



ENERGY REGULATION QUARTERLY

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EDITORIAL POLICY

The Quarterly is published by the Canadian Gas Association to create a better understanding of energy regulatory issues and trends in Canada.

The managing editors will work with CGA in the identification of themes and topics for each issue, they will author editorial opinions, select contributors, and edit contributions to ensure consistency of style and quality.

The Quarterly will maintain a “roster” of contributors who have been invited by the managing editors to lend their names and their contributions to the publication. Individuals on the roster may be invited by the managing editors to author articles on particular topics or they may propose contributions at their own initiative. From time to time other individuals may also be invited to author articles. Some contributors may have been representing or otherwise associated with parties to a case on which they are providing comment. Where that is the case, notification to that effect will be provided by the editors in a footnote to the comment. The managing editors reserve to themselves responsibility for selecting items for publication.

The substantive content of individual articles is the sole responsibility of the contributors.

In the spirit of the intention to provide a forum for debate and discussion the Quarterly invites readers to offer commentary on published articles and invites contributors to offer rebuttals where appropriate. Commentaries and rebuttals will be posted on the Energy Regulation Quarterly website.

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EDITORIAL

Rowland J. Harrison, Q.C. and Gordon E. Kaiser, FCI Arb
Managing Editors

This year is the 100th anniversary of public utility regulation in Alberta, a milestone that has been marked by various events, publications and presentations. In May, the occasion was reflected in the program for the annual conference of the Canadian Association of Members of Public Utility Tribunals (CAMPUT), which was hosted in Calgary in May by the Alberta Utilities Commission (AUC) under the title “A Century of Regulation: Honouring the Past, Shaping the Future.” Earlier in the year, the AUC itself had celebrated the occasion with the publication of *Alberta Utilities Commission: 100 years of service to Alberta 1915-2015*.

We are pleased to observe the AUC’s centenary by publishing a presentation by the Commission’s current chair, Willie Grieve Q.C., under the title “One Hundred Years of Public Utility Regulation in Alberta.” In Grieve’s own words, the purpose of his presentation is “to put Alberta’s public utility regulatory agency into some economic, legal, political and historical context.” He achieves more than that. He first recounts that the foundations of the regulatory bargain can be traced back to Magna Carta. While invoking the “foundational principles” of utility regulation, however, his presentation is equally mindful of the changing role of regulation, noting that the facts underlying any set of concepts change over time.

Grieve’s paper conveniently provides a theme for much of the content of this issue of *Energy Regulation Quarterly*, revolving around the transition from the past into the future of energy regulation.

Mark Jamison’s paper on “The Economic and Political Realities of Regulation: Lessons for the Future” reminds readers that the past practices of utility regulation include both lessons and myths. In looking at the past, it is incumbent on regulators to properly understand the

difference. He examines three important lessons regarding the importance and role of information, the design of incentives and the design of markets.

Of the many dynamics at play in the current energy regulation environment, one of the most challenging for regulators, regulated industries and governments alike is the rapid emergence of the “social licence” phenomenon. In demanding that regulators themselves must acquire and maintain a social licence to regulate (apart from the social licence to **operate** that is demanded of project proponents), the concept threatens the very legitimacy of regulatory institutions. Mike Cleland addresses the issues in “The Social Licence to Regulate: Energy and the Decline of Confidence in Public Authorities.”

Scott Hempling’s article “From Streetcars to Solar Panels: Stranded Cost Policy in the United States” addresses a recurring issue in utility regulation, again with an underlying theme, as is clear from the title, of moving from the past into the future. While the article discusses the U.S. experience, we expect the review of basic issues and principles will be valuable for Canadian readers as well.

The continual emergence of new technologies is, of course, one of the most significant dynamics in today’s energy industries, frequently requiring new responses from regulators. The resulting changes are often incremental. The development of tidal power in Nova Scotia, however, goes beyond incremental change, calling for a new regulatory framework for the development and oversight of marine-based renewable energy activities. William Lahey reviews developments in “Regulation and the Development of a New Energy Industry: Tidal Energy in Nova Scotia.”

While “transition” permeates much of the

current energy regulation environment, lawyers must continue to be conversant with certain enduring legal principles, particularly as such principles are to be applied in the context of regulatory proceedings. Philip Tunley's article on "Expert Evidence for Energy Lawyers and Regulators" offers a comprehensive review of the principles that apply to the admissibility and use of expert opinion evidence that is frequently central to specific regulatory proceedings. The article is likely to become a valuable reference for energy lawyers and regulators alike.

Another area in which general legal principles may bear directly on the ultimate outcomes of energy regulatory proceedings is the courts' approach to judicial review of such proceedings. William Lahey's Case Comment reviews a decision of the Nova Scotia Court of Appeal quashing a decision of the Nova Scotia Utility and Review Board in which the Board had approved the inclusion in Nova Scotia Power Incorporated's rate base of an investment in a wind power project. The Board had based its decision on what it saw as the application of "a fundamental principle of public utility regulation." All parties and the Court of Appeal itself agreed that the standard of review was reasonableness. Lahey concludes, however, that the Court nevertheless proceeded to review the Board's decision for reasonableness much as it would have for correctness, "with not a hint of deference..." The Court's decision provides yet another example of the ongoing transition into the post-*Dunsmuir* world in which the judicial deference to be extended to the decisions of energy regulators is perhaps better understood in theory than in practice.¹ ■

¹ See David Mullan, "2014 Developments in Administrative Law Relevant to Energy Law and Regulation" 3:1 Energy Regulation Quarterly 17.

ONE HUNDRED YEARS OF PUBLIC UTILITY REGULATION IN ALBERTA*

Willie Grieve, Q.C. **

My purpose here is to take a few minutes, after 100 years, to put Alberta's public utility regulatory agency into some economic, legal, political and historical context.¹

In 1915, the province found itself inundated with complaints from Albertans who wanted electricity, natural gas and telephone services. These were new services that promised to improve everyone's quality of life and drive the new economy in the 20th century. Newspaper accounts were full of stories about utility companies refusing to provide service, preferring their friends and charging too much for service or for hooking up customers. There was anger and frustration in the air and no one seemed to have much sympathy for the challenges faced by the companies themselves. Indeed, when the Board of Public Utility Commissioners was created, one newspaper account referred to the noble band of regulators being there to protect the public from the practices of the utility companies.

And Alberta was not alone. These same types of complaints and concerns prompted the creation of the Interstate Commerce Commission in the United States in 1887 and the Board of Railway Commissioners in Canada in 1905 to deal with similar types of complaints about railways – in both cases, their nations' first national regulatory agencies.

Over time, the reason for regulating came to be understood as this: when a company exercises monopoly control over the supply of an essential public service (such as rail services

at that time), it is likely to charge prices that are too high and provide services of inferior quality. Regulation steps in where competition does not, to remedy the market failure.

The model of an independent regulatory agency was an American construct and had first been adopted earlier in some of the New England states for water utilities. This model of an independent agency created by legislators to perform quasi-judicial functions was new for a parliamentary democracy like Canada and its provinces and much of the early debate was focussed on how and whether the agency should exercise responsibilities variously perceived to be judicial, administrative or legislative in nature. Actually the functions were all of those and impossibly intertwined.

In 1915, the Alberta legislature had choices. It could decide to have no legislative response and leave complaints about utilities to the courts and the occasional piece of legislation to be administered by the courts. After all, it wasn't that there were no laws the courts could use to control the behaviour of the utility companies. There was the common law.

The legislature could have assigned the powers to regulate the utility companies to the responsible Minister. It did not do so – for many reasons including the specialized nature of the subject matter and the high risk of short term political pressures and partisan decisions leading to unstable and risky industries, higher prices and political trouble for the poor Minister who might be chosen for the task.

* This article is an edited version of remarks by the author delivered on April 14, 2015 at Government House in Edmonton, on the occasion of the centennial of the establishment of public utility regulation in Alberta. The original remarks are published on the website of the Commission at <<http://www.auc.ab.ca/centennial/Documents/WillieSpeech.pdf>>. The consent of the Commission to the publication of this version is gratefully acknowledged.

**Chair, Alberta Utilities Commission.

¹ The Alberta Utilities Commission was originally established by the *Public Utilities Act*, SA 1915, c 6 as the Board of Public Utility Commissioners.

The legislature could have decided to take over all of the utility companies making them all crown corporations. After all, that is what it had done with telecommunications when it created Alberta Government Telephones and direct government ownership and control was the model employed for these types of industries throughout most of the world, including the parliamentary system in Great Britain and most of the Canadian provinces for electricity.

Eventually, every province in Canada (and some before Alberta) and every state in the United States created independent quasi-judicial regulators and they are still in place today – each with its own history and list of powers and responsibilities. Interestingly, other parts of the world later started to turn their utility industry government departments (electricity, post and telegraph offices, natural gas, railways and others) into government owned corporations many of which, in turn, were privatized and regulated and, even where not privatized, are also regulated by some sort of independent quasi-judicial regulator. That is what Alberta did with its crown corporation AGT in 1915 and it took many years before others in the world started regulating their crown corporations (or state owned) public utility companies by an independent regulator. Crown ownership and control was considered at that time in other Canadian jurisdictions to be a better solution than private ownership and regulation for dealing with these companies and the important role they played in the economy. History has shown, though, that the public demands the openness and transparency of independent regulation of these industries, regardless of whether they are government owned or privately owned.

The debate about government ownership or private ownership is still alive and well in many parts of the world – especially developing countries – but in Alberta that debate was decided for electric utilities in 1948 when Albertans voted in a plebiscite by a majority of 151 votes to reject the creation of a crown corporation for electricity in Alberta.² In the late 1980s, the courts ruled that telecommunications was under exclusive federal jurisdiction,³ and AGT was privatized soon

after. Gas distribution has never been crown owned here and is not in most of Canada.

While the decision to create boards like the Board of Public Utility Commissioners in 1915 was not unique to Alberta, the list of powers and responsibilities placed in the hands of the new board covered many areas, including functions that would not normally be included in any definition of a public utility but all of which were important at the time and shared the characteristics necessary for oversight independent from political influence and control. In addition to electricity, natural gas distribution, telephone services and local railways, the Board had to oversee and approve the debentures issued by local authorities to build schools and other infrastructure (the Board's first order). The Board also had a variety of powers over municipalities -- really acting as a resource for municipalities to get established as the province was being settled and growing. The Board was asked to regulate the sale of stocks in new business enterprises to protect the public from buying worthless securities and had early jurisdiction over energy resource conservation. And in 1933, the Board was asked to regulate the price of milk – a function it performed until mid 2008 (not regulated because prices might be too high but, rather, to ensure supply of fresh milk by making sure prices were not too low for producers).

Over time, some powers were moved in and then moved out to other agencies as the functions of government grew and new agencies with new specializations were required. Today the AUC still has some residual regulation over municipal disputes and regulates private water utilities. The Board of Public Utility Commissioners was Alberta's first independent agency. Many of the other agencies in the province today, including the Securities Commission, the Alberta Energy Regulator, the Municipal Government Board and the Surface Rights Board can trace their origins to the Board of Public Utility Commissioners.

But the core responsibilities to regulate the price, service quality and supply of public utility services have remained with the public utility regulator from the beginning in 1915.

² Jared Wesley, *Code Politics: Campaigns and Cultures on the Canadian Prairies*, (Vancouver: UBC Press, 2011) at 71.

³ Under the federal *Works and Undertakings* head of power which are excluded from provincial jurisdiction at s 92 (10) of *The Constitution Act, 1867*. See *Alberta Government Telephones v Canada (Canadian Radio-Television and Telecommunications Commission)*, [1989] 2 SCR 225.

The idea of regulating prices, service quality and supply predates the creation of independent quasi-judicial agencies like ours. The first regulatory statute in recorded history is the Code of Hammurabi – carved into stone around 1750 BC. It regulated many things in people's lives in ancient Mesopotamia but among the many provisions was the price of hiring a swift ship for transport and the price of a house -- rate regulation. The first expression of some of the principles that still inform the regulation of common carriers today (such as absolute liability for losses) is found in the code of Hammurabi – and common carrier regulatory principles form part of the origin of public utility regulatory principles.

The exposition in British law of the basic responsibilities of common carriers dates back to the 1600s when Lord Hale explained why the regulation of innkeepers, wharfingers, ferrymen, turnpike operators and other similar industries was justified.⁴ They had committed their property to public use, used public property to deliver the services and held themselves out as providers of services to the public. No such legal justification is needed today, but when you look at these industries as they existed then, you see the foundation of public utility regulation today.

These industries had monopolies where they operated and the services they provided were essential to the day-to-day lives of people and the ability of the economy to function – in just the same way that modern public utility services are essential to participation in society and are the foundation upon which our economy functions today.

The point here is that even if the Board of Public Utility Commissioners had not been created, there was already a body of law that could have been called upon by the courts to prevent the abuse of monopoly power over essential public services. That body of law placed upon these companies' duties to charge reasonable rates and to refrain from unjust discrimination or undue preference in the provision of or the pricing of those services. These are the principles at the

heart of what the AUC does today and what every other public utility regulator does today.

Interestingly, as all of the North American regulators were being formed in the early 20th century, there were companies arguing that these principles did not apply to them. The significance of governments stepping in to create the public utility regulators in Canada was that the debate was taken out of the hands of the courts.

These industries were monopoly suppliers of essential public services and economic regulation would apply to them as long as competition was not sufficient to protect the public. There was no reason for delaying until a number of courts had offered opinions. The public interest demanded immediate action. And even later, when some courts did have an opportunity to deal with the questions, they relied on the early law of common carriage to find the duties to be imposed on these companies.

Of course, when the enforcement of those duties was put in the hands of independent government agencies, the duties of fair hearing, natural justice, independence, absence of bias, freedom from dictation by others and reliance on relevant facts were imposed on the agencies by the common law, and likely would have been imposed on any government body whether an independent agency or the minister acting alone.⁵ Corporate and individual rights were at stake. In Canada, the importance of these values was driven home most forcefully in 1959 by the Supreme Court in *Roncarelli v Duplessis*, a case in which Premier Duplessis sought to prevent a citizen from renewing a liquor licence by instructing the Quebec Liquor Commission to deny the application.⁶ The Court said that the Premier had no power to dictate the decision. The legislature had given that power to the board.

So, not only do the principles of public utility regulation stand independent of the creation of the regulatory agencies, the basic principles of administrative law under which governments

⁴ Matthew Hale, *A Treatise in Three Parts: De Jure Maris; De Portibus Maris; Concerning the Custom of Goods Imported and Exported*, reprinted in *A Collection of Tracts Relative to the Law of England, 1787* (Francis Hargrave); See landmark US Supreme Court decision *Munn v Illinois*, 94 US 113 (1877) where the court discusses Sir Hale's treatise at great length.

⁵ In *Nicholson v Haldimand-Norfolk Regional Board of Commissioners of Police*, [1979] 1 SCR 311, the Supreme Court, under the pen of Chief Justice Laskin held that the exercise of all statutory power was subject to the duty of fairness, without having to first classify such power as 'quasi-judicial'.

⁶ *Roncarelli v Duplessis*, [1959] SCR 121.

must operate also predate the creation of the agencies and stand independent of them.

Once the agencies had the powers to regulate rates, they also automatically had imposed upon them the accompanying duty to provide a reasonable opportunity for the companies to recover their costs of service including a fair return on their invested capital. This is referred to as the regulatory bargain. Once again we can turn to the Supreme Court of Canada on this point in a 1929 decision out of Alberta,⁷ but there are many expositions of the regulatory bargain in many courts in Canada and the United States. Entire books have been written on this subject.⁸ Indeed, one can trace the foundations of the regulatory bargain back to the Magna Carta in 1215 – 800 years ago this June.

Happily, the regulation of these utility industries under the regulatory bargain has, for the most part, been successful in delivering high quality utility services in Alberta and throughout North America at just and reasonable, and non-discriminatory rates to underpin the modern economy we have today. And of course we must acknowledge that it was not the regulators actually building the networks – it was the companies and their engineers.

Interestingly, though, the combination of the fundamental duties placed on public utilities and the adoption of cost of service regulation has made these companies like no others in the economy. The law imposes duties beyond simply the best interests of the shareholders and the form of regulation creates incentives to act in ways precisely opposite to the efficiency incentives created by competitive markets. As a result, across North America one can trace the footsteps and fingerprints of generations of political activists and lobbyists seeking some advantage from the legislatures, either for the utility companies or for groups of their customers. In this environment of bizarre incentives and ever more complex and voluminous legislation, regulators and legislators have had to be mindful that the rights and responsibilities of the companies and their customers must be balanced and symmetrical.

Like the application of any other set of concepts, the facts underlying their application change over time as competition from competing technologies arises. First it was the railways, the big essential monopolies of the late 19th century and into the 20th century. Much of the economic regulation has been removed as trucking, and air services have eliminated their monopolies – but governments will still step in if there are unique circumstances. Later much of the economic regulation of telecommunications companies was removed in response to competition made possible by technological change and the same happened relatively quietly to many postal services. Economic regulation of the price of natural gas has been removed and retail competition has been allowed to arise by eliminating the vertical integration of the utilities. In electricity, there are competitive market forces nibbling at the edges in just the same way as competition began in other industries such as rail, telecommunications and postal services – and in Alberta we have created a regulatory model to rely on market forces to establish the price of electricity while the monopoly infrastructure that carries it to our homes and businesses remains regulated.

In this environment, a new imperative arises. Not only must customers be protected from monopoly suppliers of essential public services, new competitors must be protected from the possibility that the monopoly in portions of the companies might be leveraged into the competitive portions thereby preventing competition from arising. In the meantime, regulators no longer regulate whole utility companies; they regulate accounting subsets of them – the monopoly facilities and services – and seek to prevent captive customers from subsidizing competitive operations of the former monopoly utilities. Alfred E Kahn, the father of airline deregulation and the namesake of our visiting scholar position at the Alberta Utilities Commission, referred to the challenge as “finding the best possible mix of inevitably imperfect regulation and inevitably imperfect competition.”⁹

In every industry where competition has eroded the monopoly supply of an essential

⁷ *Northwestern Utilities Ltd v Edmonton (City)*, [1929] SCR 186.

⁸ See J. Gregory Sidak & Daniel F. Spulber, *Deregulation Takings and the Regulatory Contract: The Competitive Transformation of Network Industries in the United States*, (Cambridge: Cambridge University Press, 1998).

⁹ Alfred E. Khan, *The Economics of Regulation: Principles and Institutions*, (Cambridge, MA: MIT Press, 1988) at xxxvii.

public utility service, deregulation of prices has resulted in increased regulation of the interfaces between the networks and systems of competing companies that must cooperate in a technical fashion in order for competition to flourish in the delivery of end user services. Even here we can turn to more ancient writings for guidance. Adam Smith in 1776 in *The Wealth of Nations* warned that governments should not encourage people of the same trade to gather together lest the conversation turn to some conspiracy against the public or some contrivance to raise prices. Our Canadian regulatory solution to Adam Smith's admonition has been to make sure the regulator is in the room during any of these discussions dealing with how competing networks can exchange money, information and traffic necessary to make competition work.¹⁰

So this is the future of regulation. Continue to uphold the foundational principles of just and reasonable rates with no unjust discrimination or undue preference until competition removes the monopoly condition or the essential service condition. Monitor or regulate interaction among competitors and prevent the leveraging of monopoly power into adjacent competitive markets. Interestingly, at the AUC we already carry out all of these types of functions today in one form or another in order to protect the public interest. And we even find ourselves today carrying out very judicial functions equivalent to the federal competition tribunal in adjudicating cases of anti-competitive conduct. This is our place today in the long history of economic and public utility regulation.

For all of that we do, our duty is to act honestly, in good faith and in the public interest – not in anyone's private interest and not even in the best interests of the AUC if those interests collide with the public interest. This is the essence of our public service.

I believe there is no higher calling than public service. And I am inspired every day by the dedication of our Commission members and our staff to pursuing the public interest in all of the work they do. We take great care because so much is at stake. We know we have a duty to protect the public interest. We know that the AUC is simply the vessel in which the principles of economic and public utility regulation passed

down through time are housed today in Alberta and that we are the stewards of those principles dedicated to ensuring that the industries that are the foundation of our economy are operated in a way that serves the public interest.

It is an honour for all of us to serve now, on the occasion of the centennial of public utility regulation in Alberta and to celebrate its centennial. So on behalf of the Commission members and all of the staff at today's AUC, we wish a happy 100th birthday to Alberta's public utility regulatory agency and we thank you all for being here to celebrate with us. ■

¹⁰ See the Canadian Payments Association for banking and the Settlement System Code for electricity payments in Alberta, implemented by the Alberta Utilities Commission.

THE ECONOMIC AND POLITICAL REALITIES OF REGULATION: LESSONS FOR THE FUTURE

*Mark A. Jamison**

1. Introduction

The first electricity price review in the UK provided a moment in regulatory history where what we had learned from the past and what we hoped for the future converged and nearly exploded. It was about 20 years ago and the government, having completed its privatization of the electric distribution companies, had established initial prices and price trajectories. Now it was up to the newly formed regulatory agency to establish prices going forward. The regulator's announced pricing decision appeared tough at first glance – it clawed back profits and required that prices decrease in real terms going forward for five years – but within 24 hours of the announcement the share prices of the utilities began climbing rapidly and there were hostile takeover bids coming from outside the country. Clearly the future looked more profitable – much more – than the regulator had anticipated.

What had gone wrong? Perhaps nothing from the regulator's perspective. It is quite feasible that the regulator was implementing a well-established economic theory that firms will hide their true abilities to be efficient unless allowed to profit from improved performance. But the media and political firestorms that soon followed revealed that regulation has political realities that are intertwined with its economic realities.

I review these realities in this essay to help inform us about the future. There are certain realities that we must not abandon – namely, that high-quality information is critical

for regulatory stability and to constrain political opportunism, that firms respond to economic incentives, that markets reveal reality, that regulatory agencies are important for compensating for weaknesses in the politics of utility services, and that regulators are implicitly asked to serve a leadership role that, if they fulfill it, they do so at their peril. I consider each of these in the following sections.

2. The Economics of Information

The roots of economic regulation of utilities go back centuries, but the most relevant events occurred in the past 150 years. In the initial decades following the development of utility services, political officials sought to control prices and service directly through negotiations because they were concerned that an unchecked, monopoly industry would exercise market power to the serious harm of the community. Sometimes the political negotiators represented cities and at other times legislative bodies. Regardless of the political body involved, the officials faced significant pressures: (1) an incentive to take political advantage of the utilities' sunk costs (once investments had been made) and force prices to non-compensatory levels; and (2) the knowledge that utilities held an information advantage that they could exploit during and after the negotiations.

Regardless of the mode of direct political control: (1) prices became outdated as technology and economic conditions changed, resulting in financial distress and poor service; (2) politicians were out-negotiated by their utility counterparts; and (3) utility services were

* Mark A. Jamison, Director and Gunter Professor, Public Utility Research Center Warrington College of Business Administration at the University of Florida.

withheld from political opponents or given free (or nearly free) to political friends. Sometimes courts intervened and established prices and service obligations when utility conduct violated principles of common law. But the courts fared no better than the political bodies: Benefits were received only by stakeholders with the resources to pursue legal cases.

The information and opportunism problems led to the formation of regulatory agencies in the early 1900s and to what was called service at cost regulation. The agency served as a source of expertise to diminish the utilities' information advantage. It also served as a buffer between investments, which are made on planning horizons that are several decades long, and politics, which has a planning horizon of no longer than the time to the next election. The service at cost approach to pricing, which utilized utility accounting and operating data, constrained the regulator and politicians from setting prices that were out of line with commercial realities. This is a point that seems to be lost in regulation today: relying on accounting data was not about controlling the utility but about controlling the regulator.

Good, well-understood data were missing from the UK regulator's initial price review. It wasn't that the data were unavailable: rather, the newness of the system and the focus on incentives resulted in poor regulatory data. Reality was known by investors, as the stock market revealed, but was unknown by the regulator.

3. The Economics of Incentives

When service at cost regulation (which became known later as rate of return regulation) was first developed, it was immediately recognized that it diminished incentives for the utility to control costs. This observation led to the development of systems for strengthening the incentives.

Two incentive systems were deliberately used at the start of the agency regulation and remain in use today. One is the use of audits that may allow the regulator to identify inefficiencies if the regulator has high expertise or the utility is unusually sloppy in its decision making. Even if the regulator fails to catch inefficiencies, the possibility of discovery provides the utility with an incentive to avoid wastefulness that could be caught.

The other incentive mechanism was called

the sliding scale, which is now called earnings sharing. This system allowed the utility to keep some portion of its profits over and above what the regulator had estimated were needed to maintain investment levels, if the greater profits were from sales or efficiencies that were greater than what the regulator had anticipated.

More recently the regulators have begun using price cap or revenue cap regulation. Price caps are used when costs are largely driven by volumes of output and revenue caps are used when the reverse is true. In their purest form, the caps limit prices in a way that is independent of the utility's accounting costs. This provides a maximum incentive for efficiency. But in most cases the capping system serves as a formalized regulatory lag (i.e., the situation where the regulator responds to cost changes with price changes after some time delay) by using accounting data to reset prices only at fixed times. This diminishes the efficiency incentive, but has the benefit of constraining the regulator from establishing prices that deviate so far from economic reality that they could cause more harm than the diminished efficiency incentive.

Regulators also use benchmarking to provide information on what utilities are capable of doing. With benchmarking the regulator uses information from other utilities to estimate the possible technical efficiency of the utility being regulated. In essence this forces utilities in separate markets to compete against each other for the regulators' rewards. The weakness of benchmarking is the lack of precise methods for making utilities comparable: each utility has some degree of uniqueness in its situation and, if this is not properly reflected in the benchmarking analyses, the regulator could choose unrealistic expectations that imperil the utility.

The UK regulator understood economic incentives very well and anticipated that the utilities would reveal how efficient they could be if the regulator could commit to not clawing back the efficiency gains for a significant period of time. The regulator was right, but the political and public relations costs were high. I discuss those in a later section. Before doing that, it is important to examine the importance of getting markets right.

4. The Economics of Markets

That markets reveal economic realities wasn't necessarily a problem for regulation in the

UK – the market competition for electricity generation was producing cost savings for customers and the financial markets revealed economic reality on cue – but it was the mixing of regulation and competition that was shown to be problematic.

Telecommunications regulation provides one of the clearest examples of the problems created by trying to regulate prices and service in a competitive market. Mistakes included getting industry boundaries wrong, misidentifying what customers wanted to buy, and establishing uneconomic prices.

Based on a history of aligning market boundaries with political interests – which was sustainable in a monopoly era, but not when markets became open to competition – regulators established service territories, service definitions, jurisdictional boundaries, and prices along lines of local service, long distance service, interstate and intrastate service (in the case of the US), and domestic and international service. Once regulators began to relinquish control of market entry, the system began unraveling. For several years the regulatory system fought back with some success by creating elaborate subsidy systems and placing barriers to competition. But once technology change enabled an end run on the regulations, the game was over. Unregulated mobile services demonstrated that customers did not care about local and long distance distinctions, that they were willing to sacrifice some service quality for convenience, and that prices did not need to align nicely with economics costs as long as customers understood the pricing plans, customers found the predictability adequate, and revenues were high enough to incentivize investment and low enough to limit new entry. Regulators' efforts to unbundle networks to facilitate entry were at best marginally helpful to the launch of competition, but also locked competitors into the incumbents' monopoly-era network structures and technologies. This was eventually overcome by broadband, which proved to be sufficiently disruptive to remove artificial distinctions between voice and data services, and between domestic and international communications.

These lessons are relevant to the evolution of energy regulation in two regards. First they show that gradual deregulation suffers from the illusion of knowledge, which is a psychological anomaly that leads us to believe we know more

than we do. This manifests itself in deregulation in many ways, one of which is that regulators' and stakeholders' views of the future are distorted by their legacies. I believe we see this in the use of simple net metering policies, feed-in tariffs, and subsidies for fuels. The second lesson is that regulators can be overly cautious with the deregulatory process. Markets involve risk and businesses and investors are well adapted to managing that risk. Unfortunately in a regulated market, there are also political risks for regulators and for utilities. These risks have proven to be problematic because the market for political power does not respond well to the appearance of doubt or failure. These barriers to proper deregulation led Alfred Kahn to coin the phrase, "Deregulating the process of deregulation," to explain the importance of letting markets reveal realities that were unknowable prior to deregulation.

5. Political Realities of Regulation

My above descriptions of the economic lessons highlight some of the political realities of utilities and their regulation: (1) the political system takes a short-term view that diminishes incentives for long term investing; (2) government involvement enables rent seeking behavior, especially as technologies change and deregulation proceeds at a slow pace; and (3) energy (and the environment) have political value because they touch the lives of every person, and excite passions.

These political realities are one of the reasons why governments formed utility regulatory agencies with as much independence as the political machinery could tolerate and that is consistent with holding regulators accountable for their decisions, but not accountable for events that are beyond their influence or control. History has shown that this balance is subject to tensions that sometimes throw the system into disequilibrium: regulatory agencies have been dissolved (and then reconstituted), regulators have been pressured out of office (to be replaced by people with no better capabilities and biases), and regulation has been politically micromanaged. It is the regulators themselves that appear best situated for managing these pressures by managing their political capital, getting on the balcony to see the larger political landscape, and disappointing people at a rate at which they can endure. Regulators are in the position of speaking unpopular truths – that changes have costs, that revenues must cover costs, and the like – and must do so in ways

and at a pace that keeps the system sustainable.

6. Conclusion

The first UK price review provided an important moment in regulation. It showed that brilliance and talent – both of which the regulator possessed – are not substitutes for good information. It also showed the power of incentives and the power of markets, both of which reveal unanticipated realities. Perhaps more than anything, the experience demonstrated the importance of a regulator defending the integrity of the process in the presence of political and public pressures. Regulation disappoints. The art of regulation is to disappoint at a rate that the stakeholders can endure. ■

THE SOCIAL LICENCE TO REGULATE: ENERGY AND THE DECLINE OF CONFIDENCE IN PUBLIC AUTHORITIES

*Michael Cleland**

Introduction

This article emerges from a panel discussion at the 2015 conference of the Canadian Association of Members of Public Utility Tribunals (CAMPUT) entitled the “Social Licence to Regulate”. The panelists were Rowland Harrison, Peter Robinson and Paul Boothe.¹ The author acted as moderator. While the panelists’ remarks and discussion with the audience provided much grist for the mill, this article is the responsibility of the author and no part of it except where specifically indicated should be attributed to any of the panelists.

Following the sequence of questions addressed by the panelists, the article proceeds as follows:

- Do we have a problem? Is there evidence of failure of public confidence with respect to energy regulatory systems?
- If we have a problem what are its apparent causes? Are those causes external to the regulators, at the level of society and policy – or internal, such as matters of procedure?
- Finally, what are the potential directions that policy makers and regulators might take to begin restoring public confidence?

It is important at the outset to note what amounts to both a supposition and a conclusion. To whatever extent the problem exists it needs to be understood as a system issue, one that engages not only the full complex of regulatory authorities whose mandates bear on energy development but also the policy and political systems under whose authority and oversight regulators operate. This is about more than any one regulator or jurisdiction and it is about much more than regulatory procedure.

Quis custodiet ipsos custodies?

The very notion of a “social licence to regulate” should give pause to anyone familiar with many of Canada’s established traditions. These include a habitual practice of civil obedience and respect for the rule of law as well as a practice of establishing and maintaining competent and well respected regulatory institutions. But something has changed of late and though the title “The Social Licence to Regulate” may seem ironic, it is no less a reflection of a real social phenomenon: the apparent erosion of confidence in public authorities who make decisions concerning energy projects (and other sorts of projects as well but that is not the subject at hand). A significant part of Canadian society no longer trusts the guardians and we find ourselves in the midst of an inchoate

* Michael Cleland, Senior Fellow at the University of Ottawa Collaboratory on Energy Research and Policy in collaboration with Laura Nourallah, PhD candidate at the School of Policy Studies at the University of Ottawa

¹ Rowland Harrison is a former member of the National Energy Board and recently completed his term as the TransCanada Chair in Administrative and Regulatory Law at the University of Alberta; Peter Robinson is Chief Executive Officer at the Suzuki Foundation; Paul Boothe is a former Deputy Minister of the Environment in Ottawa and is at present the Director of the Lawrence National Center for Policy and Management at the Ivey School of Business at Western Ontario.

search for alternatives. What happened?

First, has there in fact been such an erosion of confidence? The evidence to date is indicative but largely anecdotal. By and large the academic literature has focused on questions of public trust in project developers and unease with potential consequences of projects themselves ranging from worries about health and safety to perceptions of unfair distribution of costs and benefits.² Most of the debate and discussion at conferences has focused on corporate practices. There is some literature that systematically examines the degree to which regulatory institutions and processes engender or erode trust and confidence but almost none that touches on specific cases in Canada.³ It seems clear that there is an urgent need to develop a deeper understanding of attitudes toward regulatory processes both in general and with respect to specific projects and both at the level of society as a whole and at the community level.

In the meantime we have anecdotal information, much of which was cited by the CAMPUT panelists and which is indicative of a growing problem. Because of the tentative and anecdotal nature of the evidence, this article has avoided pointing fingers at any one jurisdiction or agency. At this stage in the debate a good part of what is being said has the character of slander and urban myth and nothing is served by contributing to either of those.

We do know that several regulatory agencies in several jurisdictions have come in for criticism over the past few years with this criticism expressed in media and in parliamentary processes. Those agencies include economic regulators of pipelines, power lines and energy distribution systems; resource regulators; and environmental protection regulators. The criticisms cover a wide range of concerns:

- Regulators have lost some of their

independence and are seen increasingly as subject to political manipulation in order to further political agendas irrespective of the consequences for the public interest.

- Regulators have been accused of excluding questions from consideration – notably greenhouse gas emissions – that some influential part of the public believes should be explicitly under consideration in approving projects.
- Regulators have been accused of conducting their procedures in ways that deliberately stifle debate and discussion including falling well short with respect to the duty to consult aboriginal Canadians.
- Regulators have been accused of acting to undermine the legitimacy of project opponents.
- Regulators have been seen to be lacking the tools – skills, authorities, systems – needed to properly oversee projects and to hold project developers to account for meeting regulatory requirements.
- Governments have been accused of revising regulatory statutes while avoiding the legitimate scrutiny of the public or even of legislators.

All of this activity shows up in what one of the panelists described as “an explosion” of court challenges. Not many years ago court challenges to regulatory decisions were rare but as of spring 2015, the National Energy Board alone was dealing with 15 legal challenges in the Federal Court of Appeal and the Supreme Court of Canada. Traditionally, courts have deferred to the expertise and authority of regulatory bodies and this practice is deeply established in precedent⁴and likely to continue. However, the fact of so many challenges raises

² Nicholas L Cain & Hal T Nelson, “What drives opposition to high-voltage transmission lines?” (2013) 33 Land Use Policy 204; Michael Siegrist, Heinz Gutscher, & Timothy C Earle, “Perception of Risk: the Influence of General Grust, and General Confidence” (2005) 8 Journal of Risk Research 145; K David Pijawka, K D, & Alvin H Mushkatel, “Public Opposition to the Siting of the High-Level Nuclear Waste Repository: The Importance of Trust (1991) 10 Review of Policy Research, 180; Paul Slovic, “Perceived Risk, Trust, and Democracy” (1993) 13 Risk Analysis 675 [Slovic].

³ Nicolás C Bronfman et al, “Understanding Social Acceptance of Electricity Generation Sources” (2012) 46 Energy Policy, 246; Philip Sinclair & Ragnar Löfstedt “The Influence of Trust in a Biomass Plant Application: The Case Study of Sutton, UK” (2001) 21 Biomass and Bioenergy 177; Roger E Kespersion, Dominic Golding & Seth Tuler, “Social Distress as a Factor in Siting Hazardous Facilities and Communicating Risks” (1992) 48 Journal of Social Issues 161.

⁴ For a very helpful review of where and how courts have shown deference to regulators (or not) see: David Mullan, “2014 Developments in Administrative Law Relevant to Energy Law and Regulation” (2015) 3:1 Energy Regulation Quarterly 17.

the question: does the public see the same qualities in the regulators that the courts do?

In an almost ironic collateral effect, having contributed (perhaps quite significantly) to creating the problem, Canada's political leaders increasingly find it expedient to imply that regulators have not quite done what is needed to secure "social licence" for the projects that they are assessing. When the politicians start piling on, one can take that as good evidence of an emergent social and political phenomenon. In short, while work is needed to test the dimensions of the issue and to uncover solutions, we can say, *prima facie*, that we have a problem and that it is growing.

Something is happening here...

And we do know what it is, or at least we have a pretty good idea.

Part of what has happened over the last two decades or so is a failure of imagination on the part of governments and members of the energy industry. Ten years ago we could easily see the growing disconnect between energy preferences expressed by citizens as consumers (cheap, reliable) compared to their political or public opinion preferences (clean, virtuous). Twenty years ago it was possible to discern a growing problem in securing approval for new energy projects. The signature cases in fact go back to the 1970's in the case of the James Bay project and the Mackenzie Pipeline. Aside from the recognition that aboriginal communities had legitimate concerns, the phenomenon more generally has largely been attributed (by government and industry) to people who presumably were not very public spirited or were paranoid or simply cranky. The labels which were applied reflected that. All of them were distinctly pejorative and dismissive such as NIMBY, NOPE and BANANA.⁵ The problem in other words was a few, albeit noisy, members of the public,

and though governments and industry would regularly wring hands about the matter, decision makers remained confident that the broader public understood the need for new energy projects and that the necessary level of political support could be found.

Events in the past decade have shaken that confidence. More and more projects of many different sorts come in for vociferous and effective opposition from a wide variety of local communities including aboriginal communities and from environmental interests. The reasons for this are not difficult to discern and many of them were cited by the CAMPUT panelists. Briefly stated, much has changed: in substance especially as the climate file has emerged and at the level of society in terms of both broad social trends and the emergence of a newly forceful aboriginal community backed by both the law and political support. On the other hand, to date there remains a paucity of systematic analysis in the academic literature which effectively puts the pieces together in any sort of model of social behaviour or which plumbs those phenomena to discern what they might tell us about avenues that would lead to solutions. The following is intended as a starting point.

The most obvious source and one that is well established in the literature and in multiple sources of public opinion is the decline of trust and in particular the decline of trust in public institutions.⁶ The decline of trust in public institutions began in the United States in the early 1970's and Canada not long after. One source, tracking levels of trust over several decades showed (in the early 1970's) confidence levels that governments will "do the right thing" at around 60 per cent; since then, results have sunk as low as 20 per cent and since 1990 they have rarely climbed above 30 per cent.⁷ People simply don't believe governments. What can be done about that is another matter but one might at least surmise

⁵ For any who are uninitiated: Not in My Backyard; Nowhere on Planet Earth; Build Absolutely Nothing Anywhere Near Anybody.

⁶ Shafak Sajid, *Restoring Trust: The Road to Public Support for Resource Industries* (2014), The Canada West Foundation, online: Centre for Natural Resources Policy <http://cwf.ca/pdf-docs/publications/CWF_Restoring_Trust_Report_v2.pdf>; Neil Nevitte & Mebs Kanji, "Authority Orientations and Political Support: A Cross-National Analysis of Satisfaction with Governments and Democracy" (2002) 1 *Comparative Sociology* 387; Neil Nevitte, "The Decline of Deference Revisited: Evidence after 25 Years" (2001), *World Values Surveys*, online: UCI Center for the Study of Democracy <<http://www.nevitte.org/wp-content/uploads/2011/04/The-Decline-of-Deference-Revisited.pdf>>; David Zussman, "Do Citizens Trust their Governments?" (1997) 40 *Canadian Public Administration* 234.

⁷ Frank Graves, *The Trust Deficit: What Does it Mean* (May 14 2013), online: Ekos Politics <http://www.ekospolitics.com/wp-content/uploads/full_report_may_14_2013.pdf>.

that governments are moving in the wrong direction when they take more political control and reduce the independence of regulators.

Another and perhaps related phenomenon found throughout the literature⁸ is the breakdown of social cohesion, put another way, a process of increased fragmentation whether between interest groups or on a geographic basis. In particular, local communities have begun to assert themselves much more vigorously than they did in past decades and in a world of tightly targeted politics they have become effective at getting heard. Aboriginal communities in particular have become both a political and a legal force and if the courts have not in fact accorded first nations a veto, (not where there exists a reasonably articulated and proportionate public interest),⁹ the chattering class narrative appears to have accepted that they have. In some minds at least, local simply trumps the broader interest.

Some of this is undoubtedly good if one accepts that past practices often left local communities bearing the costs and risks while the broader society enjoyed the benefits. That is particularly true in the case of aboriginal communities for whom energy and resource projects are at one and the same time an existential threat to traditions and yet the only viable avenue for future community vitality. On the other hand in the rush by many commentators including political figures to appear sensitive to local concerns, the larger public interest has gotten lost. Some sort of rebalancing is needed so as to genuinely account for local concerns without pandering to them.

A third sociological phenomenon that appears to underpin a substantial part of public opposition is the emergence in recent decades of a society obsessed (the word is not too strong) with worries about threats to health and safety. Energy developments of all sorts raise questions about health and safety and the science around those questions is often complex and

ambiguous. Much of the literature¹⁰ touches on these issues and consistently stresses two aspects: the need for concerned voices to be heard; and the importance of trust in authorities to do the right thing when it comes to resolving issues that are far too complex for most experts, far less any lay person, to understand.

Into this stew of hopes and (mainly) fears, governments have thrown one of the largest policy failures of several generations – the failure to deal honestly with the issue of climate change. Fingers can be pointed in all directions and no political party or government in Canada can claim with any justice that it has consistently acted with wisdom and foresight. Governments have consistently reinforced the belief that it is unlikely that they will do the right thing: whether over-committing to action while ignorant of the consequences, particularly for a resource based economy; simply ignoring solemnly made commitments; undertaking policy measures whose consequences were ill-understood; or doing very little while pandering both to corporate interests and to consumers. In the meantime, the public – or substantial parts of it at least – looks for a forum in which to express their concerns and absent any other forum, regulatory processes for individual projects become the default mechanism despite not being constituted legally or otherwise – to address the issue.

Other policy failures reinforce the overall effect. The inability to come effectively to a resolution with aboriginal communities is an obvious one. More amorphous but likely of growing concern is the spotty record of regional land use planning and cumulative effects management.

All of this plays out in the world of social media. There is much – and little – that can usefully be said about social media in this context. In the next section, this article proposes a model of sorts which suggests that in most cases, public policy or the broad public interest needs to be addressed with at least three critical elements in

⁸ Jane Jenson, *Mapping Social Cohesion: The State of Canadian Research* (1998), Canadian Policy Research Networks Inc, Study F-3, online: CPRN < http://cprn.org/documents/15723_en.pdf>; Gilles Bourque, & Jules Duchastel, « Les identités, la fragmentation de la société canadienne et la constitutionnalisation des enjeux politiques » (1996) 14 *International Journal of Canadian Studies* 77; Robert Putnam, “Bowling Alone: Americas Declining Social Capital” (1995) 6 *Journal of Democracy* 65.

⁹ *Tsilhqot'in Nation v British Columbia*, 2014 SCC 44, [2014] 2 SCR 256.

¹⁰ Barry G Rabe, “When Siting Works, Canada-Style” (1992) 17 *Journal of Health Politics, Policy and Law* 119, Slovic, *supra* note 2; Howard Kunreuther, Paul Slovic, & Donald MacGregor, “Risk Perception and Trust: Challenges for Facility Siting” (1996) 7 *Risk* 109; Christine Rivard et al, “An Overview of Canadian Shale Gas Production and Environmental Concerns” (2014) 126 *International Journal of Coal Geology* 64.

mind: a broad geographic perspective (national, sometimes global); a long time horizon; and a capacity to integrate a complex mix of variables and objectives. Most of the time public policy falls well short on all three dimensions and politics even more so. In any event, for all that may be said good or bad about social media, one thing seems clear: much of what transpires there is intensely personal, immediate and simplistic and as such, one of its effects is to further weaken an already weak societal capacity to take more global, long term and complex elements into account.

We live in an increasingly fragmented society burdened by multiple fears and believing – sometimes with good reason – that authorities will do the wrong thing. As citizens we are called upon to be “literate” in multiple realms including energy – calls that are most often drowned out by other, personal priorities. Against that backdrop, energy projects often face at least two substantive challenges: to do what is just with respect to local, especially aboriginal, communities while maintaining a sense of the broad public interest; and to come to grips with vexing environmental issues, notably climate change and large scale impacts on land, water and habitat. Modern communications then insert themselves into that mix. In contrast to a public policy need for thinking that is broad based, long term and able to deal with complexity, our means of addressing ourselves to our fellow citizens have become (with apologies to Thomas Hobbes) ever more nasty, brutish and short.

Rethinking Leviathan

Without going so far as to advocate the return of absolute monarchy, one can find in Hobbes a useful corrective to the emerging social licence movement, some of whose members appear to believe that anything is better than our currently constituted authorities and that local communities should be the ultimate arbiters of what is acceptable or not. This view seems perverse and dangerous. Our highly sophisticated and competent set of energy regulators (economic, resource and environmental) has for many decades upheld the social contract around energy development.

If the social contract has become as frayed as it appears, that is a long way from saying that the guarantors of that contract should be pushed to the side, quite the opposite in fact.

The preceding section touched on the idea of a policy model in which various decision makers act within a three dimensional space, the dimensions being time, geography and degree of complexity. At one extreme (call it the lower left) of that space, decisions are made with a perspective which is short term, local and one-dimensional (a job, my health, potholes in my street). Most private transactions occur in this area. At the opposite extreme (call it the upper right) can be found some sort of ideal for policy making – long term; encompassing the whole polity (and even reaching beyond it); and embracing multiple objectives such as the economy, health and safety, the environment and social justice. Very rarely does policy even approach that ideal but it is inescapable that most of our energy challenges can only be effectively addressed in that realm. Climate change is a long term global phenomenon with myriad implications for human society; pretty much everything about energy is a long game and energy decisions affect widespread geography in multiple dimensions.

As it turns out there is a mismatch between the needs of policy and the realities of politics. Famously, all politics is local. Political time horizons, never longer than the electoral cycle may now be approaching that of the twitter cycle. And if political decisions sometimes embrace complexity, they do so only intuitively and the narrative is most often one-dimensional in order to match modern attention spans.¹¹ Democracies are untidy and in many ways ill suited to the challenges they face, but somehow they work and one of the mechanisms that makes them work is institutions with the capacity to reach toward the upper right of our imagined decision space.

Enter the independent regulator. Regulatory agencies vary widely but in general they have a combination of attributes which make them unique in society. Their business is the public interest as defined by legislatures. They are expert and capable of processing

¹¹ As of 2013, for Canadians - eight seconds, one less than that of a goldfish according to a recent study by Microsoft. Kevin Mcspadden, “You Now Have a Shorter Attention Span than a Goldfish” Time Magazine Online (May 14 2015) online: Time < <http://time.com/3858309/attention-spans-goldfish/>>.

complex information. They characteristically make decisions with very long time horizons. They function within carefully defined rules of procedure and a legal context in which procedural fairness is of central importance. And by virtue of their arms length relationship with democratic decision makers they have some degree of immunity to the pressures of local-ism, short term-ism and simple-ism.

There are several general ways in which the regulatory system might be restored to a position of greater confidence in the minds of Canadians but in order to understand how, it is necessary to understand that regulators can and do play different roles. One of these is transactional. Another is what might be termed part of the infrastructure of public policy.

The principal role for regulators is to ensure that the public interest is served with respect to individual economic transactions, in the first instance through approval processes and on an ongoing basis through monitoring and enforcement. Economic regulators assess projects and issue approvals in terms such as “public convenience and necessity”. Resource regulators protect the integrity of publically owned resources in their approval of private investments and operations to extract such resources. And environmental regulators seek to ensure that broader environmental values are protected. Most of this is essentially transactional, involving a private applicant or operator of one sort or another and often a host of related interests such as landowners or communities. In order to maintain the integrity and manageability of its decision processes, the regulator needs to maintain its focus on the specific case before it, working within a complex system of laws and legal requirements and policies that necessarily bear on the decision.

Regulators also perform broader roles. Some are established and trusted sources of data and analysis. Some are mandated to provide advice to their respective governments using a variety of procedures. These roles inherently entail a view of the world which is longer term, broader and in some respects more complex than that involved in transactional roles. In these roles regulators cannot usurp the democratic actors who need to make the policy decisions but they can inform such decisions, they can provide helpful forums where citizen voices can be heard, they can act as repositories of trusted

and widely accessible information and they can help make what are ultimately political decision processes more transparent.

In the search for solutions several steps should be taken by anyone offering advice.

One is to ensure that one understands what it is that regulators do and don't do, how they do it and why certain practices need to be followed both for practical and fairness purposes.

Another is to better understand what might be called the regulatory ecosystem. Different regulators do different things often using methods and procedures that are distinctive to their particular business; much that vexes various citizens is often outside of any one regulator's responsibilities. Jurisdictions and responsibilities inevitably overlap and sometimes collide so that cooperation and division of labour are essential characteristics of a well functioning system.

Finally it is essential to recognize that every potential solution carries with it certain inherent tensions. If policy informs regulatory decisions, are those decisions compromised in some way or are they more legitimate? If regulators are part of broader debates does that risk unreasonably colouring decisions in individual applications or does it make for better informed decisions? Does more liberal procedure enhance or does it diminish the quality of procedural fairness? If individual board members or commissioners communicate directly with the public do they risk compromising their perceived objectivity respecting individual applications? If regulators are not trusted then how can expanded or more independent roles be perceived as legitimate; which is the chicken and which is the egg?

With all that in mind, several avenues are worth exploring.

Start with the notion of independence. Every public action has some element that might be termed political (in the sense of the authoritative allocation of values) and every public actor needs somehow to be accountable. The question is how that accountability is brought about. Arm's length regulatory bodies are arguably one of the genius ideas of western democracies but they inevitably engender some suspicion that there is something undemocratic about them and, for political leaders, something

that gets in the way of political choices. We have seen a general erosion of independence for regulators in several Canadian jurisdictions. This has arguably done nothing to improve the quality of decisions while at the same time further eroding public trust. But it is overly simplistic to say – “let’s have more regulator independence”. We need to rebuild our understanding of why independence is useful and even necessary, why it needn’t conflict with democratic accountability and in what circumstances the role of the regulator is to decide and when it is to advise those who are most directly accountable to electors.

Policy matters and much of the harm done to public trust in our regulators has come about due to debris falling from failed policy. Absent enduring policy, day to day regulatory transactions will inevitably continue to suffer collateral damage. Regulatory agencies can be part of the solution here but only if political decision makers recognize that they (the political decision makers) need help and that more fresh air and sunlight may make for more enduring policy even if it narrows political choices. Some of the best stories of policy success in Canada have somewhere in them a process of enquiry or hearing such as informal advisory processes, formal commissions of enquiry or parliamentary hearings (including by our much maligned Senate). Regulatory agencies with their expertise, their objectivity and independence and their established capacity to “hear” with procedural fairness could carry some of this burden and in the process burnish their somewhat tarnished image.

Procedure matters. But not all regulatory actions are created equal and procedural choices involve inevitable tradeoffs. Regulators considering project applications have to place some limits on the scope of issues in front of them, the standing of those seeking to be heard, cost and time. Without such limits decisions will take forever. And in a world where Canadians retain the habit of expecting affordable and reliable energy services and where all Canadians benefit from selling our resources abroad into markets that have other (eager) suppliers from which to choose, “forever” is not a realistic option. At some point the broad public interest has to take precedence over the local or issue specific interest that has one more thing to say. And at least part of the mind numbing legalism of the whole business is there to secure those

guarantees of procedural fairness that are so vital to the question of trust.

Regulators sitting in essence as commissions of enquiry may have more latitude – to be less legalistic, to consider much broader questions and to hear a broader range of stakeholders in less formal settings. The important point is that we need to develop a better and broader understanding of the nature of the different processes that regulators can undertake, why some procedural limits are unavoidable and where more procedural creativity and openness may be a very good thing.

Communications matter. Most regulators operate in a grey world somewhere between the courts and the realm of ordinary citizens. As such they traditionally regard communication as something that happens when they issue their decisions and the reasons therefore. That is changing. Most regulators are not in fact mysterious scary people but to the ordinary citizen they are distant and incomprehensible. More exposure – ideally as direct as possible and not too much filtered through tweets and Facebook pages – would contribute to greater trust. Communicating with the intent of explaining decisions is a trickier matter. Decisions are written so as to pass legal muster and a “simple” explanation will almost always lose some of the nuance and detail that are essential to the decision.

Regulators also have another communications function more related to their roles as part of the policy infrastructure. Regulators are large repositories of information which can and should be made ever more accessible to the public. Helping people find their way through the thickets of information residing with various regulators and other agencies may not be per se the responsibility of regulators (this is really the business of policy officials) but regulators themselves have both a stake and a role in improving access to such information.

Capacity matters. We are asking more and more of our regulators. The business of energy will continue to bring forward more applications and operations will need to be ever more carefully monitored to meet public expectations respecting health, safety and environmental protection. More people will want to be heard about more things. We may add new or extended functions. All of this will

require more dollar resources and more human capacity. And all of it will be paid for by all of us: ratepayers for domestic energy, public resource owners, shareholders and taxpayers. The regulatory infrastructure that supports our energy economy is as vital to its functioning as roads and pipelines and, in a world where public trust has become one of the scarcest resources of all, it has become even more vital.

At the same time, if we believe that local communities and citizens should contribute more to decision processes than those communities and citizens will need to acquire more capacity if their interventions are to be constructive. They will need data and information and the means to process it. They will need processes within the community which are themselves democratic and procedurally fair. And they will need sophisticated representational capacity. We need to examine much more closely just what all this means in terms of costs that, as a society, we should be prepared to pay.

Who guards the guardians?

We do. We do so by better understanding their functions, what they do and don't do, what they can and can't do. We need to refresh our understanding of the virtues and limits of regulatory independence. We need to provide regulators with policy and legislative contexts that don't collapse around their ears as they try to do their jobs. Regulators need to take a more creative view of procedural questions but we need to understand the limits to which they can go. Regulators need to communicate and we need to help them do so. Communities themselves need to take more responsibility for being constructive intervenors. And we need to pay for it.

All of this and much more should be grist for a new conversation about public confidence in regulatory processes and authorities. It should start with less arm waving and more analysis and it should involve less tweeting and more conversation. ■

FROM STREETCARS TO SOLAR PANELS: STRANDED COST POLICY IN THE UNITED STATES

Scott Hempling¹

Introduction: Definition and Causation

A utility's obligation to serve includes an obligation to invest—in the generating plants, transmission networks, pipelines, compressors, switching equipment, wires, poles and pumping stations that are necessary to fulfill its obligation to serve. A utility's shareholders assume that their company's obligation to invest will be matched by its customers' obligation to pay—to pay rates that both recover the utility's investment over some reasonable period, and produce a reasonable return on the investment that remains unrecovered during that period.

But mismatches have occurred—situations where the utility has made an obligatory investment but the customers have not paid for that investment, thereby creating a risk of “stranded cost.” Here are seven possible examples:

Obsolescence: Streetcars are replaced by automobiles, leaving the streetcars with insufficient customers to pay off its costs.

Mis-projections of demand: A utility builds capacity based on reasonable projections of demand growth that turn out to be wrong, leading to abandonment of the plant or excess capacity.

Rate discounts: The utility's regulator allows the utility to grant large, mobile customers discounts below fully allocated cost.² Doing so ensures some contribution to fixed cost, but leaves the utility potentially unable to recover the portion of fixed cost represented by the discount.

Energy efficiency programs: Where a utility's rate design collects fixed costs through variable charges, the decline in consumption resulting from energy efficiency programs leaves the utility with unrecovered fixed costs.

Elimination of exclusive franchise: Based on an exclusive franchise, the utility builds infrastructure, but before that investment is fully recovered from customers, the government eliminates the grant of exclusivity. The utility's traditional customers migrate to new suppliers before paying off the past costs.

Elimination of utility's control of monopoly facilities: Where a utility controls a natural monopoly facility, like a distribution or transmission system, it can leverage that control to prevent competition in other markets, like electricity or gas sales. The utility

¹ Scott Hempling is an attorney and expert witness, he has advised regulatory and legislative bodies throughout North America, and is a frequent speaker at international conferences. Hempling is an adjunct professor at Georgetown University Law Center, where he teaches courses on public utility law and regulatory litigation. His book, *Regulating Public Utility Performance: The Law of Market Structure, Pricing and Jurisdiction*, from which portions of this article are drawn, was published by the American Bar Association in 2013. He has also authored a book of essays on the art of regulation, *Preside or Lead? The Attributes and Actions of Effective Regulators*. Hempling received a B.A. *cum laude* from Yale University in (1) Economics and Political Science and (2) Music, and a J.D. *magna cum laude* from Georgetown University Law Center. More detail is at www.scotthemplinglaw.com.

² Fully allocated cost, sometimes called “fully distributed cost,” refers to rates designed to recover all costs of production, both variable and fixed.

then incurs infrastructure costs to serve its captive customers. When the government removes the utility's control of the monopoly facilities, the formerly captive customers migrate to new entrants, leaving the utility with unrecovered costs.

Customer self-supply: Self-generation by customers (individually, as with solar panels, or in groups, as in micro-grids) for whom the utility historically invested in infrastructure leaves the utility unable to recover the investment historically incurred on behalf of those customers.

In each of these examples, events occurring after the utility's investment have left the utility unable to recover that investment, at least from the customers on whose behalf the investment was made. The result is stranded cost. Stranded cost is defined as the excess of book value³ over market value, where book value represents that portion of the utility's original prudent investment not yet recovered from customers as of the time they cease paying regulated rates, and market value refers to the market value of the assets attributable to that investment.

While all seven examples are versions of stranded cost, the modern debate focuses mostly on the final three: elimination of the exclusive franchise, elimination of the utility's control of bottleneck facilities, and customer self-supply. In these three contexts, stranded cost typically arises from the confluence of five factors:

1. Utility service is capital-intensive.
2. Load growth is incremental, while major infrastructure additions are lumpy. These additions come on line in large chunks, ahead of actual demand, because economies of scale reduce their long-run per-unit cost. These factors mean that at nearly any point in time, the utility will have surplus capacity.
3. Under traditional ratemaking, the investment cost of infrastructure capital additions is amortized; that is, allocated to ratepayers over the plant's useful life. If regulators expect a plant to last 30

years, they set rates to recover 1/30 of its original cost in each of those years. This annual fraction, multiplied by the original cost, is the depreciation expense. (The rates also are designed to recover a reasonable return on the not-yet-recovered cost.)

4. If the government introduces competition prior to the year in which the original investment has been fully recovered from customers through depreciation expense (as will always be the case for at least some of the utility's infrastructure), part of the utility's original investment will not yet have been recovered from ratepayers. If all of the utility's customers then find new sellers, the utility would have unrecovered book cost.

5. The utility will be able to recover its unrecovered book cost only if it can find buyers for the infrastructure (or for the output from that infrastructure), at a market price that equals or exceeds the unrecovered book value. If the anticipated recovery, i.e., the market value, is below the unrecovered book cost, the difference is called stranded costs.

In the United States, the stranded cost issues have arisen across the decades, from streetcar obsolescence in the 1940s to nuclear power plants and gas purchase contracts in the 1980s to current debates over solar installations and shuttered coal plants. Common to all these circumstances is this fact: whether as a result of government decisions or economic forces (which themselves can be encouraged or tolerated by government decisions), an investment made by a utility entity, based on an obligation established by government entity, is no longer certain of recovery from ratepayers.

Part I of this article addresses the main legal question: What are shareholders' legitimate expectations with respect to the government's treatment of their utility's prudent investments? The answer to that question lies in the Takings Clause of the U.S. Constitution, in the small number of cases applying that provision to

³ Book cost is original cost of an asset less accumulated depreciation. Accumulated depreciation is the amount already recovered from customers through the depreciation expense included in the utility's annual revenue requirement.

utility industries, and in statutes that operate within the constraints created by the Clause.

Part II describes how regulators have applied these legal principles over the last three decades, focusing on three categories of industry transitions: the elimination of exclusive retail franchise in electricity and natural gas; the unbundling of electric transmission service from wholesale sales; and the unbundling of natural gas transportation service from wholesale gas sales.

Part III examines the contrast between (a) the traditional approach to stranded investment, which deals with costs after the fact, and (b) modern approaches, which seek to assign responsibility and risks before the fact.

I. The Legal Question: What are Shareholders' Legitimate Expectations?

A. The Takings Clause of the U.S. Constitution

The U.S. Constitution's Fifth Amendment provides in part: "[N]or shall private property be taken for public use, without just compensation."⁴ Applying this language to the public utility context, Justice Brandeis described what property is "taken," for which "just compensation" is due:

The thing devoted by the investor to the public use is not specific property, tangible and intangible, but capital embarked in the enterprise. Upon the capital so invested the Federal Constitution guarantees to the utility the opportunity to earn a fair return.⁵

The private property "taken" is the shareholder investment prudently incurred by the utility to

fulfill its public service obligations. The "just compensation" is the dollar amount received by utility when it charges the rates set by the regulator. The "just compensation" problem arises if the utility is unable to recover its investment, or is denied an appropriate return on that investment. Suppose a utility with an exclusive franchise prudently invests \$90 million in an asset having a 30-year life. After ten years, the utility has recovered \$30 million through rates, while earning a return on the unrecovered amount. If the government then frees customers to buy from others, is there a failure to provide "just compensation"? The answer depends, in part, on the market value of the asset. If the market value of the asset is only \$45 million, while its book value (the unrecovered amount of the original cost) is \$60 million, there is stranded cost of \$15 million. Whether there is a constitutional right to recovery of that \$15 million has never been decided by a federal court. What follows is the judicial guidance we have.⁶

B. Case Law Under the Takings Clause

The U.S. Supreme Court has held that the Takings Clause analysis must consider the "economic impact of the regulation on the claimant and, particularly, the extent to which the regulation has interfered with distinct investment-backed expectations."⁷ The line of cases applying the Clause to public utilities establishes this principle: within some vaguely defined boundaries, utility investors enjoy no constitutional guarantee of stranded cost recovery. Rather, government regulation can place a utility at risk of not recovering its prudent investment. But the judicial guidance is blurry, leading policy makers to make compromise calls that have survived judicial challenge. After describing four oft-cited cases, we will discuss the policy compromises made in the electricity and gas industries.

⁴ US Const amend V.

⁵ *Missouri ex rel Southwestern Bell Telephone Co v Public Service Commission*, 262 US 276, 290 (1923) (Brandeis, J., concurring).

⁶ This discussion has assumed that the market value will be less than the book value, leading to stranded cost. But the opposite is also possible, producing what is sometimes called "stranded benefits." On the day competition begins, the utility might be sitting on a gold mine: a well-running, book-depreciated nuclear plant in a capacity-short region with high market prices. Shareholders then would have no constitutional concern. There would be, however, a statutory question: Who, as between shareholders and customers, should receive the excess of market value over book value? Commissions have decided this question in a variety of ways, from providing that full gain to the ratepayers, to letting shareholders keep the gain fully, to sharing the gain between shareholders and ratepayers. As this article is about stranded cost, we will not address the "gain" example further. For a discussion of treatment of the gain, see Scott Hempling, *Regulating Public Utility Performance: The Law of Market Structure, Pricing and Jurisdiction* at Chapter 6.C.3.b (American Bar Association 2013).

⁷ *Penn Central Transportation Co v New York*, 438 US 104, 124 (1978).

1. *Charles River Bridge v Proprietors of Warren Bridge*⁸

In this hoary dispute, the parties fought over the best ways to cross the Charles River in Massachusetts. First the facts, then the court's reasoning.

First, the ferry: The Massachusetts Legislature allowed Harvard College to run a ferry service over the Charles River between Charlestown and Boston and to keep the profits from the operation.

Then, Bridge #1 (the Charles River Bridge): To make river crossing more convenient, the Legislature granted Thomas Russell a charter to build a bridge at the ferry's location. The forty-year charter allowed the new company, The Proprietors of the Charles River Bridge, to charge tolls. During the forty years, the bridge owner would have to pay Harvard reasonable annual compensation for the income Harvard would have received from the ferry had the bridge not been built. After forty years the bridge would belong to the Commonwealth of Massachusetts. The bridge opened in 1786; its charter was later extended to seventy years.

Next, Bridge #2 (the Warren Bridge): In 1828, midway through the Charles River Bridge's charter term, the Legislature chartered a second company, The Proprietors of the Warren Bridge, to build a second bridge nearby (about "fifty rods" away from the Charles River Bridge). This charter required the builders to turn the bridge over to the state after it recovered its costs, but no later than six years after beginning operation. After the state received ownership, it ended the tolls, making passage on the Warren Bridge free.

Then, the lawsuit: The Charles River Bridge owners sued the state, because the now-free Warren Bridge "destroyed" the value of their bridge, for which their charter was, they thought, exclusive and perpetual.

Finally, the decision: The Supreme Court found that plaintiff Charles River Bridge could prevail only by showing that the State had breached a contract.

It is well settled, by the decisions of this court, that a state law may

be retrospective in its character, and may divest vested rights; and yet not violate the constitution of the United States, unless it also impairs the obligation of a contract. Here, there was no breach because the Charles Bridge charter never surrendered the Legislature's continual power to do what is necessary to promote the happiness and prosperity of the community by which it [*i.e.*, the government] is established.

Chartering a second bridge, even if doing so destroyed the value of the first one, was the government's way of promoting the public good:

[I]n a country like ours, free, active and enterprising, continually advancing in numbers and wealth, new channels of communication are daily found necessary both for travel and trade; and are essential to the comfort, convenience and prosperity of the people.

If plaintiffs like Charles River Bridge could block legislative decisions like the Legislature's Warren Bridge grant, public improvements would be impossible, with dire consequences:

[Y]ou will soon find the old turnpike corporations awakening from their sleep, and calling upon this court to put down the improvements which have taken their place. The millions of [dollars] which have been invested in railroads and canals, upon lines of travel which had been before occupied by turnpike corporations, will be put in jeopardy. We shall be thrown back to the improvements of the last century, and obliged to stand still, until the claims of the old turnpike corporations shall be satisfied; and they shall consent to permit these states to avail themselves of the lights of modern science, and to partake of the benefit of

⁸ *Charles River Bridge v Proprietors of Warren Bridge*, 36 US 420 (1837) [*Charles River Bridge*].

those improvements which are now adding to the wealth and prosperity, and the convenience and comfort, of every other part of the civilized world.⁹

2. *Market Street Railway Co v Railroad Commission of California*¹⁰

Market Street Railway operated streetcars and buses in and around San Francisco. Due to competition from municipal transportation companies and other transportation modes, the company was losing customers. The state commission lowered Market Street's rates, finding that the lower fare (six cents) would stimulate traffic sufficiently to leave a six percent return on the rate base. The utility challenged the rate reduction as an unconstitutional denial of just compensation.

Upholding the rate, the Court explained that the Constitution has no sympathy for a company whose services are no longer needed:

[I]f there were no public regulation at all, this appellant would be a particularly ailing unit of a generally sick industry. The problem of reconciling the patron's needs and the investor's rights in an enterprise that has passed its zenith of opportunity and usefulness, whose investment already is impaired by economic forces, and whose earning possibilities are already invaded by competition from other forms of transportation, is quite a different problem. . . . The due process clause has been applied to prevent governmental destruction of existing economic values. It has not and cannot be applied to insure values or to restore values that have been lost by the operation of economic

forces.¹¹

The Court added:

Normally, a utility would be entitled to rates sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital and to enable the company to operate successfully, to maintain its financial integrity, to attract capital, and to compensate its investors for the risks assumed. But these assurances obviously are inapplicable to a company whose financial integrity already is hopelessly undermined, which could not attract capital on any possible rate, and where investors recognize as lost a part of what they have put in.¹²

3. *Jersey Central Power & Light v Federal Energy Regulatory Commission*¹³

After prudently spending \$397 million on a nuclear plant, Jersey Central prudently abandoned the project. The utility then asked the Federal Energy Regulatory Commission (FERC) to approve higher wholesale rates to recover its costs. FERC applied its then-existing policy on prudent abandoned plant: recovery of, but not return on, the investment.¹⁴ FERC made its decision summarily, *i.e.*, without a hearing into how it would affect the utility financially.

On review, the Court of Appeals for the District of Columbia Circuit voted 5-4 to return the case to FERC for a hearing on financial effects. The majority opinion first held that requiring utilities to absorb costs associated with prudent-but-unuseful investment did not inherently violate the Takings Clause. That finding is consistent with *Market Street Railway* and *Charles River Bridge*. But the majority also

⁹ *Ibid* at 551-553.

¹⁰ *Market Street Railway Co v Railway Commission of California*, 324 US 548 (1945) [*Market Street Railway*].

¹¹ *Ibid* at 548, 554, 557, 567. By the Due Process Clause, the Court means the Fourteenth Amendment, which provides in relevant part: "Nor shall any State deprive any person of life, liberty, or property, without due process of law. . . ." The Fourteenth Amendment clause applies the Fifth Amendment's Takings Clause to the states.

¹² *Market Street Railway*, *supra* note 10 at 566 (quoting *Hope Natural Gas v Fed. Power Comm'n*, 320 US 591, 603 (1944)).

¹³ *Jersey Central Power v Federal Energy Regulatory Commission*, 810 F.2d 1168 (DC Cir 1987).

¹⁴ This approach split the pain roughly 50/50 between shareholders and ratepayers. FERC announced this sharing policy in *New England Power Co*, 8 FERC 6 61,054 (1979), *aff'd sub nom. NEPCO Mun Rate Comm'n v FERC*, 668 F.2d 1327 (DC Cir 1981) (1982).

held that the utility must have a chance to show at hearing that the policy leaves it unable to maintain its financial integrity, a test required by *Federal Power Commission v Hope Natural Gas*.¹⁵

4. *Duquesne Light Co v Barasch*¹⁶

Anticipating demand growth, Duquesne began constructing a nuclear plant. When demand growth slowed, the utility changed its plan and stopped construction. The Pennsylvania Commission found the utility prudent throughout: its forecast of demand, its decision to build, its decision to choose nuclear, its decision to stop and all costs incurred in between—all prudent. But the Pennsylvania Legislature had passed a statute requiring the costs of abandoned plant to be absorbed by shareholders, because an abandoned plant was not “used and useful” to customers.¹⁷ Duquesne argued that the Takings Clause required recovery.

The U.S. Supreme Court disagreed, and upheld the statute. Pennsylvania was free to enact laws that put the risk of prudent-but-unlucky costs on shareholders. “[A] state scheme of utility regulation does not ‘take’ property simply because it disallows recovery of capital investments that are not ‘used and useful in service to the public.’” Further, applying the “end result” test required by *Hope Natural Gas*, the Court found the economic effect of disallowance (0.4 percent of the utility’s annual revenue requirement) non-confiscatory because it was so small.

An intervenor, the Pennsylvania Electric Association, separately argued that the Constitution necessarily requires recovery of prudent costs, regardless of their usefulness and regardless of the economic effect of a disallowance. That argument, if accepted by the Court, would have prohibited regulators from

allocating to shareholders the risk of prudent but uneconomic outcomes. The Court rejected the argument as inconsistent with *Hope*:

We think that the adoption of any such rule would signal a retreat from 45 years of decisional law in this area which would be as unwarranted as it would be unsettling. *Hope* clearly held that “the Commission was not bound to the use of any single formula or combination of formulae in determining rates”¹⁸

The Court thus reaffirmed a line of cases holding that the Constitution does not insulate a utility from uneconomic outcomes, whether in the form of market forces, obsolescence or bad luck, even when the utility has acted prudently.¹⁹ If an asset is not “used and useful,” the Constitution does not make customers pay.

Exception for explicit government promise. One Supreme Court decision did find a constitutional right to recovery of stranded cost. But it first found an explicit government promise that it deemed to be a contract. An 1877 state statute authorized the City of New Orleans, Louisiana to (a) establish a private corporation, New Orleans Waterworks Company; and (b) to grant that company an exclusive privilege, for 50 years, to supply the City and its residents with water, including building and installing any necessary infrastructure. The grant included an obligation to serve: to lay sufficient pipes and procure sufficient water “as the wants of the population required.” Under the law, after 50 years the City had a right to buy the physical plant; if the city did not, the grant would extend for another 50 years, but without any exclusive privilege. The statute also allowed the company to set its own rates, provided the “net profits should not exceed ten percent per annum.”

¹⁵ *Federal Power Commission v Hope*, 320 US 591 (1944). In *Hope*, the Court emphasized the utility investor’s constitutionally protected interest in the utility’s “financial integrity.” Financial integrity requires “enough revenue not only for operating expenses but also for the capital costs of the business.” The capital costs, in turn, “include service on the debt and dividends on the stock.” The equity owner’s return, further, “should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital.” *Ibid* at 603.

¹⁶ *Duquesne Light Co v Barasch*, 488 US 299 (1989) [*Duquesne*].

¹⁷ 66 Pa Cons Stat § 1315.

¹⁸ *Duquesne*, *supra* note 16 at 315 (citing *FPC v Hope Natural Gas*, 320 US at 602).

¹⁹ See *Denver Union Stock Yard Co v United States*, 304 US 470 at 475 (1938) (upholding Agriculture Secretary’s exclusion from rate base of “land and improvements used for a stock show and for trackage and facilities for unloading and loading livestock” because they were not “used and useful” for the regulated service); and *Market Street Railway*, *supra* note 10.

As authorized by the statute, the City granted the franchise to New Orleans Waterworks Company, which started service. But two years later, Louisianans added to their state constitution this provision: “[T]he monopoly features in the charter of any corporation now existing in the state, save such as may be contained in the charters of railroad companies, are hereby repealed.” Acting under this provision, the City eliminated Waterworks’s monopoly and authorized Robert C. Rivers to lay pipes under City streets to provide water to his hotel.

Waterworks sued to stop Rivers, and won. The City’s exclusive grant to Waterworks was a contract, which even a state constitution could not impair:

The permission given to [Rivers] by the city council to lay pipes in the streets for the purpose of conveying water to his hotel is plainly in derogation of the state’s grant to [Waterworks], for, if that body can accord such a use of the public ways to [Rivers], it may grant a like use to all other citizens and to corporations of every kind; thereby materially diminishing, if not destroying, the value of [Waterworks’] contract, upon the faith of which it has expended large sums of money, and rendered services to the public which might otherwise have been performed by the state or the city at the public expense.²⁰

The City still could break Waterworks’ monopoly, but it would have to pay:

The rights and franchises which have become vested upon the faith of such contracts can be taken by the public, upon just

compensation to the company, under the state’s power of eminent domain In that way the plighted faith of the public will be kept with those who have made large investments upon the assurance by the state that the contract with them will be performed.²¹

The U.S. Supreme Court thus viewed (a) a statutory promise of monopoly status as a contract, (b) the expectation created by the contract as a property right, and (c) the state constitution’s breach of that monopoly as a breach of contract, requiring compensation because of the damage to the property right. Note that the Court’s construction of the relationship as a contract was crucial to its finding of constitutional protection under the Takings Clause. The modern reality, though, is that the relationship between regulator and utility is not a contract. As a leading treatise states:

[C]ourts should not rule that the government has entered into a contract . . . unless it is clear that a governmental entity with authority to do so has contracted with the private party in a way that restricts the power of the government to act in the future. Governmental actions relating to the use of property or business activity normally will be regulatory and not contractual in nature.²²

* * *

Stranded cost refers solely to what economists call sunk costs—the costs previously incurred that the utility is unable to recover. The same circumstances that lead to stranded sunk cost also means the utility loses out on the relatively secure profit flow that came with those purchases by those captive customers.²³

²⁰ *New Orleans Waterworks Co v Rivers*, 115 US 674 at 682-83 (1885).

²¹ *New Orleans Gas Co v La Light Co*, 115 US 650 at 673 (1885).

²² Ronald D Rotunda, et al, *Treatise on Constitutional Law: Substance and Procedure* 2d ed (St Paul, Minn: West Pub Co, 1986) § 15.8, at 103 n74. See also *Parker v Wakelin*, 937 F. Supp 46 at 52 (D Me 1996) (quoting *Nat’l Railroad Passenger Corp v Atchison, Topeka & Santa Fe Railway Co*, 470 US 451 at 465-466 (1985) (“Analysis of this question must begin with the well-established proposition that absent some clear indication that the legislature intends to bind itself contractually, the presumption is that a law is not intended to create private contractual or vested rights but merely declares a policy to be pursued until the legislature shall ordain otherwise.”) (internal quotations omitted).

²³ I use the term “relatively secure” because traditional cost-based ratemaking does not guarantee a profit; it provides only a reasonable opportunity to earn a fair profit. See Scott Hempling, *Regulating Public Utility Performance: The Law of Market Structure, Pricing and Jurisdiction* (American Bar Association, 2013) at Chapter 6.B.

These two shareholder disappointments—unrecovered sunk costs and foregone future profits—are sometimes conflated into the term “stranded costs,” but they are different. Courts and commissions take seriously the former but not the latter. A closer look at the economics shows why. When the utility receives its unrecovered sunk costs, it can invest those dollars in any enterprise, earning therefrom the profit that it no longer earns from its formerly dependent customers. Were the government to award the unrecovered cost dollars plus lost profit dollars, the utility would receive the “foregone” profit twice: once through the government award and again through its investment of the compensation received.

II. Electricity and Gas: Three Decades of Applications

A. Elimination of exclusive retail franchises

When a state introduces retail competition into a market historically served by a franchised utility, the utility faces the classic stranded cost risk: unrecovered sunk costs, where the associated investment’s market value falls below book value. In the electricity context, examples of stranded cost categories are:

1. generation-related assets;
2. long-term purchase contracts for power or fuel;
3. regulatory assets like deferred income tax liabilities;
4. capitalized investments in some social programs that were made at the direction of a commission;²⁴
5. the unfunded portion of the utility’s projected nuclear generating plant decommissioning costs²⁵; and
6. costs of employee severance, retraining, early retirement,

outplacement and related expenses, at reasonable levels, for employees who are affected by changes that occur as a result of the restructuring of the electric industry.²⁶

The shareholders’ constitutional entitlement to these costs depends on the *Penn Central* test, *i.e.*, whether the shareholders had “legitimate, investment-backed expectations” of recovery. Applying that test requires an inquiry into the nature of the franchise relationship. An exclusive retail franchise arises when the state (a) defines a geographic area, (b) prohibits retail competition within that area, and (c) appoints a company to be the sole seller within that area of services mandated by the state. In that situation, a shareholder can legitimately expect that its obligation to invest will be matched by a customer obligation to pay.²⁷ But while the term “exclusive” sounds absolute, it is in fact a theme with variations. Statutes or case law can leave openings for competitive entry, or customer self-service, thus signaling that utility investments are at risk, *i.e.*, undermining any shareholder expectation of full stranded cost recovery. Consider two examples:

1. Inadequate service: In the early 1980s, Maine, a public utility’s service territory could be invaded by a non-incumbents on a showing that the incumbent’s service was inadequate. When a non-incumbent telephone company offered discounted, low-quality phone service (customers would have to dial extra numbers and sometimes wait for a line), the Maine Public Utilities Commission allowed it to compete within the incumbent utility’s formerly exclusive territory. The Maine Supreme Judicial Court upheld the Commission:

[I]nsofar as inadequacy of existing service may be a factor relevant to the granting of a certificate of public convenience and necessity, the finding of a public need for an additional type of service not being currently provided is in itself a finding that the existing

²⁴ Congressional Budget Office, *Electric Utilities: Deregulation and Stranded Costs* (1998), online: <<https://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/9xx/doc976/stranded.pdf>>.

²⁵ 66 Pa Con Stat § 2808(c)(1).

²⁶ *Ibid* § 2803.

²⁷ *See, e.g.*, this South Dakota statute, SD Codified Laws § 49-34A-42:

Each electric utility has the exclusive right to provide electric service at retail at each and every location where it is serving a customer as of March 21, 1975, and to each and every present and future customer in its assigned service area.

service is inadequate.

. . .

[W]e believe it fair to assume that the public always desires (and, therefore, there is a public need for) comparable service at lower costs.²⁸

2. *No exclusivity*: During the 1930s, the U.S. Government loaned money to municipalities to construct electric distribution systems within areas already served by an investor-owned utility. Each loan would be secured by the municipality's revenues from retail power sales. Alabama Power, an investor-owned utility, sued the U.S. Government, arguing that the new municipal systems would invade its service territory. The U.S. Supreme Court found no constitutional injury:

[T]he mere fact that [Alabama Power] will sustain financial loss by reason of the lawful competition does not equal a constitutional violation. Since the utility had no exclusive franchise, [i]f its business be curtailed or destroyed by the operations of the municipalities, it will be by lawful competition from which no legal wrong results What [the utility] anticipates, we emphasize, is damage to something it does not possess—namely, a right to be immune from lawful municipal competition.²⁹

Given the lack of case law clarity, and the need to smooth the political path to retail competition, retail electricity competition statutes in the U.S. typically offered utilities a chance to recover stranded costs.³⁰ The recovery mechanism was usually a non-bypassable charge attached to the still-monopoly service of physical distribution. By requiring all customers of physical distribution service to pay their pro rata share of legacy costs, this device ensured that a customer's decision whether to shop the market or stay with the incumbent would focus on prospective facts rather than past costs,³¹ thereby avoiding "uneconomic bypass."³²

B. Unbundling of electric transmission service from wholesale sales

Investor-owned utilities make most of their sales to retail customers, but they also have wholesale customers, often small companies owned by municipalities or rural cooperatives. Prior to the era of open transmission access, those wholesale customers that were distribution-only entities (*i.e.*, entities that owned no generation or transmission) depended on their local investor-owned utility for wholesale power supply. The utility would provide that wholesale supply from its own generation or through purchases from third parties.

Then came FERC's Order No. 888. This 1996 issuance required transmission-owning, investor-owned public utilities to provide transmission service to eligible customers, including these transmission-dependent, municipal or cooperative systems that historically had depended on the investor-owned utility for generation supply.³³ Order

²⁸ *Standish Tel Co v Pub Util Comm'n*, 499 A.2d 458, 459-64 (Me 1985).

²⁹ *Alabama Power Co v Ickes*, 302 US 464 at 478 (1938); See also *Tennessee Electric Power Co v Tennessee Valley Authority*, 306 US 118 at 139 (1939) (rejecting utility's claim that TVA's entry into their territory violated the Fifth Amendment's Takings Clause. Absent express language granting perpetual exclusivity, the utility's existing franchises "confer[red] no contractual or property right to be free of competition either from individuals, other public utility corporations, or the state or municipality granting the franchise").

³⁰ See, *e.g.*, 66 Pa Consolidated Stat § 2804(13) ("[T]he commission has the power and duty to approve a competitive transition charge [for the recovery of transition] or stranded costs it determines to be just and reasonable to recover from ratepayers").

³¹ See, *e.g.*, Del Code tit 26 § 1010 (authorizing commission to impose a nonbypassable charge, so as to protect standard offer customers "from substantial migration away from standard offer service, whereupon they may be forced to share too great a share of the cost of the fixed assets that are necessary to serve them").

³² Uneconomic bypass occurs when the self-generating customer's total incremental cost (the one-time cost of building the plant, plus the operating costs) is (a) less than the total rate it pays the utility, making it a positive move for the customer; but (b) greater than the utility's marginal costs (*i.e.*, the cost of producing one more unit of energy), making it a negative result for society. Uneconomic bypass wastes society's resources by increasing "the total industry costs of providing a given level of service." J. Gregory Sidak & Daniel F. Spulber, *Deregulatory Takings and the Regulatory Contract* (Cambridge, UK: Cambridge University Press, 1998) at 78; see also *ibid* at 30-31 (discussing uneconomic bypass).

³³ *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities, Recovery of Stranded Costs by Public Utilities and Transmitting Utilities*, Order No 888, 75 FERC ¶ 61,080 (1996), *order on reh'g*, Order No 888-A, 78 FERC ¶ 61,220, *order on reh'g*, Order No 888-B, 81 FERC ¶ 61,248 (1997), *order on*

No. 888 freed them to shop for generation from alternative suppliers. Their shopping decisions, FERC found, could leave their legacy utility supplier with unrecovered generation costs, incurred prior to Order No. 888 on the assumption that the customers would remain dependent. FERC therefore invited the utilities to apply for extra-contractual recovery of stranded costs associated with certain pre-existing wholesale contracts, if the costs were “legitimate, prudent and verifiable.” (Why was this recovery extra-contractual? A dependent customer’s contract obligation might require purchases for only, say, 11 years. But the utility might be amortizing its generation costs over 30 years, based on its reasonable expectation that the customer would renew its contract—because it had no access to alternative supplies—and thus pay off the generation costs over the remaining 19 years.) FERC justified this extra-contractual recovery on the grounds that the incumbent utilities could not have foreseen that the Commission would require them to “alter the use of their transmission systems in response to the fundamental changes that are taking place in the industry.” FERC did caution that its offer of extra-contractual recovery will not “insulate a utility from the normal risks of competition, such as self-generation, cogeneration, or industrial plant closure, that do not arise from the new availability of non-discriminatory open access transmission.”³⁴

C. Unbundling of gas transportation service from wholesale sales

Prior to the 1980s, a local distribution company (LDC) typically depended on a single interstate pipeline for supply, because (a) the pipeline bundled gas supply with

transportation service, and (b) the LDC did not have physical and economic access to alternative pipelines. To serve their dependent LDCs, pipelines bought gas from producers under long-term contracts. In Order Nos. 436³⁵ and 636,³⁶ FERC encouraged (Order 436) and then ordered (Order 636) pipelines to unbundle transportation service from wholesale sales. These actions freed LDCs to buy gas directly from producers. This change in market structure left the pipelines with existing long-term obligations to buy gas from producers, but no assured LDC customers who would pay for that gas. The resulting stranded costs took two forms: stranded assets and take-or-pay liabilities.

Stranded assets: The pipeline industry’s stranded assets, as defined by FERC, included upstream pipeline capacity for which a downstream pipeline could not find a buyer, plus storage capacity that a pipeline no longer will need when its sales volume shrinks.³⁷ FERC allowed pipelines to recover the costs of these stranded assets, if the costs were prudently incurred but no longer used and useful.³⁸ Costs are stranded only if book value exceeds market value. The pipelines therefore had to net positive values against negative values:

[T]o the extent that [a pipeline] recognizes gains on sales of stranded facilities and later has losses on sales of facilities that it seeks to recover as stranded costs, [the pipeline must, if it files for recovery of stranded costs,] detail the prior gains and reduce the proposed stranded-cost recovery amount by the amount of those gains.³⁹

reh’g, Order No 888-C, 82 FERC ¶ 61,046 (1998), *aff’d in relevant part sub nom Transmission Access Policy Study Group v FERC*, 225 F.3d 667 (DC Cir 2000), *aff’d sub nom New York v FERC*, 535 US 1 (2002).

³⁴ Order No 888, 75 FERC ¶ 61,080 at text accompanying notes 581-588.

³⁵ *Regulation of Natural Gas Pipelines After Partial Wellhead Decontrol*, Order No 436, 125 FERC ¶ 61,190, *order on reh’g*, Order No 436-A, 33 FERC ¶ 61,448 (1985), *order on reh’g*, Order No 436-B, 34 FERC ¶ 61,204, *order on reh’g*, Order No 436-C, 34 FERC ¶ 61,404, *order on reh’g*, Order No 436-D, 34 FERC ¶ 61,405, *order on reh’g*, Order No 436-E, 34 FERC ¶ 61,403 (1986), *vacated and remanded sub nom Associated Gas Distributors v FERC*, 824 F.2d 981 (DC Cir 1987), *cert. denied*, 485 US 1006 (1988).

³⁶ *Pipeline Service Obligations and Revisions to Regulations Governing Self-Implementing Transportation; and Regulation of Natural Gas Pipelines After Partial Wellhead Decontrol*, Order No 636, 59 FERC ¶ 61,030, *order on reh’g*, Order No 636-A, 60 FERC ¶ 61,102, *on reh’g*, Order No 636-B, 61 FERC ¶ 61,272 (1992), *reh’g denied*, *Notice of Denial of Rehearing*, 62 FERC ¶ 61,007 (1993), *aff’d in part and remanded in part sub nom. United Distribution Co v FERC*, 88 F.3d 1105 (DC Cir 1996), *cert denied sub nom Associated Gas Distrib v FERC*, 520 US 1224 (1997).

³⁷ See *United Distribution Cos v FERC*, 88 F.3d 1105, 1178 (DC Cir 1996); see also Order No 636, 59 FERC ¶ 61,030 at text accompanying n.281 (describing stranded assets as “[c]lots of a pipeline’s assets [historically] used to provide bundled sales service, such as gas in storage, and capacity on upstream pipelines, that cannot be directly assigned to customers of the unbundled services”).

³⁸ *United Distribution*, *supra* note 37; see also Order No 636-B, 61 FERC ¶ 62,272, at p 62,041.

³⁹ *Trunkline Gas Co*, 95 FERC ¶ 61,337, at p 62,241 (2001).

FERC then gave the pipelines two paths to compensation: “spin-off” or “write-down.” If the pipeline spun off its asset (*i.e.*, transferred ownership to its shareholders), it could apply for stranded cost treatment for any amounts below the book value of the facilities it received. These amounts would, of course, be offset by any amounts received in excess of book value.⁴⁰ If the pipeline retained ownership, it could write down the asset’s value to an “economically viable level” (meaning a level reflecting market value), and then “propose [for recovery from customers] the difference between the net depreciated original cost of the plant and the lower market value, as a stranded cost.” The pipeline could recover “this written down amount over a reasonable period of time, such as five years.” Finally, consistent with its policy on abandoned plants (see the discussion of *Jersey Central*, Part I.B.3 above), FERC would allow recovery of, but not a return on, the stranded cost: “A rate of return on the amount of written down facilities would be inappropriate since this allows a return on facilities that are not economically viable, and may also result in a competitive advantage for the pipeline.”⁴¹

Take-or-pay costs: The gas transition involved billions in take-or-pay costs—pipelines’ obligations, entered into prior to unbundling, to pay producers for gas the pipelines needed to serve their dependent LDC customers:

Take-or-pay costs are incurred when a pipeline, in order to maintain inventories for its sales customers, enters into a contract with the producer in which it promises either to take or to pay for the gas it has contracted to buy. Pipelines that have built up such inventories find them hard to sell once they have granted access to the pipeline to carry the gas of their competitors; as a result, they are hit with billions of

dollars of costs.⁴²

FERC required the LDCs to bear part of these costs, a decision the Court of Appeals for the D.C. Circuit upheld as “an acceptable cost-spreading decision requiring those who benefit from the transition to a competitive natural gas market to absorb some of the costs.”⁴³

III. Traditional Approaches vs. Modern Responses

A. Traditional approach: After-the-fact discretion, subject to constitutional constraints

The line of cases addressing stranded cost has, by definition, dealt with costs after they have been incurred. The foregoing discussion has demonstrated the breadth of regulatory authority over these costs—authority granted by traditional statutes as interpreted by the courts. As required by the Supreme Court’s opinions in *Hope* and *Banasch*, the courts have declined to reject or anoint any specific rule. They look instead at whether the regulator’s decision is “based on substantial evidence and . . . adequately balances the interests of investors and ratepayers.”⁴⁴ The results range from no recovery to full recovery, with various points in between.

No recovery, no return: A pipeline spent \$13 million on unsuccessful synthetic gas supply projects. FERC disallowed both amortization and return. Upholding FERC, the Court of Appeals distinguished between imprudence and bad luck: “[T]he problem of risk allocation in this case is not a problem of fault. . . . The Natural Gas Act simply does not guarantee the shareholders of even a prudently managed utility that ratepayers can always be stuck with the bill for supply projects that turn out to be total failures, however praiseworthy the utility’s motives for undertaking those projects may have been.” The court cited a prior FERC decision holding that to be included in rate

⁴⁰ *National Fuel Gas Supply Corp.*, 71 FERC ¶ 61,031, at p 61,138 (1995).

⁴¹ *Ibid.*

⁴² *Pub Util Comm’n of Cal v FERC*, 988 F.2d 154, 157, 166 (DC Cir 1993).

⁴³ *Ibid.* at 169; see also *Associated Gas Distribs v FERC*, 824 F.2d 981, 1027 (DC Cir 1987) (upholding stranded cost recovery because pipelines were “caught in an unusual transition” due to regulatory changes beyond their control, having “entered into the now uneconomic contracts in an era when government officials berated pipeline management for failures of supply and constantly predicted continuing energy price escalations”).

⁴⁴ *United Distrib Cos*, *supra* note 37; See also *Permian Basin Area Rate Cases*, 390 US at 792 (“Judicial review of the Commission’s orders will therefore function accurately and efficaciously only if the Commission indicates fully and carefully the methods by which, and the purposes for which, it has chosen to act, as well as its assessment of the consequences of its order for the character and future development of the industry.”).

base (and thus to earn a return), “expenditures must satisfy not only the necessary condition of prudent investment but must also be ‘used and useful’ in providing service.”⁴⁵

Amortization but no return: FERC’s decisions to unbundle pipeline transportation service from pipeline gas sales left the pipelines with stranded costs. State commissions argued that because the costs were not “used and useful,” the Natural Gas Act bars their recovery from customers. The Court of Appeals disagreed, describing a middle ground: The Act allowed FERC to remove non-used-and-useful assets from rate base (where they would have earned a profit) but allow recovery of the cost through amortization expense. Granting a profit on non-used-and-useful facilities “would be inappropriate since this allows a return on facilities that are not economically viable, and may also result in a competitive advantage for the pipeline.” But allowing cost amortization “will keep the pipeline whole for the direct cost of its investment in the facilities. . . . Investor interests have not, therefore, been entirely ignored.”⁴⁶

Full recovery and return: The Court of Appeals also has said that the Commission “might also allow the pipeline to recover not only the amortization, but also interest, *i.e.*, the ‘cost’ of the unamortized portion of the investment. The Commission could further decide to include stranded investments in the utility’s rate base and thereby generate a profit for investors.”⁴⁷

This broad discretion is, however, subject to constraints. Here are the main ones:

Honour legitimate shareholder expectations: When commissions allocate the risk of prudent but

uneconomic outcomes, they must do so clearly and consistently over the life of an investment. If the commission commits, pre-investment, to full recovery of prudent costs regardless of the outcome, it must honour that commitment when setting rates. Failure to do so risks reversal under state law (“arbitrary and capricious” decision making) or the U.S. Constitution (undermining “distinct, investment-backed expectations” created by the prior regulatory commitment).⁴⁸ As the *Barasch* Court warned:

The risks a utility faces are in large part defined by the rate methodology because utilities are virtually always public monopolies dealing in an essential service, and so relatively immune to the usual market risks. Consequently, a State’s decision to arbitrarily switch back and forth between methodologies in a way which required investors to bear the risk of bad investments at some times while denying them the benefit of good investments at others would raise serious constitutional questions.⁴⁹

Reflect shareholder risks in the authorized return on equity: Investors legitimately expect higher returns for higher risks. A commission that assigns to shareholders the risk of prudent but uneconomic outcomes must compensate for that risk when it determines the authorized return on equity.⁵⁰

Allow for “lumpiness”: A new investment will rarely match existing demand perfectly. Major

⁴⁵ *Natural Gas Pipeline of America v FERC*, 765 F.2d 1155, 1163-1164 (DC Cir 1985) (citing *Transcontinental Gas Pipe Line Corp.*, 58 F.P.C. 2038 (1977)), *aff’d in relevant part and remanded on other grounds sub nom Tenn Gas Pipeline Co v FERC*, 606 F.2d 1094 (DC Cir 1979).

⁴⁶ *United Distrib Cos v FERC*, 88 E.3d 1105, 1179-1180 (DC Cir 1996) (quoting *Equitrans Inc.*, 64 FERC ¶ 61,374, at p 63,601 (1993), *National Fuel Gas Supply Corp.*, 71 FERC ¶ 61,031, at p 61,138 (1995), and *Jersey Cent. Power & Light Co v FERC*, 810 F.2d at 1192 (Starr, J., concurring)). See also *NEPCO Mun Rate Comm v FERC*, 668 F.2d 1327, 1333 (DC Cir 1981) (holding that “FERC’s refusal to include project expenditures in the rate base, while allowing their recovery as costs over time, is a valid approach to allocating the risks of project cancellation”).

⁴⁷ *United Distrib Cos v FERC*, *supra* note 32 at 1179.

⁴⁸ See *Penn Cent Transp Co v New York*, 438 US at 124 (Takings Clause analysis must consider the “economic impact of the regulation on the claimant and, particularly, the extent to which the regulation has interfered with distinct investment-backed expectations”).

⁴⁹ *Duquesne Light Co v Barasch*, *supra* note 16 at 315. See also *Verizon Commc’ns Inc v FCC*, 535 US at 527 (“[T] here may be a taking challenge distinct from a plain-vanilla objection to arbitrary or capricious agency action if a rate making body were to make opportunistic changes in rate setting methodologies just to minimize return on capital investment in a utility enterprise”).

⁵⁰ See, e.g., *Duquesne Light Co v Barasch*, *supra* note 16 at 312 (Pennsylvania’s statute “slightly increases the overall risk of investments in utilities over the pure prudent investment rule. Presumably the PUC adjusts the risk premium element of the rate of return on equity accordingly”). See also Scott Hempling, “Riders, Trackers, Surcharges, Pre-Approvals and Decoupling: How Do They Affect the Cost of Equity?” (January 2012) online: ElectricityPolicy.com <http://www.scotthemplinglaw.com/files/pdf/ppr_riders_oge_hempling112711.pdf>.

capacity additions come on line in lumps that create surplus. To treat this surplus automatically as not used and useful, and then deny recovery and return, ignores physical reality. As the Wisconsin Supreme Court declared:

[A] public utility, being required to provide service when and as demanded by the public, must have some latitude with respect to plant management; . . . in determining the rate base, property should not be excluded merely because at the moment it is not in actual service. We held that the commission could not construct a hypothetical plant which would theoretically render equivalent service and on that basis hold that any portion of the existing property was excess.⁵¹

B. Modern Responses: Assigning Responsibility and Risk Upfront

From statutes and case law, the main message is that regulators have flexibility. But regulatory flexibility can create investment uncertainty, which leads to increases in the utility's cost of capital. To address this problem, a range of solutions exists. These can be placed into two main categories: solutions that assign responsibility for known costs, i.e., costs that have occurred or will occur; and solutions that allocate the risk of unanticipated costs.

Assigning responsibility for known costs: Commissions can calculate a customer's pro rata share of the utility's book costs, and then require the customer to pay that cost on departure—either in a lump sum, or as an adder to the customer's continuing purchases of whatever monopoly service the customer still needs. A related measure is “decoupling.” In the U.S., most rates have a fixed customer charge that recovers only per-customer costs; most of the utility's fixed costs are recovered through a per-kWh rate—a variable charge. This practice creates unnecessary tension between two non-debatable goals: using less energy, and providing the utility a reasonable opportunity to recover, and earn a return on, its prudent fixed costs. Recognizing the conflict, some states have introduced “decoupling”:

insulating fixed charge recovery from variable sales. One approach is to remove all fixed costs from the variable charge and placing them in a fixed charge. The principle is simple: If the customer wants the utility to stand ready to serve, the customer must bear the costs that support the utility's readiness to serve.

Allocating the risks of unanticipated costs: Some state legislatures have authorized their commissions to insulate shareholders from certain risks. These commissions have the power to issue pre-investment orders that commit ratepayers to cost recovery for specified major capital investments. Each of the situations is distinct from the traditional approach, which is to defer decisions about recovery, and actual recovery, until the plant is used and useful, i.e., operating for the customers. Here are four examples:

1. Indiana's Environmental Compliance Plan Pre-Approval Act authorizes the Commission to approve a utility's costs in advance, if those costs support an Environmental Compliance Plan that “constitutes a reasonable and least cost strategy over the life of the investment consistent with providing reliable, efficient and economical electric service.” The Commission can also limit rate challenges to utility-incurred costs to issues of fraud, concealment or gross mismanagement.⁵²
2. A Florida statute authorizes cost recovery, prior to a plant's commercial operation, for the siting, design, licensing and construction of electric generating plants based on either nuclear or integrated gasification combined cycle power technologies.⁵³
3. A North Carolina statute authorizes recovery, before a plant's commercial operation, of “project development” costs for nuclear plants, subject to certain conditions on types and timing of activities. Eligible activities include (but are not limited to) “evaluation, design, engineering, environmental

⁵¹ *Milwaukee & Suburban Transp Corp v Pub Serv Comm'n of Wisconsin*, 108 NW2d 729, 733-734 (Wis 1961) (reversing commission disallowance of costs of “shops and yards” rendered unused due to conversion of transportation system from streetcars to trackless trolleys and buses) (citing *Wisconsin Telephone Co v Public Service Comm'n of Wis*, 287 NW 122 at 158 (Wis 1939)).

⁵² Ind Code § 8-1-27-8(1)(B).

⁵³ Fla Stat § 366.93.

analysis and permitting, early site permitting, combined operating license permitting, and initial site preparation costs.”⁵⁴

4. Mississippi’s Baseload Act authorizes the Commission to allow recovery, prior to a plant’s commercial operation, of all or some of prudent costs (both pre-construction and construction) associated with a baseload electricity plant. The statute also authorizes periodic Commission reviews and approvals of construction prudence, to reduce further the uncertainty associated with future cost recovery.⁵⁵

Conclusion

Stranded cost situations always combine two key facts: prudent investments, and post-investment circumstances not anticipated at the time of the investment. Those factual developments can be reductions in demand, increase in input costs, obsolescence, and changes in regulatory policy. The question is always: When prudent actions produce uneconomic outcomes, who bears the unrecovered costs: shareholders or customers? Readers hoping for clear “dos” and “don’ts” will be disappointed; those hoping for broad regulatory discretion will be pleased. The consistent principle is this: Regulators have a range of options, from full recovery plus profit, to no recovery and no profit, and all points in between. What matters, constitutionally, is honoring shareholders’ legitimate expectations—as those expectations are influenced by regulatory actions made clear in advance. ■

⁵⁴ NC Gen Stat § 62-110.7.

⁵⁵ Miss Code Ann § 77-3-105. For additional discussion of regulatory issues associated with “preapproval,” see Scott Hempling and Scott Strauss, *Pre-Approval Commitments: When and Under what Conditions Should Regulators Commit Ratepayer Dollars to Utility-Proposed Capital Projects?* (2008), National Regulatory Research Institute, online: NRRI <http://nrri.org/pubs/electricity/nrri_preapproval_commitments_08-12.pdf>.

REGULATION AND THE DEVELOPMENT OF A NEW ENERGY INDUSTRY: TIDAL ENERGY IN NOVA SCOTIA

*William Lahey*¹

Introduction

In the most recent sitting of Nova Scotia's House of Assembly, Energy Minister Michel Samson introduced Bill No. 110, the *Marine Renewable-energy Act*.² If enacted, it will make Nova Scotia the first province to have a distinct and comprehensive regulatory framework for the development and oversight of marine-based renewable energy activities. The proposed Act encompasses all forms of marine renewable energy, including marine wind energy and wave energy as well as tidal energy, but it is primarily directed to the development of tidal energy resources, particularly those within Nova Scotia's portion of the Bay of Fundy. This reflects the origins of the Act in the decade of attention successive Nova Scotia governments have given to understanding, testing, developing and promoting the tidal energy potential of the Bay.

From the beginning of this process, it has been clear the development of tidal energy in the Bay will depend on development and implementation of a regulatory framework

that supports the development of the industry, protects the environment, enjoys public confidence, and contributes to the achievement of Nova Scotia's energy policy objectives. The attempt to build such a framework has taken place while sharp debate about regulation and economic development in multiple natural resources sectors has been at the centre of policy and political debate in Nova Scotia.³ Along with the growing global interest in tidal energy and the recognized richness of the Bay of Fundy as a potential tidal energy resource, this makes Bill 110 and Nova Scotia's wider approach to regulation of tidal energy of interest from a broader energy regulation perspective.

Background and Context

Tidal Energy Technology and Technology Testing in Nova Scotia

Nova Scotia already obtains some of its electricity from Bay of Fundy tides via the 20 MW Annapolis Royal Tidal Power Plant, commissioned in 1984.⁴ This plant, the only one

¹ William Lahey, Associate Professor, Schulich School of Law, School of Health Administration and College of Sustainability, Dalhousie University. Thanks to Kaleigh Henry for her superb research assistance with this article.

² Bill 110, *An Act Respecting the Generation of Electricity from Marine Renewable-energy Resources*, 2nd Sess, 62nd Leg, Nova Scotia, 2015 [Bill 110].

³ Nova Scotia, Commission on Building Our New Economy, *Now or Never: An urgent call to action for Nova Scotians* (Report) (Commissioner Ray Ivany) (Halifax: the Commission, 2014); Independent Panel on the Regulation of Aquaculture, *A New Regulatory Framework for High Value/Low Impact Aquaculture in Nova Scotia*, by Meinhard Doelle & William Lahey (Final Report) (Halifax: Province of NS, 2014); Independent Panel on Hydraulic Fracturing, (Report) (Chair David Wheeler) (Halifax: NS Department of Energy, 2014); Nova Scotia Tax and Regulatory Review, *Charting a Path for Growth*, by Laurel Broten (Halifax: Province of NS, 2014).

⁴ Marine Renewables Canada, "Marine Renewable Energy in Canada & the Global Context: State of the Sector Report" (2013) at 8, online: MRC <<http://www.marinerenewables.ca/wp-content/uploads/2012/11/State-of-the-Canadian-MRE-Sector-20131.pdf>> [Marine Renewables Canada]; Fundy Ocean Research Center for Energy (FORCE), "Tidal Energy: A history of innovation", online: FORCE <<http://fundyforce.ca/renewable-and-predictable/a-history-of-innovation/>>; International Renewable Energy Agency, "Tidal Energy: Technology Brief" at 11, online: <<http://www>

of its kind in North America and third largest of its kind in the world, uses barrage technology: water entering and leaving a tidal estuary is forced through a barrage built across the full width of the estuary. Like all electricity produced from tidal energy, the electricity produced has the intermittent quality of wind and solar generated electricity but the predictability associated with hydroelectric generation. The problem with barrage technology is its environmental impact, including its impact on silt build-up. This is one of the reasons it is not being considered for wider deployment in Nova Scotia, even though it produces cheaper electricity (in the range of \$0.14 to \$0.27 per kWh) than the electricity that alternative tidal technologies are currently capable of producing (in the range of \$0.44 to \$0.51 per kWh).⁵

Starting roughly in 2005, Nova Scotia – and New Brunswick – started to consider the possibilities provided by tidal in-stream energy conversion (TISEC) technology. This technology uses devices similar to wind turbines to extract kinetic (free-flowing) energy from tidal currents.⁶ In general, this technology comes in one of three configurations - horizontal axis turbines, vertical access turbines and oscillating hydrofoils – all of which can be deployed on the surface, on the sea-bottom or in the water column.

TISEC's strength is its potentially negligible environmental impact. While there are unanswered questions about the impact the technology may have on the biophysical environment when deployed at a commercial scale in a "tidal array" of TISEC devices, analysis to date has not identified the potential for significant environmental hazards. In addition, TISEC devices, unlike barrages, can be re-oriented, relocated or removed from the tidal environment to address or mitigate detected problems.

To encourage and facilitate the testing of TISEC technology in the Bay of Fundy - and more specifically in the part of the Inner Bay of Fundy called Minas Basin - Nova Scotia commissioned the construction of a test centre at Minas Basin in 2008.⁷ The centre, the only facility of its kind in Canada, is operated by the Fundy Ocean Research Centre for Energy (FORCE), a not-for-profit company formed and governed as a collaboration between the provincial Department of Energy and the developers selected by the province after a request for proposals to undertake TISEC demonstration projects at the site. It is funded by grants from the federal and provincial governments and Encana, as well as by the developers who will test TISEC devices at the centre.

The centre currently has four offshore "berths" for demonstration projects. Each berth is connected to an onshore substation by a subsea power cable. This substation is connected to the NSP transmission grid by a 10 km transmission line. The centre is currently approved for a 5 MW capacity but could be upgraded to 64 MW of capacity.⁸

The completion of a joint federal-provincial environmental assessment on the FORCE centre in 2009 means that each developer who uses the site does not have to incur the costs of a separate environmental assessment.⁹ The centre also reduces the costs of TISEC testing by offering developers a shared observation facility, submarine cables, grid connection, and environmental monitoring facilities and services. This sharing of infrastructure is also designed, like FORCE's shared governance model, to ensure that projects are consistently and transparently monitored and evaluated from both energy conversion and environmental performance perspectives. Provincial oversight, both by Environment and Energy, an Environmental

irena.org/DocumentDownloads/Publications/Tidal_Energy_V4_WEB.pdf [IRENA].

⁵ Nova Scotia, Department of Energy, *Marine Renewable Energy Strategy*, (Halifax: Department of Energy, May 2012) at 11 [*Marine Renewable Energy Strategy*].

⁶ Electric Power Research Institute (EPRI), "North America Tidal In-Stream Energy Conversion Technology Feasibility Study", (Palo Alto: EPRI, 11 June 2006) at 3 [*TISEC Feasibility Study*]. <http://oceanenergy.epri.com/attachments/streamenergy/reports/008_Summary_Tidal_Report_06-10-06.pdf>; OER (now OERA), "Fundy Tidal Energy: Strategic Environmental Assessment", Final Report (Halifax: NS Department of Energy, April 2008) at 13-14, online: <<http://www.oera.ca/wp-content/uploads/2013/06/FINAL-SEA-REPORT.pdf>> [*SEA Final Report*]; Marine Renewable Energy Strategy, *supra* note 5 at 11-12; FORCE, "Tidal Energy: Tidal Energy Generation", online: <<http://fundyforce.ca/renewable-and-predictable/tidal-energy-generation/>>.

⁷ *Marine Renewables Canada*, *supra* note 4 at 13, 35-36; FORCE, "About: FORCE", online: <<http://fundyforce.ca/about/>>.

⁸ *Re Tidal Energy Feed-in Tariffs*, 2013 NSUARB 214 (13 November 2013) at paras 28-29, accessed online with docket number M05092: <<http://nsuarb.novascotia.ca/>> [*Re Tidal Feed-in Tariffs*].

⁹ *SEA Final Report*, *supra* note 6 at 1-2; Marine Renewable Energy Strategy, *supra* note 5 at 18.

Monitoring Advisory Committee, and a Community Liaison Committee are all in place to ensure FORCE and developers fulfill these monitoring, evaluation and transparency objectives.

Economic, Environmental and Energy Objectives

Nova Scotia's interest in testing TISEC technology in the Bay of Fundy was propelled by a mix of economic and environmental policy considerations. Bay of Fundy tides are the highest and strongest in the world.¹⁰ There is growing global interest in the potential contribution of tidal energy to climate change mitigation.¹¹ TISEC technology is however still in a developmental stage: it has yet to be commercially deployed anywhere.¹² Together, these factors suggest that the development of the Bay's tidal energy potential could put Nova Scotia, as well as New Brunswick, at the forefront of an emerging energy sector of significant proportions.

In 2006, a study by California's Electric Power Research Institute gave weight to these aspirations by concluding that the Bay's tidal energy potential – currently estimated at more than 2400 MW – was among the highest in the world.¹³ Combined with the Bay's relatively harsh conditions, this confirmed that the Bay offered good opportunities for testing both the efficiency of TISEC technology in generating electricity and its durability and functionality in harsh operational conditions. The idea is that technology proven in the Bay of Fundy would be technology proven for application in most locations – it would have met the “Bay of Fundy Standard”.

The greening of Nova Scotia's electricity system also made the energy potential of the Bay of Fundy attractive. In 2005, roughly 90 per cent of Nova Scotia's electricity was generated from fossil fuels, primarily coal, by Nova Scotia Power.¹⁴ Starting in that year, successive regulations made under the *Environment Act* placed escalating emission limits for sulphur dioxide, nitrogen oxides, mercury and other greenhouse gasses on the utility.¹⁵ In 2007, a policy commitment to reduce greenhouse gas emissions to 10 percent below 1990 levels by 2020 was legislated by the *Environmental Goals and Sustainable Prosperity Act*.¹⁶ In 2010, renewable energy standards were adopted under the *Electricity Act* (in accordance with a Renewable Electricity Plan of that year) which established renewable energy standards of 25 per cent for 2015 and 40 per cent for 2020.¹⁷ These regulatory requirements are now the basis of an equivalency agreement between Nova Scotia and the federal government under the provisions of the *Canadian Environmental Protection Act*.¹⁸ Compliance with the provincial regulations is deemed to be equivalent to the compliance with federal regulations – the *Reduction of Carbon Dioxide Emissions from Coal-Fired Generation of Electricity Regulations* – that would otherwise apply to NSP.¹⁹

Optimism about the Bay of Fundy's tidal energy potential had both a cause and effect relationship to these regulatory developments. Especially before the development and regulatory approval of the Maritime Link Project, tidal power was regarded as potentially important to the extent of Nova Scotia's opportunity to significantly green its electricity system. Nova Scotia was an

¹⁰ FORCE, “Tidal Energy: Bay of Fundy”, online: FORCE <<http://fundyforce.ca/renewable-and-predictable/the-bay-of-fundy/>>.

¹¹ RenewableUK, “Ocean Energy in Europe's Atlantic Arc: Policy assessment report”, prepared for Strategic Initiative for Ocean Energy (March 2013), online: SI Ocean <<http://www.si-ocean.eu/en/>>; Abbie Badcock-Broe et al, “Wave and Tidal Energy Market Deployment Strategy for Europe” (June 2014) at 19, online: SI Ocean <http://www.oceanenergy-europe.eu/images/OEF/140037-SI_Ocean_-_Market_Deployment_Strategy.pdf>; Channel MOR Project, “The MRE Sector and its Governing Regulations” (April 2015), online: <http://channelmorenergy.eu/wp-content/uploads/2015/05/channel_mre_governing_regulations.pdf>.

¹² IRENA, *supra* note 4 at 28; OERA, “Value Proposition for Tidal Energy Development in Nova Scotia, Atlantic Canada and Canada”, prepared by Gardner Pinfold Consultants Inc. & Acadia Tidal Energy Institute (Halifax: April 2015, OERA) at 1, online: <http://www.oera.ca/wp-content/uploads/2015/04/Value-Prop-English-Summary_April-21-2015.pdf> [OERA Value Proposition].

¹³ TISEC Feasibility Study, *supra* note 6; Richard Karsten et al., “Assessment of tidal current energy in the Minas Passage, Bay of Fundy”, Proceedings of the Institution of Mechanical Engineers, 222, Part A: Power and Energy, (2008), 293-507.

¹⁴ Nova Scotia, Department of Energy, “Renewable Electricity Plan” (Halifax: April 2010) at 2 [Renewable Electricity Plan].

¹⁵ *Air Quality Regulations*, NS Reg 28/2005; *Greenhouse Gas Emissions Regulations*, NS Reg 260/2009.

¹⁶ *Environmental Goals and Sustainable Prosperity Act*, NS 2012, c 42, s 4(f).

¹⁷ *Renewable Electricity Plan*, *supra* note 14 at 2; *Renewable Electricity Regulations*, *supra* note 42, ss 6(1), 6(1)(5), 6A(1), 6A(4).

¹⁸ An Agreement on the Equivalency of Federal and Nova Scotia Regulations for the Control of Greenhouse Gas Emissions from Electricity Producers in Nova Scotia, online Environment Canada : <<http://www.ec.gc.ca/lcpe-cepal/default.asp?lang=En&n=1ADECED-1>>; *Canadian Environmental Protection Act*, SC 1999, c 33.

¹⁹ *Reduction of Carbon Dioxide Emissions from Coal-Fired Generation of Electricity Regulations*, SOR/2014-265.

energy island, connected to the North American grid only by the intertie at the New Brunswick border that the two provinces use to manage peak demand. This meant that renewable energy on the scale required to green the province's electricity system would have to come from within Nova Scotia. In that context, it was important from a system reliability perspective that tidal power promised a volume of renewable energy that was, unlike wind and other indigenous alternatives, predictable.

The Maritime Link project has altered this context.²⁰ That project will give Nova Scotia access to hydroelectric power from the dams being constructed in Labrador and carry Newfoundland hydroelectricity to North American markets through an expanded transmission cable between Nova Scotia and New Brunswick. It will therefore supply Nova Scotia with a large block of renewable energy that will not only be predictable but constant and cheaper than tidal power is likely to be for some time. It also gives Nova Scotia access to additional sources of renewable energy from the east and west.

The context for the development of tidal power has changed in a broader sense: the assumptions about relentless and sharp increases in the price of fossil fuels that informed analysis of tidal energy's economic potential in the period between 2005 and 2010²¹ have proven off the mark, at least in the short-term, due to the combined effect of the shale-gas revolution, the recession and the production decisions made by leading oil producing countries. The result is that changes in the price of fossil fuels have not narrowed the gap between the cost of producing electricity with fossil fuels and the cost of producing it with tidal energy to the extent some anticipated.

These circumstances call for realism and caution

in the development of the Bay of Fundy's tidal energy potential – as recognized in virtually every official document on tidal power produced over the past 10 years.²² Another factor is the fate suffered by the OpenHydro device put in the water by NSP in 2009: it had to be removed in 2010 when it was severely damaged by the force of the tides.²³ References to this event now emphasize the successful retrieval of the device but the event also clearly shows that the mastery of the Bay of Fundy by TISEC technology cannot be assumed.

Still, the rationale for continuing with concerted effort on Fundy's tidal energy potential remains strong. The transmission line being built between Nova Scotia and New Brunswick for the Maritime Link will also give Nova Scotia an ability to export tidal energy it otherwise would not have. Demand for that energy beyond Nova Scotia may be increased by the combined effect of many factors, including consumer demand for clean energy, the limitations of renewable energy alternatives and the outcome of political decision-making on climate change mitigation. This same complex mix of factors will shape the longer-term demand for renewable energy within Nova Scotia, possibly in directions that cannot be economically satisfied by the alternatives to the abundant supply of tidal energy available from the Bay of Fundy. Meanwhile, the cost of tidal energy will decrease if the efficiency of TISEC technology is improved. This requires technological innovation that can only happen from deployment and testing in tidal environments, including those as challenging as the Bay of Fundy. Jurisdictions that host that innovation will have opportunities to export the resulting technology and expertise.

Nova Scotia claims it can, with the benefit of strategic partnerships with other jurisdictions,²⁴ be one of these jurisdictions because of the

²⁰ William Lahey, "The Contributions of Utilities Regulation to Electricity Systems Transformation: the Case of Nova Scotia" (2014) 2 Energy Regulation Quarterly, online: ERQ <<http://www.energyregulationquarterly.ca/articles/the-contributions-of-utilities-regulation-to-electricity-system-transformation-the-case-of-nova-scotia#sthash.puFdrJjh.IJ2b8MPd.dpbs>>. For more information on how the Maritime Link will affect the energy portfolio and subsequent demand for renewable electricity within the Province of Nova Scotia, view the application documents relating to the Maritime Link Project, Matter No. M05419 of the Nova Scotia Utility and Review Board, online: <<http://nsuarb.novascotia.ca/>>.

²¹ *SEA Final Report*, *supra* note 6 at 10, 27.

²² For example, in responding to the strategic environmental assessment completed on tidal energy in 2008, the Department of Energy referred to the need for caution or a cautious approach six times in a 33-page document. The document may be viewed online at <<http://fundyforce.ca/wp-content/uploads/2012/05/Tidal-SEA-Response1.pdf>>.

²³ Nova Scotia Power Inc., "Deployment and Recovery of the OpenHydro In-stream Tidal Turbine", Environmental Effects Monitoring Report, Appendix B (Halifax: NSPI, 20 June 2011), online: <<http://fundyforce.ca/wp-content/uploads/2012/05/Appendix-B-NSPI-Deployment-and-Recovery.pdf>>.

²⁴ Offshore Energy Research Association, "Nova Scotia and U.K. Collaborate on Tidal Industry Development" (4 March, 2014), online: <http://www.oera.ca/nova-scotia-and-u-k-collaborate-on-tidal-industry-development/>; Nova Scotia, News Release, "Nova Scotia and British Columbia Collaborate on Tidal Energy" (21 July, 2014), online: NS

resource richness of the Bay of Fundy and the human, institutional and infrastructure resources it has in many of the relevant disciplines (such as oceanography and marine engineering) and sectors (including a variety of marine industries and professional services sectors).²⁵ Currently, its objective is to achieve 300 MW from commercial production by 2020. The regulatory objective is to operationalize a regulatory system that will facilitate and enable the development of the industry to this level and beyond. It is to make regulation one of the province's jurisdictional advantages in tidal energy.

The Role of Consultative Processes

In 2008, the Department of Energy, with the benefit of academic advice²⁶ and stakeholder support, mandated Offshore Energy Environmental Research Association (OEER) to complete a strategic environmental assessment (SEA) of renewable energy in the Bay of Fundy, particularly tidal energy produced by TISEC technology.²⁷ OEER in turn established a multi-disciplinary and multi-stakeholder Technical Advisory Group to lead the process and a 24-member Roundtable of stakeholders and Mi'kmaq representatives.²⁸ The process included: a background report prepared by Jacques Whitford;²⁹ community forums; funding for community research and input from community groups; and the website posting for comment of the background report and the draft SEA report.³⁰ The context included uncertainty and therefore apprehension about how tidal energy's development might damage the fishing industry, including the lucrative lobster fishery, and interfere with Mi'kmaq rights and interests or disrupt other users of the Bay, as well as potential for opposition based on these uncertainties. The broader context is a persistent

concern in Nova Scotia about the rationale for more cohesive and integrated management of coastal zones and resources and a widely held perception that resource industries are not properly or sufficiently regulated.

The overriding conclusion reached by the SEA was that the newness of the technology precluded definitive or even firm conclusions on the potential impact of TISEC technology on the biophysical and socioeconomic environments. For example, the impact the removal of significant amounts of energy from tides could have on their velocity and connected hydrodynamic and biophysical processes was identified as a significant unknown.³¹ Such unknowns led the SEA to emphasize an incremental approach to development in which, for example, successful completion of demonstration projects would be a prerequisite for commercial projects and commercial projects would be required to scale up incrementally as monitoring showed the safety of expansion, using only removable equipment.³² The unknowns also led the SEA to emphasize the importance of robust monitoring, evaluation and research, as well as the infrastructure needed to make them possible, and ongoing consultation with potentially affected constituencies. Of 27 recommendations, at least 10 dealt wholly or partly with the themes of research, monitoring and evaluation, while at least 15 could be said to be primarily, mostly, or significantly about continuing engagement with stakeholders or the Mi'kmaq.³³

The SEA did however confirm that TISEC technology does not involve known harms to the environment. Implicitly, this was the basis for the recommendations that demonstration projects proceed and for the enactment of marine

<<http://novascotia.ca/news/release/?id=20150721003>>.

²⁵ *Marine Renewable Energy Strategy*, *supra* note 5; *OERA Value Proposition*, *supra* note 12 at ii-iii; *Marine Renewables Canada*, *supra* note 4 at 21, 54-56.

²⁶ Meinhard Doelle et al., "The Regulation of Tidal Energy Development Off Nova Scotia: Navigating Foggy Waters" (2005) 55:1 UNBL [Doelle et al].

²⁷ OEER was incorporated in 2006 with funding from the Department of Energy. Its membership as of 2008 was the Department and Acadia University, St. Francis Xavier University and Cape Breton University. It has merged with the Offshore Energy Technology Research Association, an association with membership from industry, to form the Offshore Energy Research Association of Nova Scotia.

²⁸ *SEA Final Report*, *supra* note 6 at 5-6.

²⁹ The background report was co-funded with New Brunswick, which used it for its own SEA process. New Brunswick and Nova Scotia government officials participated in each other's SEA process.

³⁰ *SEA Final Report*, *supra* note 6 at 1.

³¹ *Ibid* at 5.

³² *Ibid* at 40-47.

³³ OEER, "Fundy Tidal Energy: Strategic Environmental Assessment", Appendix A: Recommendations Summary (Halifax: NS Department of Energy, April 2008) at 75-83, online: <<http://www.oera.ca/wp-content/uploads/2013/06/FINAL-SEA-REPORT.pdf>> [*SEA Recommendations Summary*].

renewable energy legislation, encompassing 10 principles of sustainable development, to encourage the “safe and environmentally sound” development of the industry.³⁴ It was also the basis for two other recommendations: the development of a marine energy benefits strategy and a Marine Renewable Energy Community Participation and Benefits Strategy.³⁵

The Department of Energy response was to quickly promise action on all SEA recommendations, albeit not the action proposed by the SEA in all cases.³⁶ Specifically, it accepted the SEA recommendations most directly connected to regulation and legislation, including those calling for: an incremental approach to development; a demonstration project program; marine renewable energy legislation; a requirement that developers carry out Mi'kmaq ecological knowledge studies and consult with Mi'kmaq communities; environmental assessments before permitting of demonstration and commercial projects; and procedures and protocols to ensure consultations with fishers and fisheries stakeholders “at every stage of tidal development.” It also endorsed the principle emphasized in the SEA, that tidal resources must remain and be developed as public resources.

In the bigger picture, the SEA, which was updated in 2014,³⁷ accomplished much of what proponents for SEA claim it can do:³⁸ it gave those outside of government and industry a meaningful ground-floor opportunity to influence decisions on planning and policies and the design of legislation and regulation. It gave them a forum for influencing the goals and objectives that government and industry decision-making should be both guided and judged by. It thereby contributed to open-mindedness about the development of a new industry that is bound to have an adverse effect on some even if it is broadly beneficial for the province. This has given social licence to tidal energy's development

in Nova Scotia.³⁹ The SEA also helped to inform, facilitate and streamline the joint federal-provincial environmental assessment that was subsequently completed on the FORCE test centre by Nova Scotia's Minister of Environment, Transport Canada, Fisheries and Ocean Canada and Environment Canada.

The SEA's recommendations specifically relating to regulation and legislation were developed in a further consultative process led by Dr. Robert Fournier of Dalhousie University's Department of Oceanography and Marine Affairs Program in 2010-11.⁴⁰ His recommendations called for: a regulatory and legislative framework informed by a strategic plan for the marine renewables sector; continuing engagement with the Mi'kmaq; a licensing system containing clear quantitative criteria for transition from the demonstration to commercial stage of operations; strong and explicit commitment to transparency in regulatory decision-making; adoption and use of marine spatial planning in regulatory decision-making; a comprehensive regulatory plan; a federal/provincial working group on regulation and a model of regulatory collaboration like the Nova Scotia offshore oil and gas regime whereby the province and the federal government could incorporate their respective laws into a common regulatory framework; the consolidation of regulatory authority in a position or office conforming to the model of a “trusted regulator”; and the use of SEA where industry expands, at regular intervals and when there are strong indicators of physical, biological and socioeconomic change.⁴¹

Many of Fournier's recommendations and those of the SEA are reflected in the Marine Renewable Energy Strategy released by the Department of Energy in 2012, which is itself a response to the SEA's recommendation for a strategic approach to the development of the sector and Fournier's call for legislation and regulation based on a

³⁴ *SEA Final Report*, *supra* note 6 at 26-28.

³⁵ *Ibid* at 64-65; *SEA Recommendations Summary*, *supra* note 33 at 81.

³⁶ Nova Scotia, Department of Energy, Bay of Fundy Tidal Energy: A response to the strategic environmental assessment”, online: <<http://fundyforce.ca/wp-content/uploads/2012/05/Tidal-SEA-Response1.pdf>>.

³⁷ AECOM Canada Ltd and Acadia Tidal Energy Institute, Tidal Energy: Strategic Environmental Assessment (SEA) – Update for the Bay of Fundy (Halifax: Offshore Energy Research Association, 2014), online: <http://www.oera.ca/wp-content/uploads/2014/05/Bay-of-Fundy-SEA-Update-PART-A-B_Background-Study-and-Community-Response-Report.pdf>.

³⁸ *Doelle et al*, *supra* note 26.

³⁹ See Michael Cleland, “The Social Licence to Regulate: Energy and the Decline of Confidence in Public Authorities” in present issue of ERQ for more information on the notion of social licence within the context of energy regulation.

⁴⁰ Robert Fournier, “Marine Renewable Energy Legislation: A consultative process” (Report) (Halifax: Government of NS, 18 July 2011) online: OERA <<http://www.oera.ca/wp-content/uploads/2013/05/Fournier-Final-Report.pdf>>.

⁴¹ *Ibid* at 70-76, “Summary of Recommendations”.

⁴² *Marine Renewable Energy Strategy*, *supra* note 5.

strategic plan.⁴² As proposed by both the SEA and Fournier, the province's strategy encompasses distinct but interconnected plans for research, sector development and regulation. Most broadly, the influence of the SEA and of Fournier, and of consultations with Nova Scotia's Mi'kmaq, is seen in the "Strategic Objectives" chapter of the *Nova Scotia Renewable Energy Strategy*: to build and maintain public trust through science, accountability and transparency; to develop approaches that are technically, economically and environmentally sustainable; to build an industry in Nova Scotia; and to consult and collaborate with the Mi'kmaq.⁴³

Economic Regulation and the Market for Tidal Energy

One of the priorities within the "build the industry" component of Nova Scotia's strategy is marketplace development for the electricity tidal energy projects will produce. This reflects recognition that although it must become "commercially viable over time" primarily through technological innovation, "tidal power will, initially at least, require market supports".⁴⁴

Feed-in-tariff (FIT) programs have been created to provide some of this support. In 2010, amendments to the *Electricity Act* created a community feed-in-tariff (COMFIT) for "low-impact electricity" from projects owned by community organizations such as Mi'kmaq band councils, municipalities, universities, community economic development corporations, and co-operatives.⁴⁵ Consistent with the SEA's recommendation for attention to community participation and benefits, "small-scale in-stream tidal", defined as tidal power from a device with a capacity under .5 MW capable of being connected to the grid through a distribution system, qualifies as "low-impact electricity" eligible for the COMFIT.

The 2010 amendments also provided for a separate feed-in-tariff for privately owned "developmental tidal arrays", defined to be one or more devices with a capacity greater than .5 MW capable of being connected with the grid through a transmission system.⁴⁶ This is the tariff

that will apply to developmental projects at the FORCE test centre.

Responsibility for setting both tariffs was assigned to the province's Utility and Review Board (UARB) and responsibility for deciding applications to participate in the tariff programs to the Minister of Energy. An application for approval for the development feed-in tariff is required to be more extensive than one for the COMFIT.⁴⁷ In addition to a "project concept", a "business case", evidence of community support and demonstrated knowledge of various matters, an application for the development tariff must also include a project plan, a full description of the technology to be used, a business plan, a risk management plan and information on how the project will build and maintain public trust in tidal development and contribute to the tidal energy industry in Nova Scotia. Another difference is that an application to participate in the developmental tidal tariff can only be made in response to a Ministerial invitation or public call for applications.

In 2011, the Board characterized tidal technology as "experimental" in setting the COMFIT for tidal at \$652/MWh, on the assumption of a production costs of \$10,076 per kilowatt.⁴⁸ The rationale was recognition both that development demanded a high tariff and that ratepayers were protected by the reality that tidal was "likely to be a small component of the overall COMFIT program." In 2013, the Board ruled that the feed-in-tariff for "developmental tidal arrays" could be structured, at the option of developers, either as a "test tariff" or as a "developmental tariff."⁴⁹ Under the first, the tariff is either \$575 or \$455/MWh for three years, depending on whether annual production is below or above 3,300 MWh, and either \$495 or \$375/MWh for 15 years, depending on whether annual production is below or above 16,650 MWh. For developers choosing the developmental tariff, the rate is either \$530 or \$420/MWh for 15 years, depending on whether annual production is below or above 16,650 MWh. Both "paths" will provide developers with the same revenue on a net present value basis. The test path option allows front-ending some of that revenue.

⁴³ *Ibid* at ch 4.

⁴⁴ *Ibid* at 21.

⁴⁵ *Renewable Electricity Regulations*, *supra* note 17, NS Reg 155/2010, s 20.

⁴⁶ *Ibid*, s 18(2)(a)(3), 19(1), 20(3)(a).

⁴⁷ *Ibid*, s 22.

⁴⁸ *Re Renewable Energy Community Based Feed-In Tariffs*, *supra* note 8.

⁴⁹ *Ibid*.

In its Marine Renewable Energy Strategy, the province stated that the total impact of tidal feed-in-tariffs on rates would be between 1 and 2 per cent.⁵⁰ In January of 2015, it put consideration of new applications for the COMFIT, including new tidal applications, on hold.⁵¹ By then, five tidal projects, all owned by community economic development organizations, had been approved.⁵² Meanwhile, the four tidal energy developers who had previously been given approval to test their technology at FORCE have all been approved for the developmental tariff for a combined total of 17.5 MW of electricity.⁵³

As noted above, the longer-term market prospects for Nova Scotia tidal energy will be improved when the Maritime Link project fully connects Nova Scotia into the North American grid. The UARB's approval of that project may prove to be economic regulation's greater contribution to the development of a market for Nova Scotia's tidal energy industry.⁵⁴

Proposed Marine Renewable-energy Act⁵⁵

Under the proposed legislation, "marine renewable energy resources" are defined to include tides and currents (as well as waves and wind over marine waters). "Marine renewable electricity" is defined as electricity produced from marine renewable energy resources.⁵⁶ A "generator" will be defined to mean any device or technology, including an "in-stream

tidal-energy converter" used, or tested for use, in producing marine renewable electricity.⁵⁷ Generators will be "connected generators," used to produce electricity for use or consumption onshore, or "unconnected generators."⁵⁸

The Act will establish two "areas of marine renewable-energy priority", including the "Fundy Area of Marine Renewable-energy Priority", and authorize the creation of others.⁵⁹ Constructing, installing or operating a generator - and related cables, structures and equipment - will be prohibited within these designated areas unless a licence (for connected generators) or permit (for unconnected generators) is obtained under the Act.⁶⁰ The Minister will be authorized to issue licenses to those already issued a feed-in tariff approval for a developmental project at the FORCE site.⁶¹ Otherwise, it will only be possible to apply for a licence in response to a call for applications.⁶² A call for applications must relate to a geographic area "within a marine renewable-electricity area".⁶³

It will be unlawful to interconnect a generator with the electrical grid or an onshore electricity consumer except from within a "marine renewable-electricity area."⁶⁴ The Act will create the first of these, the "FORCE Renewable-electricity Area", located in the Fundy Area of Marine Renewable-energy Priority. Cabinet will have the authority to designate other marine renewable-electricity

⁵⁰ *Marine Renewable Energy Strategy*, *supra* note 5 at 23.

⁵¹ Nova Scotia, News Release, "Community Feed-In-Tariff Program Achieves Goal, on Hold", (15 January 2015). This review has resulted in the decision to end the COMFIT Program: see Nova Scotia Department of Energy, "COMFIT", online: <http://energy.novascotia.ca/renewables/programs-and-projects/comfit>.

⁵² Nova Scotia, Department of Energy, "COMFIT Project Status List", online: <http://energy.novascotia.ca/sites/default/files/files/Comfit%20Status.pdf>.

⁵³ Nova Scotia, Department of Energy, News Release "Awards Support Tidal Industry Development" (19 December 2014), online: NS <http://novascotia.ca/news/release/?id=20141219004>. The four developers are Minas Energy, Black Rock Tidal Power, Atlantis Operations Canada and Cape Sharp Tidal Venture, each representing a consortium of local and international companies.

⁵⁴ *Re NSP Maritime Link Incorporated*, 2013 NSUARB 154 (4 November 2013) accessed online with docket number M05419: <http://nsuarb.novascotia.ca/>.

⁵⁵ Bill 110 covers much wider ground than can be fully summarized here. In particular, it contains numerous provisions on research and its promotion, on monitoring of the industry as a whole, on collection and sharing of data by licensed operators and the development and operation of non-regulatory programs. This summary concentrates on the Bill's regulatory provisions.

⁵⁶ *Bill 110*, *supra* note 2.

⁵⁷ *Ibid.*, cls 3(e)-(g).

⁵⁸ *Ibid.*, cl 3(1)(c), (g), (v).

⁵⁹ *Ibid.*, cls 10-11.

⁶⁰ *Ibid.*, cl 12.

⁶¹ *Ibid.*, cl 27(1).

⁶² *Ibid.*, cls 22-23(1).

⁶³ *Ibid.*, cl 23(2); In contrast, a person may apply to the Minister for a permit to construct, install or operate an unconnected generator and associated cables, structures and equipment: Bill 110, cl 32(1).

⁶⁴ *Ibid.*, cl 21.

areas.⁶⁵ These must be within a designated “area of marine renewable-energy priority”. So, building a connected generator outside of a renewable-electricity area located within an area of marine renewable-energy priority will be prohibited.

These provisions, as well as the provisions giving extensive oversight and directional powers to the Minister, seem responsive to the call for a regulatory framework that avoids or minimizes locational conflict with other marine activities and that otherwise ensures a strategic, planned, cautious and incremental approach to development. Along with the deliberate choice not to require or provide for the leasing of marine space to those given licences or permits, they are also responsive to the call for an approach that keeps marine resources firmly in the public domain. It may however be asked if the emphasis on control of development will be at the expense of investment and innovation.

Other provisions respond to the call for a continuation of the proactive engagement of the public and stakeholders in the strategic planning level of decision-making. The Act will require consultations with the public before a marine renewable-electricity area is established or the regulations establishing one are materially modified.⁶⁶ It will specify the content of the public notice that must be issued to initiate these consultations.⁶⁷ It will require the Minister to issue a background report on resource potential and environmental and socio-economic factors before the consultation and a report, for public comment prior to decision, summarizing the information received from the consultation after it is completed.⁶⁸

By the standards of Nova Scotia resource development legislation, these consultation requirements are very specific and directive. Bill 110 goes further: it says the creation of a marine renewable-electricity area (or material

modification of a regulation establishing one) must be proceeded by a strategic environmental assessment.⁶⁹ In a Nova Scotia and perhaps a Canadian context, this is an exceptional legislative commitment to SEA,⁷⁰ clearly reflective of the role that SEA has already played in tidal power in Nova Scotia. It is interesting that it is proposed in legislation to be administered by the Minister of Energy and not the Minister of Environment. This aligns with the understanding of SEA as a planning and not a regulatory process. It is also aligned with the proposed Act’s stated purpose: “to provide for the responsible, efficient and effective development of marine renewable-energy resources through a regulatory system that is staged, consultative and adaptive and integrates technical, environmental and socio-economic factors.”⁷¹ SEA can play a vital role in the accomplishment of this purpose.

In the licensing process, the Minister will be required to provide the public basic information about the process but not further consultation.⁷² Presumably, the premise is that ample public engagement in the creation of a marine renewable electricity area obviates the need for public participation in licensing, especially once the processes required under the *Environment Act* have been applied. It will be interesting to see if the premise holds when the Act is brought into implementation in the face of what appears to be a growing citizen expectation in Nova Scotia for more rather than less involvement in the transactional and operational end of regulation. Much will depend on whether Energy acts as the “trusted regulator” envisaged by Fournier and on whether Energy and the sector effectively implement the “Statement of Best Practices for In-Stream Tidal Energy Development and Operation” which Energy released in 2014.⁷³

Bill 110 provides a range of options for collaboration and coordination with other

⁶⁵ *Ibid*, cl 66(1)-(2).

⁶⁶ *Ibid*, cl 15ff.

⁶⁷ *Ibid*, cls 16(1)-(2).

⁶⁸ *Ibid*, cls 16(3)-(4).

⁶⁹ *Ibid*, cl 17(1)(a).

⁷⁰ *Doelle et al*, *supra* note 26.

⁷¹ *Bill 110*, *supra* note 2, cl 2.

⁷² Licenses can include terms and conditions requiring development and adherence to plans, including plans on “public consultation”, as well as “environmental protection, research, monitoring, risk-management, generator decommissioning and site restoration”: *Bill 110*, cl 28(a)(vi).

⁷³ Nova Scotia, Department of Energy and Marine Renewables, “Statement of Best Practices for In-stream Tidal Energy Development & Operation” (Halifax: 2014), online: <<http://energy.novascotia.ca/sites/default/files/files/Statement%20of%20Best%20Practices%20Booklet.pdf>>.

regulators, including federal regulators. This is responsive to the reality that federal and provincial jurisdiction will both apply to in-stream tidal energy projects, whether they are located in provincial or federal waters.⁷⁴ The Minister would, for example, have the authority to delegate “any power or duty” to a provincial, federal or municipal employee; to transfer administration of a provision of the Act to another minister, a federal agency or a municipality; and to enter into agreements with another province, Canada or another state for the “coordination of regulatory activities.”⁷⁵ While extensive, the provisions of the Bill in this respect fall short of providing for joint management on the model of the federal-provincial legislative framework under which Nova Scotia and Canada jointly manage offshore oil and gas development through delegation of their respective claims to administrative jurisdiction to the Canada-Nova Scotia Offshore Petroleum Board, as Fournier had contemplated.

Bill 110 contains extensive regulation-making powers. Envisaging the day when tidal energy will not only be feasible but profitable, these include the power to make regulations creating a system of royalties, rents and fees that the producers of marine-renewable electricity would be required to pay.⁷⁶

Conclusion

Over the past 10 years, Nova Scotia has taken a “slow and steady” but determined and sustained approach to development of its tidal energy resources. Within this approach, it has given considerable attention to building a regulatory framework that will facilitate and enable development while ensuring development occurs on terms and conditions that Nova

Scotians will support or at least accept. Success will depend on how the framework is operationalized, not only on how it is designed, but so far, the approach taken to both design and operationalization is encouraging. The test will come when the turbines hit the waters, especially on a commercial scale. That will test not only the energy potential of the Bay of Fundy and the technical capacity of the machines used to harness it but also the regulatory capacity of Nova Scotia to ensure it is all governed and seen to be governed in the public interest. ■

⁷⁴ For example, federal jurisdictions over fisheries and navigation and shipping will apply whether the waters are provincial or federal. The more fundamental question is ownership of the tidal energy resource. Nova Scotia's claim that, subject to its boundary with New Brunswick, it has jurisdiction over the waters of the inner Bay of Fundy based on ownership of those waters, is very strong constitutionally. Its claim to jurisdiction based on ownership extending to and over the continental shelf adjacent to its land mass is more debatable; see Doelle et al, *supra* note 26. With respect to the development of the oil and gas resources there, Canada and Nova Scotia have basically “agreed to disagree” on their respective jurisdictional claims by adopting “mirror legislation” under which they jointly manage oil and gas development and political accords and legislation under which the revenue from this development accrues to Nova Scotia by agreement. It is of interest that “Province” is defined under the *Electricity Act* for the purpose of defining the locational requirement of tidal projects eligible for feed-in-tariffs to include: “the lands and submarine areas within the limits of the offshore area described in Schedule 1 to the *Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation (Nova Scotia) Act*”. This jurisdictional claim seems to be outside the agreement to set aside jurisdictional dispute embodied in the *Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation (Nova Scotia) Act* and the “mirror legislation” of Canada.

⁷⁵ *Bill 110, supra* note 2, cls 7(1), 8(1), 9(b).

⁷⁶ *Ibid.*, cl 59.

EXPERT EVIDENCE FOR ENERGY LAWYERS AND REGULATORS

*Philip Tunley**

Introduction

Recent court decisions dealing with the admissibility and assessment of expert evidence are already confronting energy regulators with new challenges, as shown by the decision of the Alberta Utilities Commission in Canada's first electricity market manipulation case.¹

Much of the work done by and in front of energy tribunals involves experts. Expert evidence can affect the assessment of a wide variety of issues involved in energy regulation, including accounting and financial matters, monopoly and market economics, environmental impacts of energy products and infrastructure, and a myriad of technological and scientific issues affecting the energy industry. Such evidence can be critical both in the adjudication of disputes between stakeholders, and in the forward-looking development of energy policy. At its best, it has the potential to be compelling, or even decisive, on many issues. There may also be a measure of expertise involved in the presentation of many of the adjudicative facts that arise in energy proceedings, including implicit or explicit "opinions" of technical witnesses, whether or not they are formally identified as "experts". The preparation, presentation and assessment of expert evidence are therefore critical topics for both practitioners and tribunal members.

This review of recent cases provides both an essential primer on the law, and some insights into the underlying principles and purposes of this kind of evidence that are relevant to energy lawyers and regulators.

As a starting point, it is useful to examine the law relating to expert evidence, as developed largely in the context of dispute resolution by our courts. Recent court decisions continue to reflect a fundamental tension between, on one hand, the value and importance of expert opinion evidence in an increasingly complex world, and on the other, caution respecting the dangers of misuse and over-reliance on this kind of evidence. In part, this tension reflects an institutional feature of our courts, which are deliberately non-specialist in character. However, it also reflects broader concerns, for example, about the use of experts as professional "hired guns", the potential role of counsel in shaping this kind of evidence to support an adversarial position rather than an accurate or optimal result, and the danger of adjudicators abdicating their role to the experts on highly specialized issues. These concerns can all apply with equal force to regulatory tribunals and proceedings. This review therefore suggests how counsel and tribunal members can both benefit from the application of the legal rules and practices developed in our court system, and at the same time avoid the pitfalls identified in court decisions.

The paper also considers how expert evidence can assist the policy-making role of "expert" tribunals, such as energy regulators. It considers some special concerns that can arise when members of such tribunals apply their own expertise to shape the evidence in proceedings over which they preside. The purposes of the rules of evidence align closely with the goals of fairness to parties, and of optimal decision-making in the public interest that underlie administrative proceedings. These goals are

* Philip Tunley is a partner at Stockwoods and his practice covers a wide range of commercial and public law litigation. His public law practice is grounded in four years as counsel with the Ministry of the Attorney General of Ontario. While acting as counsel with the Attorney General, Phil specialized in constitutional litigation and regulatory prosecutions. Finally, Phil has appeared as lead counsel before all levels of the Ontario and Federal courts and the Supreme Court of Canada, as well as a variety of administrative tribunals and ADR procedures.

¹ *Re Market Surveillance Administrator Allegations Against TransAlta Corporation et al*, Decision 3110-D01-2015, AUC (27 July 2015) [*TransAlta*].

best served when the principles and dangers underlying the law of expert evidence are understood and applied. They should inform counsel's decisions about what expert evidence to call, as well as the procedures to be followed when calling such evidence at a hearing, and the assessment of the evidence by decision-makers. In all these respects, the recent case law has useful and important lessons for energy lawyers and regulators.

The Limited Admissibility of Opinion Evidence: Fact *versus* Opinion

The general rule of our law is that witnesses may not give opinion evidence, but are limited to testimony about facts within their personal knowledge.²

Although the line between fact and opinion is not always clear, in general "opinions" represent an inference or conclusion drawn by the witness from underlying facts. This distinction highlights two specific reasons for the general rule against allowing opinion evidence:

- first, it is usually the role of the court, not the witnesses, to draw inferences or conclusions from the facts; and
- second, there is a concern to avoid collateral inquiries into the myriad factors affecting the basis for the witness's opinion, and its validity.

The first rationale is based on the integrity of the courts' decision-making process, and is particularly important where the inference or conclusion to be drawn involves a legal component: e.g. whether or not someone was negligent. The second highlights the unreliability of this kind of evidence, generally. In most circumstances, it is neither relevant nor helpful to the court, and may even be distracting, to hear the witnesses' opinions about the matters in issue.

The general rule against opinion evidence is, however, subject to recognized exceptions. One involves lay witnesses who do not use special knowledge, and applies in circumstances where

the distinction between fact and opinion is virtually impossible to maintain: for example, testimony as to whether someone is drunk, or how fast a vehicle is travelling. The other important exception involves expert opinion evidence. In this context, an "expert" is someone with special knowledge or expertise, who can provide the trier of fact with a "ready-made inference" based on facts they observe or are asked to assume, which the court itself would be unable to draw unassisted.³

These background principles highlight why expert evidence, although common, is exceptional in nature, and should properly be subject to special requirements, and assessed with caution.

Some of the most important considerations in the presentation and assessment of expert opinion evidence, which recur throughout the discussion below, can be summarized as follows:

- **Relevance:** are the opinions offered relevant to an issue raised before the tribunal?
- **Qualifications:** does the witness have special knowledge, based on qualifications or experience, to provide a proper basis for the opinions offered?
- **Necessity:** are the opinions necessary to the tribunal's decision-making process, or do they usurp the proper role or functions of the tribunal?
- **Foundation:** does the testimony differentiate appropriately between opinions and the underlying facts on which they are based, and are the necessary facts established to support the opinions offered?

Conditions for the Admission of Expert Opinion Evidence

The first three of these considerations were identified by the Supreme Court of Canada in *R v Mohan*⁴ as pre-conditions that must now be met before expert evidence is admitted in the courts. In total five such conditions have

² For a good discussion of this rule, and the principles underlying it, see Alan W Bryant, Sidney Lederman & Michelle K Fuerest, *Sopinka, Lederman and Bryant: The Law of Evidence in Canada*, 4th ed [Sopinka] (Markham: LexisNexis, 2014) at ch 12, Introduction. There are several other excellent evidence texts, which often provide slightly different insights and analysis. It is worth consulting more than one whenever an important issue arises.

³ *Ibid* at 769

⁴ *R v Mohan*, [1994] 2 SCR 9, 114 DLR (4th) 419 [Mohan] at pp 20-25.

now been suggested. They are reviewed in turn below, together with the procedures used by many courts to ensure that the admissibility requirements are met at the outset of a trial.

(a) Relevance and the Requirement for an Expert Report

The requirement of relevance is basic and necessary for any evidence to be admitted, but its application in cases of expert evidence has several dimensions. First the opinion that is offered must arise from or relate to the facts that are relevant to the dispute: an opinion of facts other than those before the court is not relevant, and is of no assistance to the court. However, this does not mean that the expert is limited to facts disclosed or put in issue by the parties: it is quite common for further investigations or tests to be undertaken by or at the request of an expert witness, and for additional facts to be put forward. These are also subject to the relevancy requirement. Finally, the opinion itself must be one that is relevant to an issue which the court has to decide: for example, the value of property in issue, or the negligence of a party.

Even this relatively simple analysis illustrates how expert evidence tends to complicate a dispute, by adding to the facts that need to be decided, as well as the evidence to be considered on certain issues. To address this, most courts and tribunals have rules of practice requiring the preparation of an expert report setting out (among other things) the facts that the expert has considered, and the opinions she or he is offering to the trier of fact. Typically, these rules require parties to exchange reports a certain time in advance of the hearing, and limit the testimony of the experts at the hearing to the matters set out.⁵ One of the functions of such requirements is to allow parties to raise any objections regarding relevance of the proposed testimony before it is called.

The criterion of relevance also has a legal component, which engages counsel for the parties directly. A vital part of counsel's role is to advise on the issues that require expert evidence and the selection of appropriate experts to address them, and to instruct the experts appropriately. It is common practice for counsel, in discussion with the expert, to prepare a retainer letter that sets out any facts provided or to be assumed, and the specific issues on which an opinion is sought.

Again, a key purpose is to ensure that the expert report will meet the relevance criterion by responding to issues defined by counsel involved in the proceeding.

(b) Qualifications and "Tendering" the Expert

Court rules and practices also typically address the requirement for a qualified expert.

Selection of an appropriate expert must be based on their qualifications to provide the opinions requested, but counsel also consider their other qualities as a witness. Discussion of the draft retainer letter with the selected expert ensures that the issues defined by counsel are fully within her or his qualifications. In some cases, this may identify a need to sub-divide the issues between differently qualified experts, and to request two or more separate reports that together meet the needs of the particular case.

The rules of practice requiring expert reports typically require that these also include confirmation of the witness's qualifications to provide the opinion requested. Qualifications may consist of formal training, certifications, research, publications or other experience. Reports typically attach a current CV, and may include other material addressing the witness's qualification to address the specific issues raised in a given case.

In addition, most courts have adopted a screening process, referred to as "tendering" the expert, which counsel is required to go through at the beginning of their expert witness's testimony. This process typically involves leading the expert through their relevant qualifications, and then asking the court to recognize the witness as an expert in a defined area covering the issues in their report. Opposing counsel is then given an opportunity to cross examine the expert on their qualifications in the defined area, followed by any re-examination. The court may then require argument, if there is still any challenge to the witness giving evidence. Ultimately, the court rules both on whether the witness is qualified to give expert opinion evidence, and if so in what area or areas.

In many cases, this process may be abridged in whole or in part by opposing counsel

⁵ See for example, rule 53.03(1) of the Ontario *Rules of Civil Procedure*, RRO. 1990, Reg 194 as am; rule 52.2(1) of the *Federal Court Rules*, SOR/98-106 as am. is to the same effect but requires an Affidavit; and see s. 657.3(1) of the *Criminal Code*, RSC 1985, c C-46 as am.

conceding the issue of qualification. Such counsel may nevertheless elect to cross-examine on qualifications at the outset, either as a matter going to weight rather than admissibility, or simply to restrict the scope of the witness's expertise. In some cases, the relative scope of the witnesses' expertise and the areas in which they are recognized by the court to be qualified to give expert opinions may be the real battleground, as counsel seek to exploit any areas where their own expert is qualified while the opposing expert is not.

Some tribunals abridge or dispense with this tendering process altogether, as a matter of routine. If it will serve no real purpose in terms of the quality of the expert testimony, this may be appropriate. If so, experienced counsel usually agree to dispense with the process. This is common, for example, where the witness has testified previously and has been recognized as having the relevant expertise by the decision-maker. In other cases, however, it can serve an important "gate-keeping" function, as well as ensuring fairness to all parties. There may therefore be a strong case for following it through, particularly where the expert evidence is contested, and the outcome of the case is likely to depend on how that evidence is assessed.

(c) Necessity and Opinions on the "Very Issue" before the Court

It is trite to say that an expert must not usurp the function of the trier of fact, by giving evidence on "the very issue" that the trier is to decide. However, in practice this can be a very difficult line to draw. Two common examples serve to illustrate the problem:

- An accountant asked to give evidence about certain property whose value is in issue may testify about the accuracy of financial data about the property (expert findings), calculations she or he performed on that data and their results (expert conclusions), the fairness of the presentation of information in financial statements related to the property (expert opinion) – and they may offer an opinion as to the value of the property, which may in some cases be the ultimate issue the court is to decide.
- A medical doctor may be asked to give evidence about symptoms observed in a patient or the results of tests performed (findings), the factors likely contributing to the patient's condition (conclusions), their diagnosis (opinion) – and they

may offer an opinion as to the current standard of care recognized in their profession for treatment of the condition, or the causation of the condition, which again approach the ultimate issue to be decided.

The requirement of "necessity" in court decisions about the admissibility of expert evidence is one of the ways this line is drawn on a case-by-case basis: the question asked is whether the trier of fact (judge or jury) could or could not draw the inference required without expert assistance? If the answer is "no", because special knowledge or judgment is required to draw the inference reliably, then expert evidence is admissible to assist. In that case, the integrity of the decision-making process can still be protected in a number of ways, for example:

- the court normally has at least two competing opinions to select from,
- the court is still required to test the opinions given, based on foundation in the facts, in expert literature or research, in common sense or logic, and even based upon the credibility of the witnesses;
- in many areas, experts deliberately express opinions in a form that respects the ultimate decision-making authority of the court; for example, a valuation opinion is often in terms of a range of "reasonable" values rather than a single result.

These and other factors – including the fact that accountants regularly advise buyers or sellers, and physicians regularly treat ill patients in the real world – also help ensure the reliability of the ultimate decision made by the court based on this kind of evidence.

Another dimension of the analysis of whether this line is crossed arises where the inference to which the testimony relates has a legal component: for example, a finding of negligence. Expert evidence about what standards of care are currently practiced in a given profession may be proper. Evidence that shows those prevailing standards do not require certain treatments, or do not mitigate certain risks, may also be proper. However, going on to provide opinions on what the standard ought to be, in a prescriptive sense, usually crosses the line and trenches upon the functions of the court.

At the other end of the spectrum, opinion evidence is not necessary if the court is able to draw the inference itself, without assistance, in

which case the evidence should not be allowed.

(d) Other Exclusionary Rules Continue to Apply

In *Mohan*, the Court added a fourth condition: that the proposed testimony must not fall afoul of any other exclusionary rule of evidence, separate and apart from the opinion rule.⁶ In other words, even if evidence is given by an appropriately qualified expert, is relevant, and meets the necessity criterion, it is not admissible if other exclusionary rules apply.

It is not the purpose of this paper to explore these issues in detail, since available evidence texts generally provide a thorough review. However, both counsel and the tribunal should ensure that other applicable exclusionary rules are not overlooked when expert evidence is developed and presented, including in particular the special problems that can arise with the hearsay rule.⁷

(e) Impartiality, Independence and Bias

Very recently, in *White Burgess Langille Inman v Abbott and Haliburton Company Limited*,⁸ the Supreme Court suggested a fifth condition to the admissibility of expert evidence, in stating that:

“... at a certain point, expert evidence should be ruled inadmissible due to the expert’s lack of impartiality and/or independence.”

This statement builds on a long line of authorities articulating the “expert’s duty” to provide independent, impartial, and unbiased evidence to the courts, which first developed at common law. Based on a review of the case law, the often-cited U.K. case of *National Justice Compania Naviera v Prudential*⁹ set out a number of principles that comprise the elements of this expert’s duty. These may be summarized as follows:

- the evidence should be the independent product of the expert, uninfluenced by the exigencies of the litigation;
- that evidence should be objective, unbiased, and within the witness’ expertise;
- the expert should state the facts or assumptions on which the evidence is based, and not omit to consider relevant facts;
- all qualifications on the opinion should be stated expressly;
- all documents relied on must be produced to the parties; and
- the expert should never assume the role of an advocate.

The duty of the expert to remain impartial and independent has also been codified in the rules of several courts. Recently, in Ontario, the articulation of this duty has been significantly strengthened following a recent civil justice review¹⁰ and subsequent public inquiry¹¹ which identified renewed concerns about the potential for misuse and overreliance on expert opinion evidence. Rule 4.1.01(1) now provides that it is the duty of every expert engaged by or on behalf of a party to provide opinion evidence that is (a) “fair, objective and non-partisan”, and (b) “related only to matters that are within the expert’s area of expertise”. In addition, the expert has a duty to “provide such additional assistance as the court may reasonably require to determine a matter in issue.” Subrule (2) provides that this duty “prevails over any obligation owed by the expert to the party by whom or on whose behalf he or she is engaged”. In addition, the expert is required to sign and include in his or her report a written “Acknowledgement” of this duty.¹² The Ontario Energy Board has now adopted similar principles in Rule 13A of its own Rules of Practice and Procedure.

⁶ *Mohan*, *supra* note 4 at pp 25, 37-39. The Court in that case upheld the exclusion of evidence sought to be called by the defence from a psychiatrist as to disposition to commit the crime charged.

⁷ See *Sopinka*, *supra* note 2 at paras 12.169-12.215.

⁸ *White Burgess Langille Inman v Abbott and Haliburton*, 2015 SCC 23, 383 DLR (4th) 429 [*White Burgess*].

⁹ *National Justice Compania Naviera SA v Prudential Assurance Co*, [1993] FSR 563, [1993] Loyd’s Rep 68.

¹⁰ *The Report of the Civil Justice Reform Project* headed by Coulter Osborne, 2007, made recommendations resulting in these revisions to the *Rules of Civil Procedure* in Ontario. See The Honourable Coulter A Osborne, *Civil Justice Reform Project: Summary of Findings and Recommendations* at ch 9, online: Ministry of the Attorney General of Ontario <http://www.attorneygeneral.jus.gov.on.ca/english/about/pubs/cjrp/cjrp-report_en.pdf>.

¹¹ The 2008 report by Commissioner Stephen Goudge in the *Inquiry into Pediatric Forensic Pathology in Ontario* arose out of concerns about the evidence given by pathologist Dr. Charles Smith.

¹² *Rules of Civil Procedure*, RRO 1990, Reg. 194, Rule 4.1 and Form 53.

However, despite these developments and the Supreme Court's decision in *White Burgess*, it remains to be seen whether it will be possible (as with the other four conditions) to enforce this principle pre-emptively, before the evidence is heard. The Court notes that the threshold for pre-emptive exclusion is "not particularly onerous" and that this "should only occur in very clear cases."¹³

The Court has so far provided little guidance on what "certain point" must be reached before considerations of independence, impartiality and bias should result in a finding of inadmissibility, rather than going to weight. In terms of a test, the Court cited another recent decision of its own, in *Mouvement laïque québécois v Saguenay (City)*,¹⁴ which seems to make this determination depend very much on the facts: "whether the expert's lack of independence renders him or her incapable of giving an impartial opinion in the specific circumstances of the case." While the Court then cited a number of cases in which evidence was ruled inadmissible because the expert was a party litigant, or a lawyer for a party, or had some interest in the litigation, or in one case simply had an inappropriate retainer agreement, *White Burgess* does not clarify whether these were categorical rulings or turned on their particular facts. In the absence of further guidance, it is difficult to anticipate how it could be determined whether the test proposed is met or not, without first hearing the evidence.

The recent decision of the AUC in *TransAlta* is an important acknowledgment and application of these principles by an energy regulator. The Commission accepts and applies the *White Burgess* framework in considering challenges to the admissibility of expert evidence called by both parties. Although no challenge to admissibility had been made by either side in written submissions on the pre-qualification of experts, and questions were not asked of the witnesses in testimony related to the tests subsequently adopted in *White Burgess*, the Commission was able to apply the Supreme Court's analysis retrospectively, and to conclude that all of the experts who testified met the threshold for admissibility.¹⁵

This case law suggests that if it can be shown

that any of these five conditions are not met by proposed expert evidence, then a preliminary objection can be taken to prevent the evidence being heard by a court at all. Interestingly, objections based upon a failure to differentiate fact from opinion, or the sufficiency of the facts to support an opinion, are not currently identified as pre-conditions for admissibility in the same way. As a practical matter, however, many issues related to relevance, necessity and bias may also become apparent only as the substantive evidence is led, and a pre-emptive objection may not always be possible. At that stage, the question as to whether these objections are taken into account in ruling the admissibility of the evidence, or as going to the weight to be given to the opinions and whether they should be accepted at the conclusion of the hearing, may well depend upon the specific facts of the case.

Litigation Experts versus Participating or Third Party Experts

In another very recent decision, the Ontario Court of Appeal has held that these requirements, and particularly the expert's duty respecting independence, impartiality, and bias and requirement to sign an Acknowledgment of that duty, only apply to "litigation experts" who are retained and called by the parties specifically to provide opinions on matters arising in the litigation. In *Westerhof v Gee Estate*,¹⁶ in the context of medical evidence relating to a personal injury dispute, the Court of Appeal usefully distinguishes two other types of experts who are not subject to these requirements.

Under this analysis, "participating experts" are ones who form expert opinions or make expert findings based upon their participation in the underlying events: e.g. a treating physician who renders emergency service at a hospital. There has never been any doubt that such witnesses may give evidence about their actions and observations, including evidence about the expert judgments (opinions) they applied: for example, in terms of the treatments they provided. Similarly, "third party experts" are identified as experts retained by someone other than the litigant parties to form an opinion based on the underlying facts, such as a medical

¹³ *White Burgess*, *supra* note 8, at para 49.

¹⁴ *Mouvement laïque québécois v Saguenay (City)*, 2015 SCC 16 at para 106.

¹⁵ *TransAlta*, *supra* note 1 at paras 85, 100, 105-106.

¹⁶ *Westerhof v Gee Estate*, 2015 ONCA 206, at paras 6-8, 65-86.

practitioner retained to provide opinions for insurance purposes unrelated to the litigation.

What is important about the Court's reasoning in *Westerhof* is that it is expressly *not* based upon drawing a simplistic distinction between fact evidence and opinion evidence, as earlier authorities arguably were.¹⁷ Rather, it expressly accepts that the evidence to be given will be expert opinion evidence, and that it will be given without complying with the rules applicable to litigation experts.¹⁸ Moreover, the rationale for admissibility of this evidence is based upon the presence of other factors that provide assurance as to the reliability of these expert witnesses (specifically that they form and typically record their findings, opinions and conclusions in a professional context prior to, or at least separate from, the particular litigation), as well as the artificiality and impracticality of trying to force compliance with the litigation expert regime.¹⁹ This is important because it may avoid the need to limit their evidence based on untenable distinctions between fact evidence and opinions. Inevitably, in cross-examination or even during examination in chief, counsel may wish to confront these "experts" with the opinions or analysis of litigation experts, to either reinforce or challenge whatever judgments they made at the time they formed their opinion. There is no principled basis to restrict this kind of expert exchange.

The approach taken in the *Westerhof* case should be welcomed by energy lawyers and regulators, to whom the concept of participating and non-party experts should be very familiar. For example, legislation in the energy field sometime allows regulators in an adjudicative proceeding to receive reports from other specialist agencies, such as an electricity system operator, without specifying the evidentiary nature or status of such reports.²⁰ Under the *Westerhof* analysis, such reports can now be recognized as simply as a form of non-party expert report. When an issue is joined on some aspect of such a report before the regulator, responding litigation expert reports could be filed. Procedures could be invoked to require the attendance of an expert representative of the agency for cross-examination on their report.

Ultimately, the tribunal would have the benefit of a full expert evidentiary record to decide the issue in the public interest. Similarly, regulated parties often commission consulting reports when developing a facility, system or policy, long before any issue arises about it in proceedings before a regulator. When such issue does arise, these consulting reports are typically filed. They can now be presented, challenged, and evaluated for what they are: that is a form of participating expert report.

The next question is whether the expert accounting, financial, or technical staff of a regulated party – who invariably testify in energy proceedings – can now also be recognized as participating experts. The fact is that the financial and other documents they prepare, and the witness statements prepared for them by counsel, regularly reflect both implicit and explicit expert opinion evidence. Should they be denied such status, and their evidence restricted, simply because they are not independent of one of the litigant parties?

This question is one that arose before the AUC in its *TransAlta* decision. In that case, one of the Market Surveillance Administrator's expert witnesses was one of its own employees, who had acted as the lead investigator, and prepared the notice of allegations that framed the prosecution before the Commission. *TransAlta* argued that these circumstances gave the witness a "vested interest in the outcome of this proceeding", which should result in his evidence being inadmissible. In rejecting that argument, the Commission relied in part upon the statement by the Supreme Court in *White Burgess* that in most cases "a mere employment relationship with the party calling the evidence will be insufficient" to disqualify the witness altogether. The Commission did not note that the Supreme Court also quoted with approval from longstanding authority to the effect that "there is a natural bias to do something serviceable for those who employ you and adequately remunerate you".²¹

The Commission did, however, accept that in these circumstances "the expert and the party

¹⁷ See especially *ibid* at paras 66-70.

¹⁸ *Ibid* at para 14.

¹⁹ *Ibid* at paras 82-83, 85-86.

²⁰ See for example, the Ontario Energy Board's Decision and Order in EB-2011-0140, *East-West Tie Line – Phase II* (7 August 2013), at p 4 ff, in which the Board requested technical reports from the Ontario Power Authority and Independent Electricity Operator relating to the technical feasibility and requirements and the need for an electricity transmission project.

²¹ *TransAlta*, *supra* note 1 at paras 86-88, 121; and see *White Burgess*, *supra* note 8 at paras 11, 49.

are effectively one and the same”, and that “ordinarily that could be cause for considerable concern leading to the evidence in question being accorded little or no weight”. In finding that the result should not follow in the *TransAlta* case, the Commission recognized a number of important mitigating factors, specifically:

- the assumptions and calculations made by the expert were transparent;
- the Commission had available a critique of the expert’s testimony from TransAlta’s own experts, and was not reliant upon the challenged expert alone;
- the Commission also relied upon its own expertise, which “does allow it to make an informed judgment” about the challenged evidence;
- the witness was “well qualified” because of his “experience and knowledge of the Alberta electricity market”; and
- the Commission accepted both the MSA’s argument that it had a statutory mandate as, itself, an expert body, which should not be unduly prevented from developing and employing its own in-house expertise, and the witness’s testimony that he understood that mandate.²²

The Commission also went on to refer to other “corporate witnesses” whose evidence included some element of specialized technical and opinion evidence, and reaffirmed its 3-step process for weighing these “expert” components of their evidence, by considering:

- the nature of their specialized and technical evidence;
- whether the witness has demonstrated the necessary skill, knowledge and experience to provide an opinion; and
- whether or to what degree the evidence was influenced by the witness’s position as an employee.²³

Consistent with *White Burgess*, the *TransAlta* analysis confirms that, as a practical matter, it may be better simply to recognize, challenge and

weigh the evidence of specialized or technical corporate witnesses for what it really is, and that is expert opinion evidence. Nevertheless, when an issue in the proceeding is truly going to turn on a battle of expert evidence, the regulated party will likely not rely solely on its in-house experts, but rather will be well advised to retain litigation experts to make its case.

The Role of Counsel in Drafting Expert Reports

Another recent decision of the Ontario Court of Appeal in *Moore v Getahun*²⁴ revisits the longstanding debate about counsel’s role in the preparation and review of expert reports, and appears to resolve it convincingly. The trial judge, following one line of prior decisions, had expressed strong concern about counsel’s involvement in the process of drafting expert reports, and required disclosure of all drafts. Her decision caused a renewed debate among lawyers, particularly at the Advocates Society, who prepared “Principles Governing Communications with Testifying Experts”, and intervened in the appeal. The Court of Appeal, adopting the Advocates Society’s “Principles” gave lengthy reasons allowing the appeal. The Court refused to interfere with “the well-established practice of counsel meeting with expert witnesses to review draft reports” on the basis that “expert witnesses need the assistance of lawyers in framing their reports in a way that is comprehensible and responsive”. It also held that production of draft reports is not required and should not be ordered “[a]bsent a factual foundation to support a reasonable suspicion that counsel improperly influenced the expert.”²⁵

This decision provides a strong reaffirmation of the legitimacy of counsel’s involvement, based upon the importance of ensuring that expert evidence is relevant to the matters in issue, and that it is of assistance to the court.

Implications for Energy Regulation

How then should energy lawyers and tribunal members respond to these developments in the case law coming from our courts?

²² *TransAlta*, *supra* note 1 at paras 97, 109-111, 122-128.

²³ *Ibid* at para 132, applying the tests developed in its Decision 2011-236, *Heartland Transmission Project* (1 November 2011) at para 93.

²⁴ *Moore v Getahun*, 2015 ONCA 55.

²⁵ *Ibid* at paras 62-65, 78.

In terms of the tightening rules respecting admissibility of expert opinion evidence, one response may be to ignore them, and carry on as usual. Many energy regulators can rely on provisions like subsection 15(1) of Ontario's *Statutory Powers Procedures Act*²⁶, which provide that they may admit as evidence any relevant testimony "whether or not admissible in a court." The fundamental difference between expert regulators and non-expert courts in terms of the expert evidence they hear may be invoked to justify departures from the approach represented by these decisions.

Indeed, the AUC in *TransAlta* makes a strong case that its own expertise mitigates the specific risk of deferring inappropriately to expert witnesses to a point where it is "not a significant factor".²⁷ Nevertheless, as noted, that Commission carefully applies the Supreme Court's analysis in reaching its assessment of particular expert evidence issues before it. This approach is to be commended, for a number of reasons.

First, as has been shown, the main principles and concerns underlying these decisions – complexity of proceedings, the use of experts as professional "hired guns," the potential to shape expert evidence to support adversarial positions, the risk of usurping the proper role of adjudicators – can all apply with equal force in a regulatory context. The decision whether to exclude the evidence on threshold grounds of admissibility, or to admit the evidence but not accept or act upon it, is ultimately not as important as the reasoned analysis of the evidence and the basis for finding it unreliable. These decisions all contribute to that analysis, and to our understanding of what can make expert opinion evidence either unreliable or compelling.

Second, the purposes of the rules of evidence align closely with the goals that underlie all administrative proceedings. The rules of evidence generally are based on two considerations: fairness and ascertaining the truth through accurate fact-finding. Many regulators would recognize the same principles as fundamental to their goal of optimal decision-making in the public interest. The principles at play in these decisions relate to both the fairness of the process and the accuracy of the findings

related to the admission of expert opinion evidence.

Most importantly, specialized tribunals like those in the energy field are simply more reliant on expert evidence to function effectively. It is necessary for them to receive and assess expert evidence more often and for more purposes, than it is for the courts. It is normal, and a matter of routine. Such tribunals must therefore be prepared to process such evidence more efficiently, and sometimes perhaps more flexibly, than the courts, but that is not a reason to do it any less carefully and deliberately.

Some examples will illustrate both the special opportunities and risks that regulators face in their use of expert evidence.

One important opportunity concerns the proactive development and presentation of expert evidence by regulators in policy development proceedings. For example, the Ontario Energy Board has occasionally hired its own expert to lead a process of stakeholder consultations towards the development of a new policy. This technique was used in hearings to develop new options for demand-side management programs for natural gas utilities, and appears to have been particularly effective because of the absence of sharply adversarial interests between stakeholders. Although judicial review of the process was sought, unsuccessfully, by one intervenor, the grounds for review did not challenge evidentiary process followed in the development of the new policy, but rather the substantive policy options that emerged and the legal status and use of the policy in subsequent Board decision-making.²⁸ In another case, however, the same Board adopted a similar informal consultation process and led expert evidence on the much more contentious issue of rate of return on investment. Although some individual stakeholders led competing evidence to challenge the Board's expert, the ultimate result was a decision and order substantially following the recommendations of the Board's own expert. Although open to subsequent challenge in particular rate hearings, this result left many intervenors unhappy at the appearance of pre-determination, and vowing

²⁶ *Statutory powers Procedures Act, RSO 1990, c s22, s 15(1).*

²⁷ *TransAlta*, *supra* note 1 at para 110.

²⁸ EB-2011-0021, *Generic Proceeding on Demand Side Management Activities for Natural Gas Utilities*, Report dated 25 August 2006; see *Pollution Probe v Ontario Energy Board*, 2012 ONSC 3206 (Div Court, 30 May 2012).

to raise the issue again at the next opportunity.²⁹ These examples highlight both the value of this approach to policy development, but also the importance of fairness considerations in the use and assessment by regulators of their own experts.

Another opportunity, *albeit* with attendant risks, is the engagement in examination of experts by tribunal members who share the same expertise. Properly undertaken, this practice takes advantage of the tribunal's expertise, and can serve the interests of efficiently getting to the heart of the issues troubling the tribunal, while giving notice to the experts, counsel and parties involved of the matters that need to be addressed. The risks are fairly obvious, however, and include the possibility of unfairness if major concerns are being raised only towards the end of a hearing after the evidence is substantially committed, and in extreme cases perhaps even giving an appearance of bias. These risks may be increased if tribunal members at the same time engage in practices (fortunately less common today than in the past), such as performing their own searches of prior reports or testimony of the expert to use in examination, or taking the experts beyond their own reports and testimony to explore other issues reflecting the member's own interests. What is clear from the court decisions reviewed above is that courts are well versed in the issues for fairness related to expert opinion evidence, including the assessment of concerns about bias in this context.

There are, however, many techniques that tribunals can employ to minimize the resulting risks of judicial review. The first is, simply, to raise any issues of concern as soon as expert reports are delivered and filed, so that counsel and the experts can be prepared to address them up front before the hearing begins. Secondly, if tribunal staff have status at the hearing, then cross-examination of the experts (especially questions involving review of material prepared in advance) can appropriately be left to them, as can the preparation of responding expert reports, where appropriate, to address issues of sufficient interest to the tribunal. Just as important, however, tribunals should be prepared to adopt and use the full range of pre-hearing procedures respecting disclosure and resolution of issues,

including those developed by the courts specifically to deal with expert opinion evidence.

In terms of such procedural solutions, some tribunals have developed their own approaches that build upon those of the courts. For example, Rule 13A.04(a) of the Ontario Energy Board's *Rules of Practice and Procedure* allows the Board to require two or more opposing litigation experts to confer in advance of the hearing "for the purposes of, among others, narrowing the issues, identifying the points on which their views differ and are in agreement, and preparing a joint written statement to be admissible as evidence at the hearing". Rule 13A.04(b) also allows the Board to require such experts to appear and be questioned together, on a single witness panel. This kind of innovation is designed not only to increase efficiency and reduce the complexity of proceedings, but also to improve the quality and reliability of the evidence heard and the opportunity for tribunal members to evaluate the competing positions.

These and other procedures, including the involvement of tribunal staff in preparing a case for hearing, can all help to avoid the situation of a tribunal being left with an absence of necessary expert evidence on an issue raised before it.³⁰ No matter how expansive a view one takes of the importance of tribunal expertise or the scope of their ability to take administrative notice of facts, the individual expertise of tribunal members is no substitute for real evidence given by appropriate expert witnesses, tested under cross examination. While tribunal expertise can certainly assist members in understanding and evaluating the expert evidence before them, it cannot by itself provide fair and accurate decision-making in the public interest.

Conclusions

The proper preparation, presentation and evaluation of expert evidence is critical to effective energy regulation. Whether we act as counsel presenting and cross-examining witnesses on matters involving special expertise, or as tribunal members evaluating their testimony, the issues involved are complex and serious, and arise in one form or another on an almost daily basis. These issues are both more

²⁹ EB-2006-0087, *Generic Proceeding to Amend the Licenses of Electricity Distributors*, Decision and Order (20 November 2006).

³⁰ An example where this arose can be found in Decision 2005-028 of the Alberta Energy and Utilities Board (now the Alberta Utilities Commission), in *Westridge Utilities Inc. General Rate Application* (19 April 2005).

prevalent and more important because of the increasing technological and financial complexity of our world, particularly in the field of energy regulation. Recent court decisions in this area are useful to energy lawyers and regulators in a number of ways. They remind us that this kind of evidence is admissible only as an exception to the general rules, and highlight the reasons for the exercise of caution in receiving and relying upon it at all. They reveal principles and procedures developed by the courts over time to govern its admissibility, and ensure its reliability, which are generally still relevant and applicable in energy regulation today. They provide a foundation for energy regulators to build upon, by adapting and adding to the courts experience in ways that can better serve the interests of stakeholders and the public interests involved. This is not to say the decisions should be applied slavishly, either by regulators or on judicial review. Rather it is the principles underlying the admissibility of this kind of evidence that should inform counsel's preparation and probing of the witnesses, in order to strengthen the presentation of competing expert positions. Those same principles should also inform the evaluation performed by energy tribunals, to improve the quality of the ultimate decision-making in this area." ■

CAPE BRETON EXPLORATIONS LTD v NOVA SCOTIA (ATTORNEY GENERAL)

*William Lahey**

The Nova Scotia Utility and Review Board (UARB) concluded the \$93 million investment of Nova Scotia Power Incorporated (NSPI) in a wind power project called South Canoe was a capital expenditure that should be included in NSPI's rate base.¹ South Canoe was one of three Independent Power Producer (IPP) projects approved by Nova Scotia's independent Renewable Energy Administrator (REA). Cape Breton Explorations Ltd. (CBE), a company that had unsuccessfully proposed its own IPP project, appealed the decision of the UARB, as well as the UARB's decision to allow NSPI to claim confidentiality in certain documents, to the Nova Scotia Court of Appeal. The Court rejected the challenge to the UARB's ruling on confidentiality of documents but found that the UARB's conclusion that NSPI's investment should be included in NSPI's rate base was unreasonable and quashed the UARB's decision.²

Legislative Framework

Under the Nova Scotia *Electricity Act*³ and its *Renewable Electricity Regulations*⁴, at least twenty-five percent of the electricity supplied by NSPI in 2015 was required to be renewable electricity.⁵ Roughly half (300 GWh) was required to come from IPPs. By definition, IPPs are generators of renewable low-impact electricity of which no

more than 49 per cent of the voting securities are held by a public utility.⁶ The REA holds a competitive process to determine the IPPs from whom NSPI is required, by 1 subsection 4B(12) of the *Electricity Act*, to purchase renewable electricity using a standard Power Purchase Agreement (PPA) approved by the UARB. Section 4B(13) of the *Electricity Act* requires the UARB to allow a public utility "to recover from its rate base the costs of the public utility's contracts referred to in subsection (12) on the basis approved by the Board (the UARB) under the *Public Utilities Act*".

Section 35 of the *Public Utilities Act* reads as follows:

No public utility shall proceed with any new construction, improvements or betterments in or extensions to its property used or useful in furnishing, rendering or supplying any service which requires more than the expenditure of more than two hundred and fifty thousand dollars without first securing the approval thereof by the Board.⁷

Decision of the UARB

The REA approved the bid of Oxford for

* William Lahey, Associate Professor, Schulich School of Law, School of Health Administration and College of Sustainability, Dalhousie University.

¹ *Re Nova Scotia Power Inc, Approval of a 2013 Capital Expenditure for the South Canoe Wind Project* (Decision), 2013 NSUARB 92, accessed online with docket number M05416: <<http://nsuarb.novascotia.ca/>> [*South Canoe Wind Project*].

² *Cape Breton Explorations Ltd v Nova Scotia (Attorney General)*, 2015 NSCA 33, online: <www.courts.ns.ca/Decisions_Of_Courts/documents/2015nsca35.pdf> [*Cape Breton Explorations*].

³ *Electricity Act*, SNS 2004, c 25.

⁴ *Renewable Electricity Regulations*, NS Reg 155/2010.

⁵ *Ibid* at s 6.

⁶ *Ibid* at s 3(1).

⁷ *Public Utilities Act*, RSNS 1989, c 380, s 35.

a 78MW wind farm and the bid of Minas Basin for a 24MW wind farm, which together constituted the South Canoe Wind Project. For its investment of \$93 million, NSPI owned half of the project's 34 turbines representing 49 per cent of the project's assets. It applied to the UARB to have this investment approved as a capital expenditure recoverable from ratepayers under section 35 of the *Public Utilities Act*.

CBE challenged the jurisdiction of the UARB to consider NSPI's application, arguing on the basis of 4B(13) of the *Electricity Act* that ratepayers could only be charged for the electricity procured from an IPP, not for the cost of the assets used to produce that electricity.⁸ It argued section 35 of the *Public Utilities Act* only applied to electricity produced by NSPI, not to electricity NSPI procured from an IPP.

The UARB granted NSPI's application. It interpreted subsection 4B(13) of the *Electricity Act* as stating that NSPI was to recover its IPP-related costs, not only the cost of purchasing electricity from an IPP.⁹ It reasoned that NSPI's investment in IPPs would otherwise, contrary to "a fundamental principle of public utility regulation", be unregulated, allowing it to earn unregulated profits from ratepayers which could potentially result in profits in excess of NSPI's allowed rate of return.

The UARB then found that section 35 of the *Public Utilities Act* applied.¹⁰ It relied on the statutory definition of "service" as including "the production, transmission or furnishing to or for the public by a public utility [...] of electrical energy". It also relied on the statutory definition of a "public utility" as including any person owning, operating, managing or controlling "any plant or equipment for the production, transmission, delivery or furnishing of electrical power or energy [...] either directly or indirectly to or for the public". According to the UARB, the assets owned by NSPI were being used by NSPI either directly or indirectly to provide a service to the public. The fact that the electricity in question was to be generated by an IPP was "immaterial."

Decision of the Court of Appeal

On CBE's appeal to the Nova Scotia Court of Appeal, CBE, NSPI and Justice Farrar, writing for the Court, all agreed the standard of review was reasonableness.¹¹ Despite this, the UARB's decision was subjected to a review that was almost certainly as extensive and detailed as review for correctness would have been. Justice Farrar concluded that the UARB's decision in favour of NSPI was outside of the range of possible outcomes – i.e. the range of outcomes that the UARB could reasonably reach – because it rested on multiple errors in interpreting subsection 4B(13) of the *Electricity Act* and section 35 of the *Public Utilities Act*.

On subsection 4B(13), the UARB's error was interpreting it as providing for NSPI's recovery of the cost of its investment into South Canoe even though the provision only referred to the "the costs of the public utilities contracts referred to in subsection (12)", i.e. the cost of purchasing electricity from an IPP under a PPA. In quoting the subsection in a crucial paragraph of its ruling, the UARB had omitted the words which qualified the subsection's reference to costs. This, wrote Justice Farrar, "completely alters the meaning of the subsection".¹²

On section 35 of the *Public Utilities Act*, the Court said it was clear on a "plain reading" of the section,¹³ which only applied to expenditures on "property used or useful in furnishing, rendering or supplying any service," that IPP-generated electricity was a service provided by the IPP and not NSPI. The error of the UARB in reaching the opposite conclusion was multi-faceted.

First, it resulted in NSPI having it both ways: it could count electricity from South Canoe as counting towards its obligation to purchase 300 GWh of renewable electricity from IPPs and also as a service it provided to the public for the purpose of recovering the cost of its investment from ratepayers.¹⁴

Second, because section 35 would clearly not apply if NSPI owned shares of an IPP company,

⁸ *South Canoe Wind Project*, *supra* note 1, at paras 1-4, 18-19, 64-65.

⁹ *Ibid* at paras 78-79.

¹⁰ *Ibid* at paras 87-91.

¹¹ *Cape Breton Explorations*, *supra* note 2 at paras 40-41.

¹² *Ibid* at paras 48-50 and specifically at para 53.

¹³ *Ibid* at para 76.

¹⁴ *Ibid* at paras 79-87.

there could “be no public policy justification” for interpreting it as applying where NSPI owned assets instead of shares.¹⁵ On this point, the Court questioned whether the South Canoe Project, given 49 per cent ownership of assets by NSPI, should have been treated by the REA as an IPP in the first place. This was so even though the definition of IPP in the Renewable Electricity Regulations only limited public utility IPP share ownership and only above the 49 per cent level, the level of NSPI’s ownership of assets.

Third, the Court found that the “plain reading” conclusion that IPP-generated electricity was a service provided by the IPP and not NSPI was supported by a deeper and more contextual look at the broader legislative context.¹⁶ It was supported by the definition of an IPP, which required an IPP to be “a renewable low-impact electricity generator [...] that sells electricity [...] to public utilities for retail sales to the utilities’ customers”. This showed that NSPI was a conduit between IPPs and their customers. The plain reading interpretation was also supported by the grounding of the *Public Utilities Act* on the cost of service model of regulation, under which utilities are compensated for the cost of producing the electricity they sell. For the Court, this reinforced the conclusion that compensation in relation to electricity purchased from an IPP was a matter exhaustively governed by the *Electricity Act* and *Electricity Regulations*. Meanwhile, NSPI’s ownership of turbines at South Canoe did not matter to the question of the applicability of the *Public Utilities Act* for three reasons:¹⁷ one, because under a PPA, the electricity delivered to NSPI would come from turbines owned and turbines not owned by NSPI without differentiation; two, because the definition of public utility referred to a person owning assets and not to a person owning assets with another; and three, because applying the *Public Utilities Act* via NSPI’s ownership of assets would be equivalent to regulating an IPP as a public utility, whereas IPPs were, as retail suppliers, expressly excluded from the definition of public utility by the *Electricity Act*.

The Court also found the UARB’s interpretation

of section 35 to be contrary to the intentions of the legislature in amending the *Electricity Act* to put the procurement of electricity from IPPs into the hands of the REA.¹⁸ This intention was to establish a complete code for the procurement of IPP-generated electricity that was separate from and parallel to regulation of NSPI under the *Public Utilities Act*. In this context, the provision made by 4B(13) of the *Electricity Act* for recovery by NSPI of its cost of procuring IPP-generated electricity had to be interpreted as exhaustive of NSPI’s entitlement to recover IPP-related costs. Three additional considerations reinforced this conclusion:

- the *Public Utilities Act* was silent on renewable energy whereas regulations under the *Electricity Act* dealt with NSPI’s recovery of its costs in producing renewable electricity as well as its costs in procuring it;¹⁹
- the *Electricity Act* and regulations could easily have been written to expressly provide for recovery by NSPI of the cost of IPP assets but they were not;²⁰
- and the definition of an IPP as an entity that sells electricity to a utility for resale to the public showed an intention that the public would pay by purchasing this electricity rather than by having the cost of production incorporated into the rate base of the purchasing utility.²¹

The conclusion that 4B(13) was meant to be exhaustive was also supported by the language of Nova Scotia’s Renewable Energy Strategy. It described the production of renewable electricity by NSPI under UARB oversight and procurement of electricity from IPPs through a competitive bidding process conducted by the REA as parallel processes for ensuring best value to ratepayers in the implementation of renewable electricity standards.²²

Finally, the Court dismissed the UARB’s concern that the non-applicability of section 35 would allow NSPI to make unregulated profits.²³

¹⁵ *Ibid* at paras 88-98.

¹⁶ *Ibid* at paras 99-108.

¹⁷ *Ibid* at paras 104-108.

¹⁸ *Ibid* at paras 109-128.

¹⁹ *Ibid* at paras 115-117.

²⁰ *Ibid* at para 118.

²¹ *Ibid* at para 120.

²² *Ibid* at paras 121-125.

²³ *Ibid* at paras 129-151.

It invoked earlier UARB decisions requiring NSPI to carry the risk of assets it had acquired to show that neither the *Public Utilities Act* or the “fundamental principle of utility regulation” precluded the owning of assets outside of rate base. Unregulated profits on such assets were not a problem, according to the Court, because “it is not the ratepayers’ money at stake; the ratepayers do not bear the risk of loss so they do not receive the benefit of any gains”.²⁴ Moreover, the UARB’s consequentialist interpretation of section 35 was invalid because it contravened subsection 4B(13) of the *Electricity Act*, departed from a harmonious interpretation of the broader legislative framework and ignored the legislative intention to frame cost of service regulation by the UARB and competitive bidding conducted by the REA as alternative and parallel regulatory mechanisms.²⁵

Analysis

Following the Supreme Court of Canada’s reformulation of judicial review of the substance of administrative decision-making in *Dunsmuir v New Brunswick*,²⁶ the decision of the Nova Scotia Court of Appeal in this case is one of many in which reviewing courts quickly and easily conclude, often with the agreement of the parties, that the standard of review is reasonableness. There is however not a hint of deference in how that standard of review was applied to the UARB’s decision. Although the Court rejected CBE’s written submission, which was not pressed in oral argument, that the question in issue was a jurisdictional question to be reviewed under *Dunsmuir* for correctness,²⁷ it proceeded to review the decision of the UARB for reasonableness much as it would have reviewed it for correctness. It went well beyond asking itself if the UARB had justified its interpretation of the applicable legislation. It instead conducted its own independent and extensive analysis to justify the interpretation the UARB should have come to. In other words, it reviewed the UARB’s decision much as the Supreme Court of Canada reviewed the decisions in *ATCO Gas and Pipelines Ltd v Alberta (Energy and Utilities Board)*²⁸ and in *Barrie Public Utilities v Canadian Cable Television Assn*²⁹ for correctness before *Dunsmuir* made reasonableness the presumed

standard of review in such regulatory cases. This shows the limited difference that *Dunsmuir* and the choice of standard of review can sometimes have in energy regulation even if it does result in review for reasonableness rather than correctness.

It can be speculated that this is more likely because of *Dunsmuir*’s success in making the applicability of reasonableness so clear that it is often agreed to or decided with minimal analysis, as it was in this case. This avoids the need for a discussion of the factors warranting deference which may, if discussed, influence how review for reasonableness is then conducted. For example, in this case, the agreement of the parties that reasonableness was the standard of review meant there was no need for any discussion of the specialized expertise of the UARB, the polycentric nature of its mandate, or the specific nature of the legal question decided by the Board as a home and connected statute question as distinct from a general question of law. Perhaps discussion of such factors in the choice of a standard of review helps to ensure they are also taken into account in determining how review for reasonableness is calibrated to its context. At a minimum, such discussion may help to ensure that such review involves at least some deference.

Another factor in this kind of case may be the thoroughness of the regulator’s explanation for their interpretations of legislation, especially when reaching counter-intuitive conclusions on legal questions that require more explanation and justification if they are to be found reasonable by non-expert judges. Leaving aside questions about the Court’s approach to reviewing for reasonableness, its analysis of the law applicable to NSPI’s application shows that the UARB’s decision relied on interpretations that would have been difficult to defend, even if they were not, as the Court suggested, impossible to defend. Yet the UARB’s reasoning on the crucial issue of the applicability of section 35 of the *Public Utilities Act* was brief and conclusionary. It did not extensively engage with the competing arguments such as those based on the view that the provisions on procurement of renewable electricity from IPPs found in the *Electricity Act* and *Electricity*

²⁴ *Ibid* at para 147.

²⁵ *Ibid* at para 148.

²⁶ *Dunsmuir v New Brunswick*, 2008 SCC 9, [2008] 1 SCR 190.

²⁷ *Cape Breton Explorations*, *supra* note 2 at paras 44-46.

²⁸ *ATCO Gas and Pipelines Ltd v Alberta (Energy and Utilities Board)*, 2006 SCC 4, [2006] 1 SCR 140.

²⁹ *Barrie Public Utilities v Canadian Cable Television Assn*, 2003 SCC 28, [2003] 1 SCR 476.

Regulations were intended to be exhaustive. Of course, under *Newfoundland and Labrador Nurses Union v Newfoundland and Labrador (Treasury Board)*³⁰ and other decisions of the Supreme Court of Canada, it was not required to do so. But even allowing for the responsibility of courts, as emphasized in *Newfoundland and Labrador Nurses*, to supplement reasons given for a decision before subverting them, reasons for decision which do not fulsomely grapple with key arguments, especially on questions of law, give reviewing courts less to review than reasons that are proportionate to the issues they decide. They may thereby make it easier for courts to go beyond reviewing and into independent decision-making.

A related observation is that regulators should know from this and other cases that purely functional interpretations of legislation that do not fully engage with the text, context and purpose of the provisions in play will be vulnerable on review.³¹ In this case, the UARB's reasoning came close to being that section 35 had to be applicable because consequences that departed from regulatory principles could follow if it was not applicable. The Court did not accept that the consequences the UARB feared were real ones but equally, it did not accept that the legislation could be interpreted to avoid them if it could not otherwise be so interpreted.

It is perhaps telling that the regulatory rationale for the UARB's interpretation of section 35 is the very point on which the Court's critique of the UARB is most questionable. In rejecting the UARB's concern about allowing NSPI to own assets outside of its rate base, the Court did not consider the difference between assets which were needed to produce electricity and assets NSPI used in producing electricity but purchased for broader business purposes. More broadly, in framing the issues in terms of UARB's willingness to allow NSPI to have it "both ways," the Court did not consider the benefits that ratepayers received from having section 35 applied to NSPI's investment in South Canoe. Specifically, it did not consider that while this would benefit NSPI by ensuring its recovery of its capital outlay, it would also benefit ratepayers

by bringing the profit NSPI would earn on those outlays within the general limit on NSPI's profit.

More broadly, the Court framed the issues of statutory interpretation without any apparent understanding of a wider factual context in which NSPI investment in IPP projects benefits ratepayers by reducing the cost of these projects by, for example, providing them with the benefit of NSPI's lower borrowing costs. The significance of this is illustrated by the role that NSPI had played, prior to applying to have its investment in South Canoe added to its rate base, in saving other IPP projects by becoming an investor in them to ensure their financial viability.

This context may have been relevant for understanding the legislature's choice to allow NSPI to own up to 49 per cent of entities involved in IPP projects, to place no limitation on NSPI ownership of IPP assets and to provide affirmatively for NSPI's recovery of the cost of purchasing IPP electricity without expressly precluding NSPI recovery of its investment in IPP assets. The UARB would understand this context better than a reviewing court. It alluded to it but did not very fully explain it in ruling in favour of NSPI's South Canoe application. The result may have been adjudication of CBE's appeal that was less informed than would otherwise have been the case. More specifically, the result may have been a judicial review conducted with inadequate appreciation of the rationale for at least some deference for the UARB's conclusions on a question of law it decided in favour of NSPI but also in favour of ratepayers. ■

³⁰ *Newfoundland and Labrador Nurses Union v Newfoundland and Labrador (Treasury Board)*, 2011 SCC 62, [2011] 3 SCR 708.

³¹ Another case from which this lesson may be taken may be *Canadian Human Rights Commission v Canada (Attorney General)*, 2011 SCC 53, [2011] 3 SCR 471, a case where the *Canadian Human Rights Tribunal* interpreted the *Canadian Human Rights Act* in such a way that authorizes the awarding of costs solely on the basis of invoking the principle that human rights legislation should be interpreted broadly and liberally and without engaging with the specific arguments that could be made against such an interpretation.