of trust in all authorities (Cleland and Gattinger, 2019). The record respecting trust in expertise is mixed; scientists (or science) remain among the few institutions that are generally trusted but other disciplines (e.g., economics) probably much less so and technical expertise is increasingly challenged by traditional knowledge and “lived experience”.

Finally, all of this in turn is situated in a world of rapidly evolving media – and in particular, social media – and the effects of those media on public understanding and debate. The number (and volume) of voices in the debate has increased drastically along with growing expectations that all those voices will be “heard” (Fast, 2017).

Canadian energy regulatory systems have, meanwhile, evolved to attempt to account for at least some of these many changes (Larkin, 2021). As we have seen in the case studies, sometimes this leads to constructive reform, sometimes to frustration at the rigidity imposed by legislative mandates, sometimes to considerable instability and sometimes to a tendency to bring energy decisions more directly under the control of the political executive.



The next few decades will see the times changing even more

The future, as far as we can see it emerging, will see all of the changes noted above continuing. It will likely see several tendencies accelerating and will see new ones emerging, making the decision system ever more complex.

Technologies and business models continue to evolve, particularly with respect to low-carbon options and the potential for power generation to come much more from local sources. More options are a good thing. More competing interests should also be a good thing, inducing technological change and greater efficiency. On the other hand, we are far from resolving the complexities involved in the integration of intermittent renewable or distributed resources into the grid, and more competitors will bring more controversy to regulatory processes. Until new system management models stabilize, these factors will involve uncertainty, controversy and in all likelihood more ponderous decision processes.

Meanwhile, we see a growing social agenda which will influence both policy and regulatory decisions. While climate change remains the biggest single economic, social and environmental concern, many other local environmental questions will be prominent, and all will be increasingly surrounded by questions of inclusion, equity, diversity, and multiple social goals.

The latter can be seen in the emergence of ESG (environment, social, governance) investment practices, something that at present is largely in the hands of private actors and with no generally agreed or established boundaries. ESG is, in other words, extremely fluid. It is also highly political in nature and is increasingly finding its way into formal public decision-making, despite the lack of any coherent or agreed upon framework.

And the pressure will grow for much faster change

All this will be accompanied by the current urgency on climate. Coherent policy to guide regulatory processes will be key. This will help to incorporate a crucial missing part of the debate: a realistic appreciation of the scale and pace of change contemplated by current widespread if not universal policy aspirations to achieve net zero greenhouse gas emissions by 2050.²

Most of Canada's energy production, transport and use systems have been built over many decades. These are huge and complex physical systems overseen by equally large and complex public decision systems which have never been especially nimble – and may well become less so in the face of growing expectations respecting both the substance of regulatory decisions and the inclusiveness of the processes by which they are made.

2. There will of course be a need for myriad additional policy actions, ranging from carbon pricing to direct government expenditure to numerous other forms of regulation.



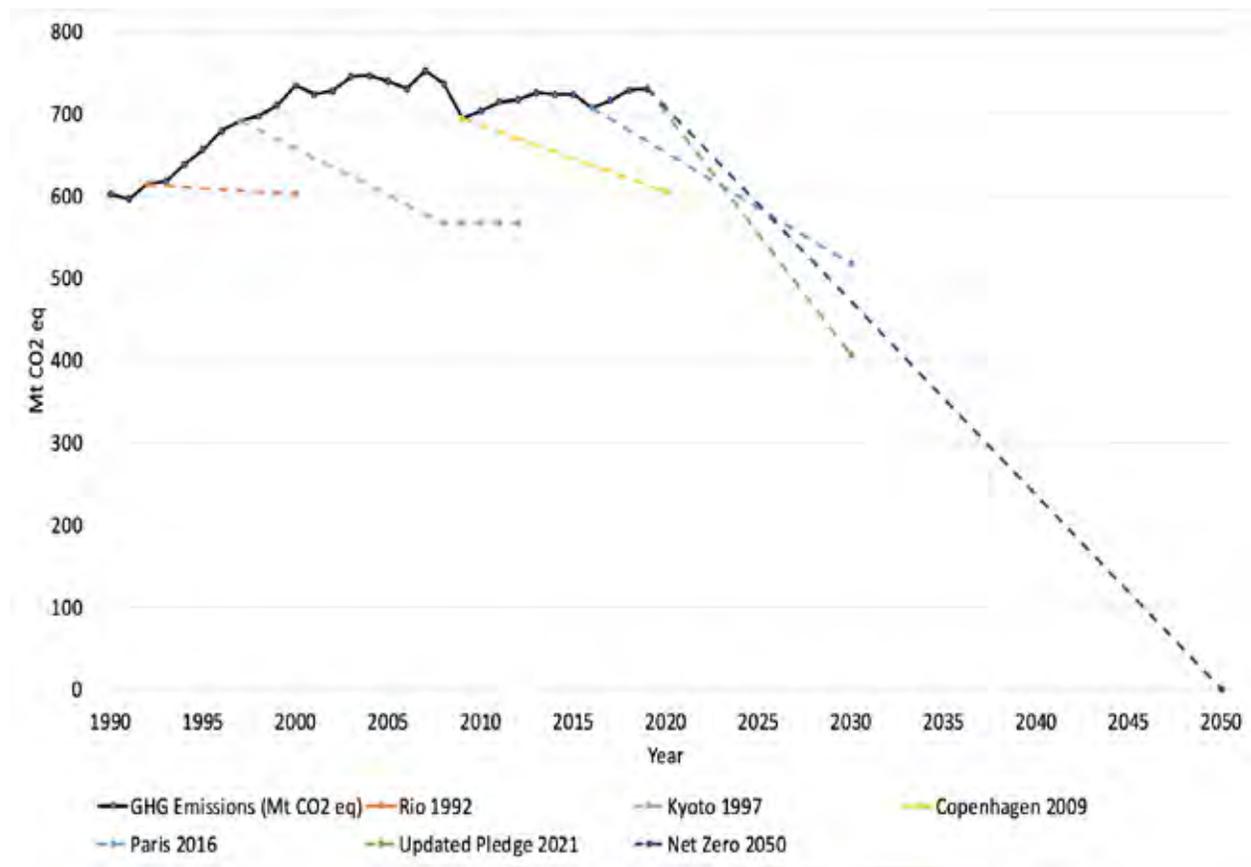
Considering the various factors of change outlined earlier, it is interesting to reflect on which may facilitate or accelerate the transformation to net zero and which may slow it down. New technologies and new business models can accelerate change as might new investment models. On the other hand, other factors will likely have the effect of slowing change, even if some may make it more durable. These include more inclusion of and consultation with a broader range of interests, more multi-dimensional decisions, more competing interests, a public forum which is more fragmented, polarized and social media driven, fluctuating but generally low levels of public trust in and deference to decision-makers and growing investor wariness about political risk.

Despite numerous pronouncements by governments dating back to the early 1990s, Canada's greenhouse gas trajectory has barely changed. With the exception of a big downturn in 2008-2010 owing largely to the global recession, emissions have continued to grow, albeit at a slowing pace in the past decade or so (leaving aside the expected but probably temporary downtick in 2020 due to COVID-19).

Contrast that trajectory with what emissions reductions would need to look like to meet 2030 and 2050 goals. Figure 1 shows Canada's actual emissions to 2019 (the most recent officially reported data) along with various international commitments going back to 1992, the initial and updated 2030 commitment under the Paris Accord and the now legislated goal of net zero by 2050. We are setting ourselves a steep challenge.



FIGURE 1: CANADA'S GREENHOUSE GAS EMISSIONS, 1990 TO 2019 (MT CO2 EQ), AND EMISSIONS REDUCTION COMMITMENTS*



Sources: Sources: For emissions targets for Kyoto, Copenhagen, and Paris:

<https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/climate-plan-overview/healthy-environment-healthy-economy.html#toc8>; for emissions data: <https://unfccc.int/documents/271493>; for Rio commitment: <https://unfccc.int/process-and-meetings/the-convention/what-is-the-united-nations-framework-convention-on-climate-change>; for net zero by 2050: <https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/net-zero-emissions-2050.html>; for Updated Pledge 2021: <https://globalnews.ca/news/7779596/climate-change-emissions-targets-canada-2030-trudeau/>

*Note: The dotted line for 2050 is not directly comparable to the other targets because the absolute level of emissions in 2050 under net zero is uncertain: how much will be attributable to reducing emissions as opposed to actions like biological sequestration to offset emissions is unknown.



A recent report by the Canadian Institute for Climate Choices sets out three broad possible pathways to net zero in 2050: continuing fossil fuel use with negative emissions technologies; a biofuels-based system; and an electricity and hydrogen-based system (Dion et al., 2021). The three pathways as outlined all entail technically plausible solutions. In reality, however, the ultimate pathway will probably be a blend of the three.

However, no matter the pathway, Canada's energy future in an age of climate change will see pressure for more radical change than our energy systems have ever seen, and will involve significant effort and investment.

That future will be turbulent, and it will entail countless individual decisions respecting development of energy resources and the building of energy infrastructure. It will probably continue for many years to involve hydrocarbon development and related transport infrastructure. Increasingly, it will entail questions around electric power. And many or most of those decisions – and by no means only those involving hydrocarbons – will involve high degrees of controversy.

Today, about 20 percent of Canadian end use energy is in the form of electricity (Natural Resources Canada, n.d.). Many scenarios see that proportion growing immensely and doing so very quickly, conceivably requiring more than a doubling of the capacity of our existing power systems (while simultaneously eliminating emissions from the existing systems) within thirty years (Cleland and Gattinger, 2019). Even with the potential for downstream and end use systems to adapt through improved efficiency and greater deployment of distributed resources, it seems certain that a very large number of large-scale developments are in prospect.

Such developments could entail renewable projects of many sorts, including wind, solar, biomass, geothermal and hydro; energy storage; hydrocarbon projects deploying carbon capture technology; nature or land-use based GHG sequestration; hydrogen production and related infrastructure; and a revival of nuclear power, notably through small modular reactors. Because load centres and energy sources may be heavily concentrated and widely separated, it will involve extensive new transmission infrastructure, often crossing jurisdictional boundaries. This will require more seamless provisions for interprovincial electricity trade and historically unprecedented intergovernmental cooperation. It may even entail exercise of federal jurisdiction where it already exists or its extension through other powers.



Overall, the scale of demands on public energy decision systems is set to grow, perhaps dramatically. As such, successfully charting Canada’s energy and climate future will depend in considerable measure on whether public energy decision systems are up to the job (Cleland and Gattinger, 2019). How will they balance the tensions among competing goals like efficiency and low cost to consumers, reliability and resilience, land use impacts and low greenhouse gas emissions? And how will they do so while building and maintaining the confidence of the general public, local communities, and investors?

The administrative forms (regulatory agencies) on which this report is focused have in some cases remained stable or in others have been subject to considerable turbulence, often due to actions by policymakers that have resulted in the attenuation of regulatory independence and the removal of decision authority to the hands of the political executive. What is of interest is whether the result of such turbulence has been to make decision systems more or less effective at balancing all the complex variables of modern society in a way that creates stable outcomes – decisions that embody what we call ‘durable balance’. And of growing interest and urgency is the question of decision-making speed in an age aspiring to net zero emissions in thirty years.

The next section explores what an effective decision system might look like and what role “independent” regulators might have in that system.



ENERGY PROJECTS, DECISION SYSTEMS AND REGULATORS: A FRAME OF REFERENCE

WHAT CONSTITUTES AN EFFECTIVE ENERGY DECISION SYSTEM?

In the face of the challenges outlined in the previous section, we frame the policy problem as follows:

- What constitutes an effective energy project decision system?
- What defines an independent regulator?
- How does regulatory independence influence – for good or ill – the effectiveness of an energy project decision system?

In the sub-sections that follow, we offer some possible answers to the first two questions. In the last section of this report, based on the five case studies, we propose some answers to the third question along with advice for policymakers and regulators.

We start by re-affirming the definitions of our key terms. When we refer to an effective “decision system”, we mean the whole system from policy (and its various tools: legislation, planning, regulation), through formal regulatory agencies, to judicial oversight. When we refer to a “regulator”, whether independent or not, we mean regulatory agencies – of which our five cases are examples.

It bears repeating that what constitutes “effective” – respecting both process and outcomes – is necessarily subjective (Cleland et al., 2020). For some it may mean stopping all fossil fuel development. For others it may mean a lightning-fast capability to remake a whole energy system in very few years. For many local communities it may mean an ability to be heard and decisions that produce a fair allocation of costs and benefits. For still others it may be much broader – encompassing wide ranging attributes of social justice.

The literature with respect to regulatory effectiveness appears thinner than that dealing with independence but there are a number of useful sources (see, for example, Jarvis and Sovacool, 2011; OECD, 2014; and Coglianese, 2016). The frame that we have settled on – below – aligns in broad strokes with the literature (see in particular Jarvis and Sovacool, 2011).



Putting it somewhat simplistically: is the system capable of meeting the needs of the society it serves? Exactly what “needs” are to be met is a matter of judgment, as are the inevitable questions of tradeoffs among the various needs and the choice of balance among them. This is an institutional design question, one that is bound by context (whether political culture or the nature of the decisions that must be made). It is also a political question, ultimately decided by parliament or legislatures and the political executive. The critical point is that regulatory institutions should be designed with full awareness of inherent tradeoffs and tensions (Cleland and Gattinger, 2019; Cleland and Gattinger, 2018; Thomson, 2020).

We envisage three essential elements of effectiveness, each of which has several sub-elements:³

Capacity to facilitate desirable development in a desirable way

- Decisions must be substantively sound and aimed at serving the broad public interest
- Decisions must be arrived at with predictable timeliness and some measure of efficiency
- Decisions must be subject to democratic accountability

Ability to adapt to a rapidly changing world

- The subject matter of decisions matters – and the number of policy desiderata that decisions need to encompass will grow
- But it’s also about the process used to take decisions – processes will need to evolve but with some measure of order and predictability

Capacity to build and sustain real and perceived legitimacy

- Legitimacy starts with the basic integrity of the regulator within the larger decision framework
- Decisions must be based on evidence, arrived at through open and inclusive processes and be seen to be fair by all affected parties
- Rules and procedures must be transparent and widely understood and trusted by relevant parties
- Outcomes need to be durable
- Ultimately, processes must enhance the confidence of investors, applicants and the various affected publics

3. As the research proceeded, these (sub)elements evolved from the framework for regulatory effectiveness originally presented in the discussion paper (Cleland et al., 2020).



WHAT DEFINES AN INDEPENDENT REGULATOR?

By way of caveat, it is important to stress two things.

First, independence is a relative concept (Thomson, 2020). No regulator is wholly independent; they all operate within bounds specified through democratic processes. And there are many variants designed to meet particular needs, whether resource development, infrastructure development, management of ongoing operations, or the economic protection of energy users.

Second, independence is not an end in itself. It is a means: regulators of varying degrees of independence are part of a larger system aimed at achieving effectiveness.

Given these caveats, there are numerous potential “models” of independence based on the criteria outlined above. There is no “ideal” model for the reasons already stated. But over the years, several regulators in Canada – notably the predecessor of the CER (the NEB before 2012) and the NSURB - have exemplified the highest degree of independence feasible in a parliamentary system. Such a regulator has all or most of the following characteristics:

Decision Independence

- It has deciding roles, and decisions can only be overturned (in the case of individual applications) by the political executive in limited circumstances or by the judiciary on matters of law or jurisdiction.
- Where it is subject to direction by policy, such direction is given through statements of general application (i.e., generally upstream of individual applications) and through formal, transparent means.

Structural Independence

- Its accountability to the political executive is clearly specified in statute and regulation.
- It is master of its own procedure within bounds established by governing statute and regulations.
- It may have advisory roles to the political executive based on its unique expertise, but these roles are carried out in a manner that preserves the organization’s independence, including, where warranted, in the plain sight of all interested parties.
- It has reliable access to resources necessary to fulfill its adjudicative and expert functions – capable staff, financial resources and access to external expertise.
- It operates within a culture rooted in principles both of modern governance and of the rule of law, notably adherence to mandate defined in statute or regulation, procedural fairness and avoidance of bias or perception of such.
- Its internal structures and procedures permit all adjudicative or other regulatory functions to operate free from undue external influence and with free and unfettered access to expertise.
- Senior personnel (management and those exercising adjudicative functions) are appointed through transparent processes and hold office subject to removal only for cause and through formal procedures.



Relatively few regulators in Canada operate with this degree of independence. The deciding (as opposed to advisory) role on substance may be very limited or non-existent. Policy direction may be given through processes that are not particularly transparent or formal. Procedure in the case of individual applications may be altered by the political executive. Appointment processes may be less than transparent. Tenure of senior personnel may not be secure. What's more, new approaches like the 'tripartite governance model' have emerged and are shaping structural independence in ways not yet fully understood (see Box 2).

With that in mind, the question remains – how does independence bear on effectiveness? In the next section we summarize the five case studies, exploring how the regulators and the surrounding elements of the decision system have evolved over the past few decades and what that might say about how systems might best adapt to the challenges of the future.

BOX 2 – REGULATORS AND THE TRIPARTITE ORGANIZATIONAL MODEL

In three of our cases (the AER, OEB and NEB/CER), the process of reform has led to the adoption of what is known as a corporate or tripartite model of organization.

Traditionally, regulators with an adjudicative function have been structured under a unitary model: a “board” that functions both as a governance body and as a pool from which panel members are drawn for any given application. Typically, the chair of the board in this model also serves as the chief executive officer (CEO), overseeing the management and administrative functions of the agency.

In the tripartite model, there is a “board” that has a governance function that may or may not extend to oversight of management or the allocation of resources, the “commissioners,” who conduct hearings but are not members of the board, and a CEO, responsible for day-to-day management of the organization (the CEO is not a member of the board nor its chair as is the case in the unitary model). In some cases, the CEO is accountable not to the board but to the responsible cabinet minister.

The tripartite model has emerged in recent years but the rationale for its use in various jurisdictions is unclear and, until more experience is gained, it is unclear whether it will better sustain the independence of the agencies or improve their effectiveness. A few observations are worth making.

The adjudicative body (the commissioners) is focused entirely on the adjudication of applications and removed from administration or more general policy questions. This may help create an aura of remove from outside influences.

The separation of the board, CEO and commissioner roles may serve to strengthen organizational governance/ oversight and reduce the possibility of ‘capture’ of the organization by external interests or internal parties.

The separation of the board and commissioners enables the presence of more diverse voices and areas of expertise on the board (i.e., board members do not need to have expertise and experience in energy or law as is normally the case with commissioners).

On the other hand, commissioners kept distant from day-to-day processes and debates as well as from overseeing the internal research and analysis (which is managed by the CEO) may be less inherently adaptable to changing circumstances.

It can be unclear to an outsider who is the “face” of the agency: the CEO or the chair of the board or the lead commissioner.

Where the CEO or board lack independence from the government, the legitimacy and independence of the entire organization may be called into question.

Where the CEO is responsible for management and resource allocation, is accountable to the minister and serves at pleasure, agency independence is further compromised and what is typically one of the main functions of the board is attenuated.





FIVE REGULATORS IN A TURBULENT WORLD

As noted, we examined five different energy regulators in five jurisdictions. Each has (or had because it has varied over time) a somewhat different mandate, but all to one degree or another have some responsibility for approving or rejecting development of resources or facilities to produce and deliver energy. Some are concerned only with hydrocarbons; others with electricity; some with both. In almost all jurisdictions, regulatory roles are divided to one degree or another among a number of public bodies.⁴

Our examination takes us back in some cases to the early to mid-20th century but our focus has unavoidably been on the past 25-30 years. We say unavoidably for two reasons: because the circumstances faced by energy project decision systems in the past three decades (as described earlier in this report) have become ever more turbulent and complex; and because in three of our cases, that contextual turbulence has seemingly been at the root of a great deal of organizational turbulence, while in two cases there has been relative stability.

While our attention initially was aimed at the question of regulatory “independence”, two important factors discussed in the previous section emerged over the course of the research. One is the recognition that the independence (or not) of any given regulator can only be understood in the context of the whole decision system, starting with policy and ending with the courts. It is the system as a whole that matters. Second, having acknowledged that regulatory independence is a means not an end, the real question – especially as we look to the future – concerns system “effectiveness.” What we mean by effectiveness, as noted earlier, has become the organizing principle for the synthesis of the five cases, in the next section in particular.

The other organizing principle for this analysis divides the notion of independence into two categories (as noted in the Frame of Reference section above). One is what we call “decision” independence: whether the regulator has actual authority to decide the cases before it (as opposed to making recommendations to a final decision-maker) and the degree to which and how that independence is constrained. The other concerns “structural” independence: the organizational characteristics of each regulator that make it more or less insulated from control or undue influence by the political executive and other parties in its operations as a whole. These two categories necessarily blend one into the other to some degree, but the distinction is useful.

4. One could argue that to truly understand the evolution of our five cases requires understanding the counterpart organizations in each jurisdiction. The cases touch on several of these, but only in passing. A comprehensive analysis is beyond the scope of this study.



A (VERY) BRIEF HISTORY

Moving from west to east, we see five very different cases.

The **British Columbia Oil and Gas Commission (BCOGC)** was founded in 1998 with a mandate to facilitate the development of hydrocarbon resources in north-east British Columbia. It was set up as a “single window regulator”, with the intent of making the decision process more efficient but at the same time with a broad remit to engage various parties in the process, notably local communities, and especially Indigenous communities. The BCOGC does not function as a tribunal⁵, unlike the other four cases, but rather as an administrative body. Strikingly, despite not functioning as a formal tribunal, the BCOGC has a high degree of decision independence: its decisions are appealable to the BC Oil and Gas Appeal Tribunal and subsequently to the courts – but not to the political executive. At the same time, its structural independence is somewhat limited since its chair is a deputy minister in the government of BC. It does, however, have relative financial independence.

Since its creation, the BCOGC has functioned in a context where its mandate has had very high political salience, given the economic and fiscal importance of hydrocarbon development to British Columbia, and the inevitable controversies concerning land rights and the environmental and social impacts of development. The level of controversy has waxed and waned, but with growing questions about hydrocarbon development in the context of climate change policy and Indigenous rights, all in all, it has grown. Despite this, the overall organizational structure – that of the regulator itself and of its relations with other parts of the BC government – has been remarkably stable. It has evolved and adapted, and responsibilities have been adjusted as circumstances required, but over more than two decades it has not been subject to any organizational “earthquakes”.

The **Alberta Energy Regulator (AER)**, in contrast, has taken on four different forms with differing remits in just over 25 years. While the energy regulator in Alberta was first created in 1938 as the Petroleum and Natural Gas Conservation Board and enjoyed relative stability in its first decades of existence, in recent decades there has been a lot of turbulence. The Energy Resources Conservation Board (ERCB) was created in 1971, then replaced in 1995 by the Alberta Energy and Utilities Board (AEUB, 1995 to 2008), reverted back to the Energy Resources Conservation Board (ERCB, 2008 to 2013) and since then, has been the Alberta Energy Regulator (AER).

5. A tribunal functions like a court, but it is also normally “expert” in the subject matter before it. Typically, it involves a panel of adjudicators, sworn witness testimony, and evidence adduced for the formal public record.



The AER's primary remit concerns the development of hydrocarbon resources in Alberta along with relevant facilities. The AER functions as a formal tribunal, as has its predecessors, and like the BCOGC is intended to function as a "single window" aimed at facilitating efficient and effective decision-making. Its success at accommodating the conflicting demands of various parties involved in energy projects has been rather mixed and in an extreme case amounted to a violent protest against its decisions (under the AEUB involving the AltaLink hearing in 2006/2007). Over time, the regulator's remit has fluctuated, expanding from being solely concerned with hydrocarbon development, to the oversight of power facilities and utility regulation as well, and then back to only hydrocarbons. While the AER (and its predecessors) has had at least ostensibly high degrees of decision independence, that independence has frequently been attenuated by various government actions. Its structural independence has varied over time depending on shifting government imperatives.

Even more than in the case of the BCOGC, hydrocarbon development has been of central concern to the Alberta government for many decades; in other words, the work of the regulator has extraordinarily high political salience. But the desire to develop resources has been constantly in tension with the expectations of rural landowners and Indigenous communities and with ever growing concerns about local environmental impacts. Climate change has been less of a driver, unlike what we have seen in the past decade with the federal regulator (the NEB and then CER). In other words, the Alberta regulator's context has been turbulent, but in contrast to BC, that has been accompanied by a striking degree of organizational turbulence.

The federal regulator, **the National Energy Board, then the Canada Energy Regulator (NEB/CER)** is notable for having been very stable from its incarnation in 1959 as the National Energy Board (NEB) right up to 2012, even against the backdrop of growing questions about Indigenous rights, concerns about the local environmental impacts of pipelines (notably the possibility of spills) and the ever-escalating controversies about the role of hydrocarbons in the context of climate policy. That changed abruptly in 2012 and then again in 2019 when the NEB was replaced by the Canada Energy Regulator (CER).

The NEB's primary role (and that of the CER) was to regulate hydrocarbon pipelines crossing provincial or international boundaries as well as international and designated interprovincial power lines. From 1959 until 2012, the NEB had a degree of both decision and structural independence which, as noted in the previous section, was very close to the maximum limit of independence in a parliamentary system. Although the Governor-in-Council (GIC, the cabinet) could withhold approval of a project, from 1959 until 2012 there was only one instance (in 1960) when it did so. Decisions to reject projects did not come before cabinet for approval. But since then, the regulator has undergone two directionally similar changes, albeit motivated by different imperatives.



The 2012 reforms, responding to government frustration that pipeline development might be prevented by the regulatory process, led to the NEB losing its decision independence; henceforth a conclusion that a project should be rejected had to come to cabinet, and decisions to approve projects could be amended by cabinet or sent back to the regulator for reconsideration. In effect, the NEB became an advisor not a de facto decider. In contrast, growing concerns about climate and Indigenous rights led the federal government in 2019 to create a less structurally independent model and one that has continued, as with the 2012 reforms, to lack decision independence on project approvals (as opposed to operational, monitoring and enforcement matters).

Interestingly, while the NEB emerged in 1959 out of one of the most politically salient controversies in Canadian parliamentary history (the “great pipeline debate”), there was an extended period when its work went largely unnoticed. Environmental issues steadily grew in importance as did concerns of affected communities and the need for those communities to be heard and accommodated (notably Indigenous communities). But in the context of the highly contested questions concerning potential oil spills and the role of hydrocarbons in a world ever more concerned about climate change, that relative stability was upended for reasons driven by two different political imperatives. The federal energy regulator went in six years from being one of the most independent of any at the federal level (and one of the most independent energy regulators in Canada) to becoming one of the least independent in both decision and structural terms.

The **Ontario Energy Board (OEB)** was first created in 1960 as a natural gas utility regulator and, like the NEB, lived out the first few decades of its existence in relative tranquility. But when the Board assumed new responsibilities for electricity in 1999 that all changed. Regulating natural gas delivery (facilities and rates) was largely uncontroversial at the time. But not so with electricity, which has been part of the OEB’s mandate now for just over twenty years.

The OEB through its early history had high degrees of both decision and structural independence and functioned as an adjudicative tribunal, but the electricity mandate changed that in radical ways. Electricity has long been a matter of high political salience in Ontario going back to the creation of Ontario Hydro in 1906. Virtually everything to do with electricity was for decades in the hands of the political executive or its Crown corporation, often in quiet consultation with municipal governments, who owned local distribution utilities. Most controversies concerned power rates and were dealt with largely through political processes.

But in the mid-1990s, the idea emerged that electricity generation could take place in competitive markets with multiple generation sources. Ontario Hydro was then split into its constituent parts. This created the need for power transmission and distribution to be conventionally regulated, hence the new mandate for the OEB.



The emergence in the early 2000s of a government intensely focused on the environment added new layers of complexity and controversy. Phasing out coal-fired power became a primary focus of the government, as did energy conservation (something that became even more prominent after the northeast blackout in 2003). Concerns about power rates, while still of great importance, got temporarily lost in the rush to eliminate coal. The balancing act between multiple energy imperatives became harder and, eventually, politically toxic.

This led over the succeeding years and continuing through a change of government in 2018 to an operating environment where the government regularly took actions in policy and legislation that had the effect of overturning both the decision and structural independence of the OEB. Notably, the government used ever more prescriptive ministerial directives to advance its policy agenda. In short, the OEB went from being highly independent up to 1999, to becoming, as one of our interviewees observed “essentially an agent of the political executive” in a decision system that can be fairly described as unstable, and one in which the government explicitly acted to counter the agency’s decision independence. In other words, in Ontario, high degrees of contextual turbulence translated directly into organizational turbulence and government efforts to rein in the agency’s independence, which continues to this day.

In contrast to Ontario, the **Nova Scotia Utility and Review Board (NSURB)** – created in 1992 through the consolidation of several diverse regulatory functions including public utility regulation – has maintained its independence and the overall decision system has maintained a high degree of stability. Also, in contrast to the other four cases, the NSURB has a much broader mandate, covering virtually all aspects of energy but also a myriad of other regulatory functions respecting everything from municipal planning appeals to insurance. On the other hand, like most of the other cases, it functions as an expert tribunal and, like the NEB before 2012, it has had very high degrees of both decision and structural independence over its lifetime.

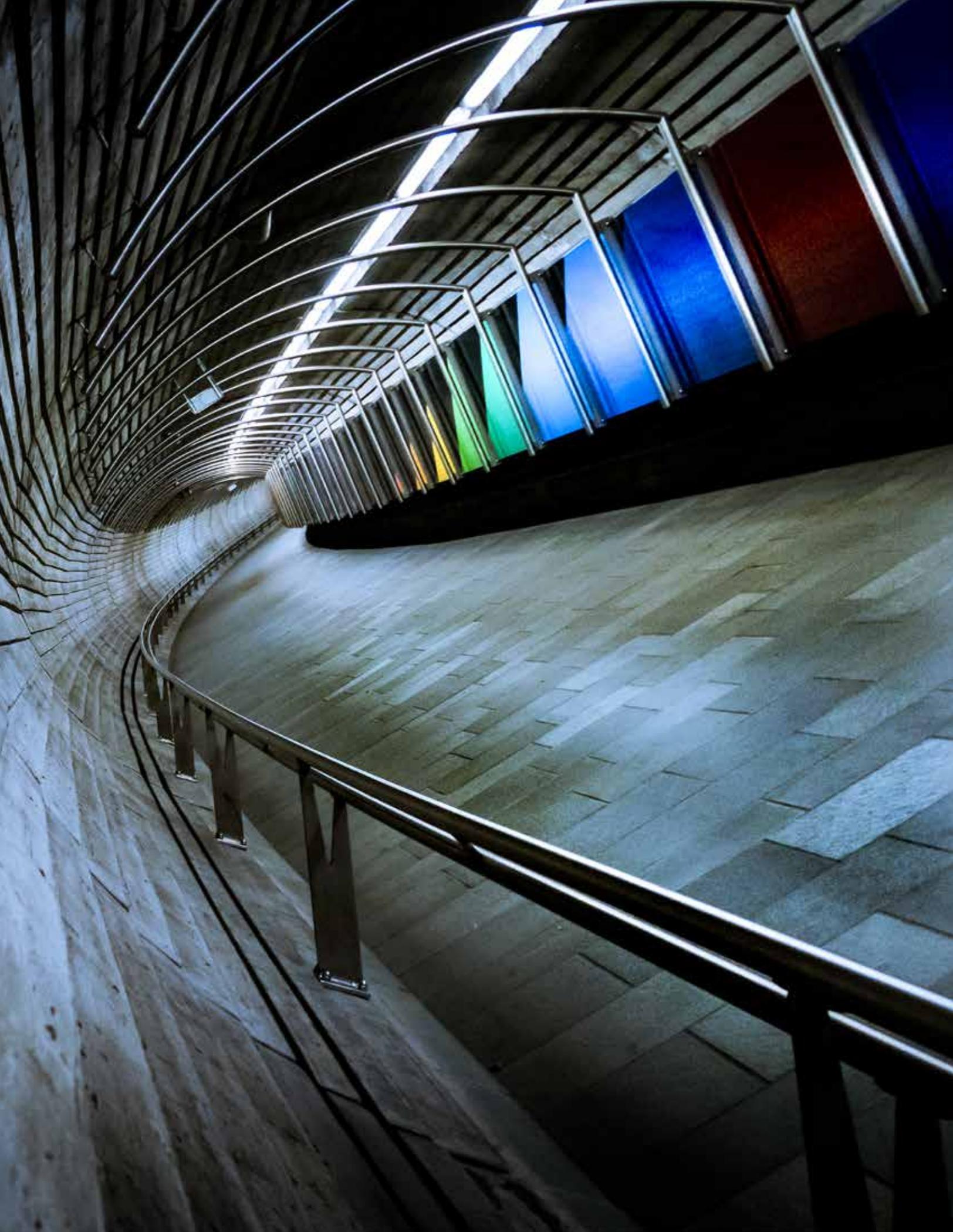
Arguably, at least insofar as the NSURB is concerned, energy is of less political salience in Nova Scotia than in BC, Alberta or Ontario. Hydrocarbon development was important in its day, but it was all offshore, therefore raising less in the way of land controversies. What’s more, hydrocarbon development fell under the jurisdiction of a joint federal/provincial regulator, the Nova Scotia Offshore Petroleum Board.



Electric power, although always important with respect to rates, has never had quite the symbolic importance that it has had in Ontario or other hydro dominated provinces such as Québec or BC (the crown corporation Nova Scotia Power was privatized in the mid-1990s with relatively little controversy). But land disputes and questions of Indigenous rights as well as power rates have always generated some degree of controversy in Nova Scotia. In the context of climate change, the province has taken actions to steadily reduce the greenhouse gas emissions associated with its power system, including with a striking degree of interprovincial cooperation (which is always controversial) in the arrangements to create the Atlantic Loop (originally, the “Maritime Link”) involving Newfoundland and Labrador, Prince Edward Island, and New Brunswick.

In other words, if contextual conditions in Nova Scotia may not have been quite as controversial as in Alberta, Ontario, BC or at the national level, they have hardly been without inherent potential for controversy. Despite this, as in BC, the NSURB and the overarching policy apparatus that makes up the whole decision system have been remarkably stable throughout the two or three decades that have generated great organizational instability in three of the other jurisdictions.







IMPLICATIONS FOR FUTURE REGULATORY EFFECTIVENESS – A DEEPER DIVE INTO THE CASES

In the previous section the prism through which we looked at the five cases was historical. Given where various decision systems have landed to date and how they might evolve, the question remains what that tells us about the capacity of those systems to be effective in future energy decision-making. That is the prism or organizing framework for this section.

A caution is in order. The examination in the five cases comes nowhere near to the depth and comprehensiveness that would be necessary to assess whether the systems have been effective in any complete sense. That would be the work of a full-scale program evaluation. We can discern from interviews and some of the documentation where there appear to have been both positive and negative outcomes, but most of the evidence we have concerns the question of independence.

As for the full suite of indicators as laid out in Section III, we are in no position to offer individual judgments. That said, based on the extensive literature review, interviews and primary documentation, we offer an assessment of the implications for effectiveness in the future.

As noted in the Frame of Reference section above, “effectiveness” is a highly subjective matter. But one thing that we take to be an objective measure looking to the future is whether regulatory systems can deliver on what seems well established as a widely held goal for Canada. That is, what sorts of decision systems will facilitate the low or zero-carbon transformation of our energy systems, or put another way, achieving net zero greenhouse gas emissions over the next thirty years. Of course, this will need to be done while sustaining energy systems that meet tests of affordability, reliability, and resilience.

In the Context section, we laid out the challenge with a simple graph (see Figure 1) whose implications can be boiled down

to two core questions. How do regulatory decision systems facilitate a fundamental transformation in thirty years of a large complex physical and market system, one that is deeply embedded in our economy, the shape and functioning of our communities and our lifestyles? How do we turn a longstanding trend of emissions growth – slowing growth but still growth – right up to the latest reported data (2019) into a sustained downward trajectory over the next decades? For illustration, to meet the federal government’s current 2030 target (40-45% below 2005 levels), emissions need to decline by close to 5% annually over the 11-year period between 2019 and 2030.

It is worth emphasizing that the inherent turbulence around energy decisions will, if anything, grow as the ongoing role of hydrocarbons in an age of climate change continues to bedevil decision-makers and as local controversies and Indigenous rights grow in importance. Most importantly, as power systems assume a much greater role, eventually come to dominate energy delivery, become GHG emissions free, and more than double in capacity over the next 30 years, much of what will need to be built will be controversial at the community level.

With all that in mind we are analyzing the case studies using a framework for assessing decision system effectiveness (see Frame of Reference above). As we consider who decides what, when and how, we will keep coming back to the question of regulator independence in the overall decision system. In other words: to what degree are both the decision independence and structural independence of regulators relevant to the achievement of our goals?

Finally, we need to emphasize again that it is the “systems” we are looking at – from high-level policy through to planning, formal regulatory processes and judicial review. As noted earlier in this report, these systems need to aspire to three essential elements.



CAPACITY TO FACILITATE DESIRABLE DEVELOPMENT IN A DESIRABLE WAY

Decisions must be substantively sound and aimed at serving the broad public interest.

This is a notion that has evolved radically from the relatively simple notions of more resource development and low energy costs that dominated energy project decision thinking for many decades. Indeed, the growing complexity and multi-dimensionality of the decision environment is the dominant theme running through the case studies. As noted earlier, numerous policy instruments will come into play on the road to net zero, and, as noted in the conclusions, the lack of clarity in high-level policy will continue to be an impediment to project decision-making.

We have seen, for example, that the BCOGC was structured to allow both more timely decisions and more engagement with First Nations communities. The AEUB, the immediate predecessor of the AER, was under growing pressure through the 1990s not only to facilitate resource development, but also to accommodate growing calls for public participation in its processes and to better account for concerns about safety and environmental effects.

The OEB, in the early 2000s, having recently taken on the role of electricity regulator, found itself pressed to consider the political imperatives of conservation, demand management and renewable power development. Similar to the AER and its predecessors, the NEB, predecessor of the CER, found itself by the 1990s in a world where social and environmental concerns were growing in importance along with the need to consult with and accommodate Indigenous communities. The NSURB throughout the past two decades has found that it needed to satisfy itself that “sufficient Crown consultation has occurred” with Indigenous communities at the same time that it is increasingly pressed to facilitate the transition of the NS power system from fossil fuels to renewable sources.

In all cases there is evidence of both success and failure. But perhaps most striking is that in some cases – the AER, the NEB/CER and the OEB – the political executive has deemed it necessary to assert direct control in order to embrace the growing complexities. In the other two cases – the BCOGC and the NSURB – the system has been able to make these adaptations through legislative or regulatory means while retaining the decision independence of the regulators.



Whether the reasons behind this relate to the cultural context of the regulators in question or whether there are some ‘absolutes’ when it comes to independence is an open question.

Decisions must be arrived at with predictable timeliness and some measure of efficiency.

Some over the years have at times tended to dismiss this objective as simply an excuse to exclude some voices or to give short shrift to non-economic factors. But again, emphasizing the goal of the net zero transformation, both timeliness and efficiency will grow as imperatives that must be balanced against others.

Efficiency can mean a number of things. In the case of the AEUB, in 1995, the goal of administrative efficiency drove the consolidation of resource development and utility regulation under a single body. In Nova Scotia, the NSURB was created in part for reasons of administrative efficiency, consolidating numerous regulatory functions within a single body whose core expertise centred on its capacities as an independent tribunal.

But broader notions of efficiency along with timeliness have been dominant themes running through all of the case studies. For example, the BCOGC was created so as to create a “single window” regulator that could account for the regulatory objectives of multiple departments and agencies. Similarly, the ERCB (predecessor of the AEUB, then the AER) was structured to provide a single window agency aimed at more efficient and timely processes. The NSURB was created to facilitate administrative efficiency, but primarily with the aim of broader economic efficiency.

In the case of the NEB, one rationale for reforms in 2012 that merged the environmental assessment process with economic regulation was to make the process more efficient and timely – although it is interesting to note that the simultaneous removal of (effectively) final decision authority to the hands of the political executive (which was carried forward into the structure of the CER), created an extra decision-making layer.

This had at least the potential to reduce both timeliness and efficiency (along with transparency and inclusiveness) and has in fact done so as we have seen in the recent Nova Gas Transmission Limited (NGTL) case, where the cabinet added conditions to the project onto those of the CER in a process that lacked transparency (Harrison 2021).

Decisions must be subject to democratic accountability.

Reasonably, governments remain always mindful of demands for democratic accountability, but exactly how that can be achieved remains an open question. The NGTL case noted above offers a striking example of the difficult balancing act of structuring decision processes to meet competing demands.

In the case of the CER, the decision process was designed by the government with the idea that, in the words of the minister tabling the legislation in the House of Commons, “[T]he final decision on major projects will rest with me or with the federal cabinet, because our government is ultimately accountable to Canadians for the decisions we make in the national interest” (as cited in Thomson, 2021).



The OEB stands out on this dimension because of the intensely political nature of electricity in Ontario (particularly electricity rates) but that fact has long remained in tension with the need for the OEB to be able to take a long-term perspective on an immensely complex system that inevitably entails very long-term investment considerations. Ontario governments have relied on “directives” to the regulator under the authority of the minister. Alberta has employed similar methods sometimes to the point of directives concerning individual applications. What is striking here in the context of democratic accountability is that using ministerial directives in this way is both less transparent and less accountable to the legislature than would be the case with legislative or regulatory change.

In the case of the NSURB, some citizen activists felt that leaving a complex set of socio-economic and environmental considerations in the hands of the independent board meant that the legislature was “abrogating its responsibilities”. In contrast, and still in Nova Scotia, another perspective on the issue centred on the need to “depoliticize” the decision process to allow longer term, less partisan perspectives to prevail in individual decisions while still respecting the need for democratic accountability.

In short, while there must be democratic accountability, the cases reveal that approaches to achieving it can vary widely and that achieving real democratic accountability – transparent, understandable, and projected through the ultimate authority of parliament or the provincial legislature – is not a simple matter. Democratic accountability might be achieved by the political executive issuing directives or having final decision authority at the level of individual proceedings. But in some jurisdictions, the choice has been to provide policy direction to regulators expressed through legislation and regulation. This also reveals that democratic accountability can be as easily obscured as enhanced depending on the structures used to allow it.



ABILITY TO ADAPT TO A RAPIDLY CHANGING WORLD

As we consider the importance of the ability to anticipate the future, whether on the part of regulators or the governments to which they are accountable, it is worth recapping what we have observed over the past decades in our five case studies.

- Energy independence, put another way, **energy security**, lay at the heart of the great pipeline debate and the creation of the NEB in 1959. Interestingly, although these sorts of questions have waxed and waned over the years, they have reemerged in recent years in a different form, alongside other elements of energy security (affordability and reliability) – more on this below.
- From the outset, regulators such as the NEB, the NSURB, or the OEB were mandated to ensure **just and reasonable** rates charged by natural monopolies (which energy pipes and wires were and remain to this day).
- All regulators have, from their beginnings, been focused on **safety** and, to a lesser degree perhaps, **environmental questions** such as land disturbances and spills.
- Resource regulators such as the BCOGC and the AER and its predecessors through the mid-20th century were established with a primary mandate to **facilitate resource development** albeit with due consideration for other public interest objectives of the time.
- Costs to consumers – aka **affordability** – are the primary focus of the NSURB and have remained a source of ongoing turbulence throughout the history of the OEB. This will remain a concern as long as there are consumers who also vote.
- Protecting **local landowner rights** and environmental impacts have accounted for much of the turbulence surrounding the AER and its predecessors and were an explicit objective in the creation of the BCOGC.
- **Indigenous rights** came into focus at least as far back as the incorporation of Aboriginal rights in the 1982 Constitution (and in fact emerged earlier in events such as the James Bay controversies) and have become ever more central to the responsibilities of all five decision systems – sometimes resting at the feet of policymakers, other times at the feet of regulators themselves.
- The emergence in the 1980s and 1990s of understandings that activities such as supply of primary fuels and refined products as well as power generation could operate as competitive industries led to various degrees of **deregulation and restructuring** of energy markets, something that has affected all five decision systems to one degree or another for several decades.



- This has been accompanied by moves toward **privatization and unbundling** of power monopolies (NSURB and OEB) with consequences for the basic relationship between regulators and their policymakers.
- With the emergence of **climate change** as a widely accepted concern in the 1990s all five decision systems have found themselves ever more absorbed by a huge imperative that both competes with and complements the many other objectives of the decision systems they operate in.
- **Energy efficiency, conservation and demand management** have a long history going back to the 1970s but most notably burst on the scene for the OEB and other gas and power regulators in the early 2000s.
- One of the inevitable consequences of concern about climate has been the drive to incorporate more **renewable energy** into systems, notably in the case of the OEB in the early 2000s and more recently the NSURB.
- As climate in particular has driven **new technologies and innovations** such as distributed power generation and the deployment of intermittent power sources, these have added ever more complexity to the palette of considerations facing power regulators in particular.
- A concern with **social impacts** is as old as the earliest land rights controversies confronting the predecessors of the AER and the emergence of Indigenous rights throughout Canada, but that concern has grown and is set to become much more expansive and complex with the emergence of the ESG movement.
- Finally, as noted earlier, **security** has reemerged, not so much based on commodities (although strategic metals are now on the agenda with the dawning age of widespread electrification) as on other components of security, most notably reliability, resilience and cyber-security, as well as affordability.

In short, as if the word “short” could possibly be used in this context, original preoccupations such as resource development and just and reasonable rates are increasingly accompanied – but not superseded – by myriad other concerns, some competing, some complementary. But more importantly for our purposes, increasingly complex and competing demands are anything but new, as is the challenge for decision-makers to navigate them effectively.

Energy decision systems have adapted, not always in a timely manner and often with high degrees of turbulence. Some have seen the future coming; others have reacted somewhat belatedly to public pressure. And as importantly, both government policymakers and regulators have adapted or, in the case of regulators, sought policy clarity so as to facilitate adaptation. All have evolved, some in more revolutionary ways than others.



The subject matter of a decision matters

Most energy regulators and the policy systems within which they work, whether concerned with resource development, infrastructure or rates, have at their core a primarily economic mandate and that mandate remains vital. Typically, for any regulator of physical facilities, there has been an accompanying concern about health and safety but often it stopped there. That has changed.

Interestingly, the BCOGC was established from the outset with a mandate not only to facilitate more efficient and effective decision-making but with a clear aim to accommodate local landowner concerns and Indigenous rights. The Alberta system with a much longer history was more strictly focused on resource development. A long process of incremental change began in the 1970s and continued through the incarnations of the ERCB, then the AEUB and finally the AER, sometimes with bumps along the road (e.g., the controversy surrounding the AltaLink project noted earlier). By 2012, with its new legislation, the AER became a “single window” regulator and adapted to take into account a much broader range of issues covering social and environmental effects of resource development.

As noted earlier, the OEB’s relatively quiet life changed quite abruptly with the acquisition of responsibility for electricity in the late 1990s. Consumer protection and health and safety remained of central importance, but with the restructuring of electricity markets the regulator was given scope to develop new approaches such as incentive or performance-based regulation, albeit, in the view of some commentators, without adequate attention to how the new policy direction would be reconciled with the core mandate of reasonable electricity prices. The biggest changes then occurred in the early 2000s driven by government policy focused on facilitating renewable power, along with conservation and demand management. In other words, by the second decade of this century, the Ontario decision system was playing a not always successful balancing act among several policy objectives.

The NEB, much like the AER and its predecessors, was for several decades primarily focused on its economic mandate and was seen by some commentators as taking an overly narrow view of the “public interest”, giving short shrift to environmental issues. The reforms of 2012 arguably brought environmental issues into much clearer focus, although the policy intent of the government was clearly on development.

As with the other regulators, the NSURB had an economic mandate – particularly consumer protection – at its core and that remains true to this day. But like the OEB, by the mid-2000s the reduction of greenhouse gas emissions from the power sector began to take on ever greater importance and the Nova Scotia system adapted with new legislation.



BUT IT'S ALSO ABOUT THE PROCESS USED TO TAKE THE DECISION

As energy decision systems have gradually taken on board ever more objectives, in parallel they have had to adapt to public expectations as to who would be involved in their decision-making processes. Most prominently those expectations – and the requirements of the law – have involved Indigenous communities. This evolution and adaptation have occurred sometimes smoothly, sometimes in fits and starts, sometimes anticipating the future and sometimes belatedly.

As noted, the BCOGC was established with an explicit mandate to account for landowner and Indigenous concerns and to engage those communities not only in individual project decisions but also in the design of the system itself. Other regulators have evolved more incrementally with respect to broad engagement, gradually opening up to hear more voices. Sometimes in the tension between openness and expeditiousness, they have turned back and restricted public engagement, which has not helped to foster public confidence. There is an inevitable tension here that will almost certainly be reflected in controversies over decision processes for many years to come.

As with broad public engagement whose history dates back to at least the 1970s, so does the question of consulting, engaging and accommodating Indigenous communities.

The Berger Commission in the 1970s established a fundamental benchmark for Indigenous consultation but over succeeding decades and even with Indigenous rights articulated in the 1982 Constitution, progress may best be described as sporadic.

In the past two decades that has fundamentally changed as successive court decisions have made clear that the duty to consult and accommodate needs to be taken seriously and undertaken in good faith, and as Indigenous communities have taken on ever larger roles both as part of the formal approval process and especially as partners in resource and infrastructure development. The exact role of the regulators may be in question – particularly whether a regulator is regarded as an agent of the Crown (as is the BCOGC) or not (as was the NEB) and, therefore, was or was not responsible for carrying out the duty to consult.

One other aspect of changing processes is worth mentioning. Typically, when thinking about regulatory processes, we mean the formal hearing process characteristic of the AER, OEB, NEB/CER and the NSURB (but not the BCOGC). But there can be more to decision-making than the formal regulatory process. For example, there have been varying degrees of high-level policy processes in most jurisdictions, but in some provinces, a lack thereof. Commentators noted in the cases of both the OEB and the AER and its predecessors that the regulator was “regulating blind” or “regulating without context”. The federal government’s establishment of the Major Projects Management Office was intended to provide policy leadership so that individual projects would have more certainty before going into formal regulatory proceedings.

Likewise, project proponents have increasingly made it a practice to engage closely with affected communities (notably Indigenous communities) outside of governmental processes so that they are able to bring mutually agreed approaches to formal proceedings. All in all, the history of informal processes either upstream in the form of high-level strategy or policy or at the level of individual projects has been decidedly mixed.



Meanwhile, the “process” within the governmental machinery has witnessed a series of evolutions, devolutions, and upheavals and in some cases relative stability and incremental change. The most important of these concerns the role of regulators relative to policymakers. Traditionally, the regulators we have been examining have been described as “independent” and in past that meant with respect to both substance and procedure. But by far the most striking contrast across the five cases has been the way policymakers have chosen to adapt to an ever more complex set of public expectations for consultation and engagement.

The BCOGC has had from its inception a relatively high degree of structural independence with periodic adjustments in legislation to give policy guidance to the regulator on evolving circumstances. As noted earlier, in Alberta and Ontario, governments have chosen rather less formal and less transparent approaches, dealing with various pressures for change and evolving policy objectives through the use of ministerial directives to their ostensibly independent regulators. The Nova Scotia government, in contrast, has maintained the independence of the NSURB while expressing its changing policy through new legislation or regulation. The NEB/CER stands out from the others insofar as the NEB experienced 50 years with a high degree of independence followed by abrupt shifts in 2012 and 2019, dispensing almost altogether with decision independence and making the regulator an advisor (on project approvals) rather than a decider.

One final aspect of the regulator’s evolving role is worth noting. When it was first established in 1959, the NEB was given a mandate to exercise an advisory role: to examine and advise the government on market conditions and other “specified energy matters”. This mandate was seen by many commentators as controversial and at odds with the independence of the regulator. And yet, over the years, to one degree or another, all the regulators have had roles as participants in policy debates and as advisors to their respective governments reflecting their expertise and their close to the ground familiarity with the issues. These roles may have affected how the regulators’ independence is perceived by stakeholders; whether it has in fact compromised their independence is less clear.

In sum, the five systems have all evolved with respect to changing substantive issues, procedural questions and the regulators’ role within the overall system. Some have evolved incrementally and transparently, others somewhat fitfully and sometimes stealthily and in at least one case (the NEB/CER) through something more akin to revolution. The ability to evolve, to see the future and adapt has long been central to the effectiveness of decision systems and it will become more crucial as the systems cope with the pressures of a big energy transformation looking to mid-century. That will rest fundamentally on the next attribute of effectiveness: perceived legitimacy.



CAPACITY TO BUILD AND SUSTAIN PERCEIVED LEGITIMACY

Legitimacy is a very complex concept but one that we believe captures several elements of what makes an effective regulator. It encompasses perception and reality as well as a multitude of perspectives.

It starts with the basic integrity of the regulator within the larger decision framework.

If the regulator has multiple and conflicting mandates, is it seen to be capable of fairly assessing those and finding an appropriate balance? In the case of the AER, some commentators saw the dual role of promoting resource development and protecting the environment as inherently in conflict. But if, as many observers note, decision systems and the regulators themselves need to account for a growing list of inherently conflicting objectives, then the argument turns in on itself. The question is not whether the objectives are in conflict but rather how the system finds a balance.

Trust in regulators to find such a balance may be compromised if they are seen in some way to be “captured” by those they regulate, as commentators have noted with respect to the AER, the NEB and the BCOGC. But again, this entails a balancing act. If a regulator has long established familiarity with the regulated industry and relationships with its representatives or is funded through industry levies, then it is bound to appear to be at least in danger of capture. The question here turns fundamentally on the transparency of processes and, ultimately, results.

The structure of the regulatory organization is a vital consideration. If appointments are seen to be partisan as in at least two instances (the OEB and the AER) then the perceived integrity of the regulator is at risk. Such concerns can be mitigated by arm’s length arrangements advising on appointments (NSURB). If appointees lack secure tenure (length of appointment, however specified) and can be removed without cause (as seen with the OEB and the AER), they may be perceived as being subject to pressure to conform to the preferences of the political executive; alternatively, if removal is only with cause and/or through an address to parliament or the legislature (as with the NEB and the NSURB) then they will be perceived as being independent and objective. Regulators must have sufficient expertise and secure access to resources adequate to support sound judgments on matters before them. The question of resources creates a conundrum; conventional budgetary processes give control to the political executive, but the alternative (industry levies) may create the appearance of regulatory capture by industry, as seen with the AER and the BCOGC.

Another factor that goes to the question of integrity is whether the regulator maintains some measure of institutional stability to sustain corporate memory and the building of trust over time (as seen with the NSURB). A regulator should embody a culture that emphasizes adherence to the law and to notions of objectivity, a characteristic which was noted with respect to the NSURB.

Structural factors may establish a prima facie case for the integrity of the regulator but at the end of the day what matters is whether its actions and decisions are seen as legitimate.

Decisions need to be based on evidence, and the regulator needs to lay out its reasons for decision in such a way that the soundness of the decision is apparent (as with the NEB). Decisions need to be arrived at through processes that are open and inclusive. There must be adequate notice to relevant stakeholders and enough hearing time and financial support to allow consideration of diverse perspectives (as seen with the AER), but this consideration is in constant tension with questions of timeliness and efficiency.

The balance between openness and timeliness may be facilitated by use of informal consultation processes that allow broad access to policy deliberations (as seen with the BCOGC and the NSURB), or to prior consultation on individual projects. One observer who advised on this project emphasized the growing importance of prior consultation and engagement so that Indigenous communities, for example, may come to the table as partners in a project rather than opponents.

But still, as noted, openness and inclusiveness will always be in tension with the desire for processes to be timely and efficient. The history of the AER and the NEB reflects not always successful efforts to find a reasonable and generally accepted balance between these competing tensions.

However the balance is struck, **it is important that rules and procedures are transparent and widely understood and trusted by relevant parties.** If procedures are unstable or subject to arbitrary alteration by

policymakers in pursuit of certain outcomes then there will be a loss of transparency and trust.

Outcomes need to be durable.

If regulatory decisions can be overturned by policymakers with little attention to due process, or if decisions, once final, can be subsequently overturned due to a change in government (as with the Northern Gateway project in 2016), then participants will forever be in doubt as to whether decision outcomes can be relied upon.

The test of legitimacy that may be the hardest to assess is whether there is confidence in the system, its processes, and its outcomes.

But whose confidence is always a matter of balance. Investors need to be confident that they will get a fair and timely hearing and results that are stable. Directly affected parties such as local landowners or Indigenous communities need to be given fair access to the process and the process needs to produce outcomes that assure reasonable mitigation of unwanted effects or compensation to offset such effects. There is always a tension surrounding how far the system must go to give more broadly interested parties (such as environmental groups for example) access so that they can have their perspectives heard. Governments themselves need to feel confident that the decision process and the actions of regulators find a reasonable balance among many policy objectives.

In the next and final section we bring all of these insights together into a set of conclusions and ideas for what those who are designing decision systems should consider as they look to the future.





LOOKING TO THE FUTURE: CONCLUSIONS AND RECOMMENDATIONS

THE POLICY CONUNDRUM

In previous sections we set out a framework for what makes an energy project decision system effective, what makes regulators within such a system more or less independent, and how independence bears on the question of effectiveness. This research study reveals that the question of system effectiveness rests on three essential elements: functionality (can it get the job done); adaptability (can it evolve with changing circumstances); and legitimacy (can it sustain broad public confidence). These three elements and a number of sub-elements within them together produce several tensions or unavoidable tradeoffs. There is no “right” answer, only the considered judgment of those who design and operate the systems.

Below we set out several key conclusions emerging from this research study and other research conducted by Positive Energy. To one degree or another, each of these conclusions could lead to detailed recommendations, but we are wary of going too far down that road. As noted, there is rarely a “right” answer or “best practice” because any given public energy decision system is highly context bound. It depends on what subject matter is under consideration: hydrocarbon resources or infrastructure, power infrastructure, market design, rates, or other aspects of energy decision-making. It also depends very much on the way geology, geography and history have shaped the circumstances in any given jurisdiction.

Our overarching recommendation, therefore, is that those responsible for designing public energy decision systems over the next few years should take careful account of the following conclusions. There are many models and avenues for reform, but our conclusions point in several important directions. The primary imperative, regardless of context, is that reforms be informed by a careful assessment of the context, inherent tradeoffs and tensions, and intended and unintended consequences.



THE BIG PICTURE: FROM NOW TO 2050

We can't afford to get the institutional arrangements wrong.

This assertion is derived not so much from the case studies as from what is in front of us: a viable energy future in an age of climate change will require that public decision systems be able to act competently, act quickly, act judiciously and act in ways that build and balance the confidence of all parties. As already noted, but worth stressing: Canada has expressed a broad-based political consensus that in the face of climate change we need to remake our energy systems from top to bottom more radically than ever in our history and do so over a time horizon that is much shorter than those of the coal and steam revolution, the electric power revolution or the oil and transport revolution. Slow is not an option if we wish to take our 2050 aspirations seriously.

But fast public decision-making is not the way of things in the 21st century.

This is for myriad reasons and political leaders are going to be faced with the dilemma of balancing the need for speed with the imperatives of careful planning and sound analysis, inclusiveness, stability and predictability, consultation, and meaningful accommodation. All of this will be essential, but it raises the question: what can be done to expedite project decisions without unduly compromising those competing goals? The next proposition would be a step in the right direction.

Canada needs much more sophisticated policy and planning at federal, provincial and local levels and much more collaboration and coherence across jurisdictions.

Every critical decision delayed until late in the process adds both time and uncertainty for investors as well as affected communities. That means that we will need more of something most policymakers do not like doing: policy. And harder still: planning. That does not mean creating a “plan” that would be static, but a continuous and dynamic process, sketching possible futures while mindful of technological uncertainties and possibilities; taking energy planning to the regional level; engaging early on with Canadians and their communities; creating signals to potential investors that they can count on.



SYSTEM DESIGN: DEMOCRATIC AND INSTITUTIONAL UNDERPINNINGS

Democratic accountability has become something of a cliché, and it is not well understood.

We have seen in the cases – coming from across the political spectrum – the argument that democratic accountability can only be achieved when final project decisions are taken by elected officials. But strangely, the argument behind this proposition appears to give little account to the most essential feature of parliamentary systems: individual elected members are directly answerable to their constituents but under a system of responsible government, the Governor in Council or Lieutenant Governor in Council (federal or provincial cabinet) is accountable not directly to the people but to parliament or provincial legislatures. Decisions made by the political executive at the level of individual applications can be obscure in their origins or their rationales, leaving meaningful accountability to the legislative bodies – and by extension to the public at large – as a potential casualty.

Democratic accountability is arguably better served when political decisions are made well upstream in the decision cycle and through formal means.

Governments should frame their broad intentions through legislation. They should also do so through regulations, which, although made outside of the legislative process, are subject normally to well established procedures for analysis and consultation and done in plain sight of legislators.

In contrast, late-stage cabinet decisions or ministerial directives that are not transparently arrived at can almost amount to regulation by stealth. If such actions are aimed at individual applications this opens up avenues for private lobbying, reducing both public accountability and investor confidence, conceivably impairing timeliness, and undercutting public confidence that regulatory processes have much meaning. Cabinet, of course, does have the ultimate authority and accountability for decisions made by the executive branch of government. But that authority should be exercised judiciously, if necessary, by asking the regulator to reconsider its decision, doing so in plain sight of all parties, involving all due process – and always being mindful that such steps will inevitably make processes slower.

Where regulatory systems are ostensibly independent they should be in fact.

Various methods by which to state political preferences can either enhance or compromise independence. Processes for appointments to regulatory bodies, arrangements for tenure of senior regulatory officials and arrangements to secure access to resources and independent expertise can reinforce independence or undercut it. There are many design possibilities to reinforce or undercut whatever degree of regulatory independence legislative bodies and the political executive choose to establish. In this case, what constitutes “best practice”, almost irrespective of a particular context, is clear – ensure that independence is in fact independence – and such practices should become and remain the norm.



SYSTEM OPERATION: DAY-TO-DAY DECISION-MAKING

Engagement will need to take place at multiple levels.

Engagement on individual projects has for some years been taking place ever earlier in decision processes and through informal means. This can lead to greater alignment on a project and reduce points of contention before formal processes begin. Policymakers and regulators need to actively encourage such approaches. Communities, most especially Indigenous communities, will need to be active shapers of the energy future and partners in many cases on all manner of projects. Terms like “co-creation,” “co-production” and “co-development” aim to capture this change.

But in many cases the terms remain ill-defined and can include a wide range of ideas from collaborative design or Indigenous-led development of standards to joint or Indigenous-led impact assessments to locally delegated monitoring and enforcement. Better defining what these terms mean, how they can be made practical and meaningful, and building the capacity to do this will be time and resource intensive, but may ultimately lead to much more durable decisions. Policymakers will need to step up and support this work.

We need much more interjurisdictional cooperation.

We have seen one instructive example in the form of what is now called the Atlantic Loop, an idea as much as a project, which now has over a decade of history behind it and, if successful, will in a few years greatly facilitate the decarbonization of power supply in the Maritime provinces. Many low carbon options are geographically constrained and distant from load centers. Finding economically and socially acceptable solutions will entail interjurisdictional cooperation – from policy through planning to projects. For many reasons – from geography to resources to demographics to political culture – such cooperation has most often proved elusive in Canada.

We need to learn what works and what doesn't as rapidly as possible.

We have seen examples of this throughout the research, respecting both system design and operation. There will need to be much more learning both within and between organizations, and it will need to take place far more rapidly and systematically, as systems adapt to the ever more complex and turbulent world of getting to net zero.



Contemporary society demands that decision processes be holistic.

They must take account of a multitude of societal goals while still arriving at viable conclusions. One aspect of this running through the cases is whether contemporary decision-making is so value-laden that every decision must be in the hands of political decision-makers. Alternatively, decisions may be so technically complex that choices need to be weighed based on deep expertise well beyond the capacity of any political body, as well as careful and open deliberation uncharacteristic of cabinet processes. Whether we like it or not, the exigencies of a net zero transformation may require that at some point in decision systems, we will need to find a new balance between political and technocratic decision-making.

Transparency – as hard as it can be for political actors – is essential for public confidence.

Cabinet level decision making is – by definition – limited in its transparency, even if it is informed by publicly available sources of advice (which it often is not). Regulatory processes, especially through formal tribunals, are normally bound by principles of procedural fairness (which include transparency) and the need for deliberations to lead to conclusions accompanied by carefully argued and stated rationales. When cabinet is involved in decision-making for individual projects or regulatory submissions, it needs to ensure the rationale for decisions and the processes and information used to arrive at them are clear and transparently communicated.

Regulators can act judiciously without being judicial.

We have observed the gradual extension of regulatory systems from being strictly court-like to being more flexible and open to more voices and various forms of evidence. We have seen regulators taking more active roles in broader policy debates. More flexibility and openness probably inhibit timeliness but if policymakers establish reasonable bounds and if most parties understand and generally accept the tradeoffs, then practical compromises may be reached.

Regulators can engage with other parties and provide advice to governments. Provided it is done separate from specific applications and in plain sight there is no reason why doing so would compromise regulator independence, objectivity, or transparency. Arguably, it is quite the opposite.



THE FUTURE: INSTITUTIONAL INNOVATION AND INFORMED REFORM

Adaptability of decision systems must be balanced against stability.

Decision systems can be designed through legislation and regulation so that they are inherently adaptable. Where, for one reason or another, systems prove to be unduly static, they can be adjusted through legislation or regulation to overcome that. But stability is also a virtue since it can enhance trust and the development of knowledge, expertise, and the reputation of decision-makers in the eyes of investors and other affected parties. Sometimes it is time to throw out the bath water. But watch out for the baby.

Durability of decisions will matter more and more.

If a decision is arrived at and a project approved or turned down then succeeding governments should be very cautious about overturning such decisions without being mindful of the costs and risks to reputation, public confidence and system stability and predictability. If reversing course is deemed necessary, then it should be done only with due process.

There will always be tradeoffs and they will often be hard.

Investor confidence – depending on timeliness, efficiency, and certainty – will always be in some degree of tension with local community confidence, which depends on balancing multiple needs, openness, and inclusion. This tension is inescapable, and it will sometimes be painful. But confidence of all parties will most likely be enhanced by early and meaningful engagement, transparency, and stability.

At the end of the day, confidence and trust of all parties in energy project decision-making systems will determine whether we succeed in meeting our energy and climate goals.

Suppliers of capital will need to believe that projects have a fair chance of succeeding and that costs and risks will not overwhelm reasonable returns on investment. Locally affected communities will need to believe their voices will be heard and their concerns attended to, including in some cases their wish to become active partners in energy projects. The broad public will need to have faith that decision-makers have established systems that will meet climate goals without compromising essential requirements like reliability, resilience and affordability. Governments must have confidence in their own systems – and in a world of more interjurisdictional cooperation – confidence in the systems of other jurisdictions.

The model chosen by any jurisdiction will depend on context.

The choice of who decides what, when and how needs to be clear, understandable, and stable. Without that, any aspirations to net zero emissions in 2050 will be buried under uncertainty and a lack of public confidence.



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POSITIVE ENERGY AT THE UNIVERSITY OF OTTAWA USES THE CONVENING POWER OF THE UNIVERSITY TO BRING TOGETHER ACADEMIC RESEARCHERS WITH EMERGING AND SENIOR DECISION-MAKERS FROM INDUSTRY, GOVERNMENT, INDIGENOUS COMMUNITIES, LOCAL COMMUNITIES AND ENVIRONMENTAL ORGANIZATIONS TO DETERMINE HOW TO STRENGTHEN PUBLIC CONFIDENCE IN ENERGY DECISION-MAKING.

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