

THE CONVERSATION

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Land Protectors Jenelle Duval, Susan Oralik, Vicki Allen and Amelia Reimer (left to right) look on as Denise Cole beats the drum on the steps of the Confederation Building in St. John's on Tuesday, Oct.25, 2016 during a Muskrat Falls demonstration. THE CANADIAN PRESS/ Paul Daly

Muskrat Falls hydroelectric project poses risks for Canada that are being ignored

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September saw the scheduled flooding at the Muskrat Falls hydroelectric facility in Labrador, with the first power from the facility set to start this fall. The \$12.7 billion provincial investment in green energy has driven Newfoundland and Labrador to the verge of bankruptcy and made a global exhibition of Canada's natural resource development. Too often the impacts on Indigenous Peoples are treated as afterthoughts.

The province has spent the past 10 years refusing to engage the Labrador Inuit over their credible concerns of health impacts from the hydroelectric project. It has ignored both the available scientific evidence and the recommendations of an independent committee it itself created.

Author



Ryan Calder

Postdoctoral Associate, Duke University

Accusations that the province of Newfoundland and Labrador misled the Labrador Inuit over its plans to mitigate the risk associated with the hydroelectric project have led to a wave of protests.

Although there has been some Canadian media interest in Muskrat Falls, the coverage has generally failed to address the systemic factors that enabled the province to disregard the constitutional rights of Indigenous Peoples to consultation and consent.

International news coverage has portrayed Muskrat Falls as part of a broader trend, in which Canadian hydroelectric development is almost always pursued at the expense of Indigenous populations. This threatens the viability of Canadian hydropower, which depends on access to the U.S. export market.



The construction site of the hydroelectric facility at Muskrat Falls, Newfoundland and Labrador is seen on July 14, 2015.
THE CANADIAN PRESS/Andrew Vaughan

Muskrat Falls seems to be changing American perceptions of the sustainability and democratic legitimacy of Canadian hydropower imports compared to other renewables. Muskrat Falls therefore jeopardizes Canada's economic welfare, in addition to its moral credibility.

Muskrat Falls and methylmercury

Flooding hydroelectric reservoirs accelerates the microbial decomposition of soil organic matter and production of methylmercury. Methylmercury is a potent neurotoxin that that can accumulate in local fish and other aquatic species such as seals and birds.

Prenatal exposure to methylmercury is associated with a host of neurodevelopmental impacts, including ADHD and reduced IQ. Any increase in exposures, even at low levels, increases these risks.

All seafood consumers are exposed to methylmercury. But for most people, the benefits of eating seafood exceed the risks.

Read more: The mercury level in your tuna is getting higher

Indigenous communities face high rates of food insecurity driven by high food prices and low opportunities for wage labour. They are often dependent on access to (and trust in) traditional food sources for nutritional sufficiency.

Hydroelectric development therefore forces affected communities to choose between two evils — higher methylmercury exposures or changes to the most nutritious part of their diets.

Renewable energy plan

The Muskrat Falls hydroelectric facility was sanctioned in 2012 as the cornerstone of the Lower Churchill Project, an ambitious plan to provide renewable energy to Atlantic Canada and New England.

Throughout the design and permitting process, the Labrador Inuit raised concerns over potential methylmercury impacts: their land claim area extends into Lake Melville, an estuary about 50 kilometres downstream from Muskrat Falls.

In part, these fears were driven by the legacy of Churchill Falls, a previous hydroelectric project upstream of Muskrat Falls. After the Churchill Falls project, fish methylmercury levels increased more than 10 times above baseline levels at their peak. These impacts were observed more than 300 kilometres downstream and persisted for more than 30 years.

Nalcor, the provincial Crown corporation responsible for the project, concedes that flooding is likely to increase methylmercury levels in the reservoir and river environment. However, it has maintained since 2009 that “there is no reasonable possibility” of impact on Labrador Inuit, a position reaffirmed in 2016 and again by the provincial government in 2019.

Risks to Inuit

Since 2012, I have been part of an interdisciplinary team of researchers working to characterize the risks of Muskrat Falls to the Labrador Inuit. We have described how northern estuaries like Lake Melville are vulnerable to changes in river methylmercury inputs, how highly varied diets leave some individuals likely to face elevated methylmercury exposures and how food consumption advisories are likely to deprive a food-insecure population of access to nutritious, traditional food.

Sustained pressure in the wake of these scientific findings led Newfoundland and Labrador to create in 2017 an independent committee to evaluate the evidence on health risks of Muskrat Falls.



Muskrat Falls, on the Churchill River in Labrador, is shown in a February 2011 file photo. THE CANADIAN PRESS/Paul Daly

In 2018, the committee voted in favour of soil removal and wetland capping to reduce methylmercury risks. The Nunatsiavut Government, representing the Labrador Inuit, urged the provincial government to act on the recommendations.

The province, however, stalled for more than a year, until declaring in 2019 that the deadline had been “unintentionally missed.” (The Innu Nation, who were able to negotiate a benefits sharing agreement in 2012, had opposed this advice, describing it as “risky” and calling into question its cost-effectiveness.)

What was the province's actual commitment to consultation or indemnification? Was it surprised by the advice of the independent committee to which it had appointed numerous Nalcor consultants?

International standing in jeopardy

Roughly 10 per cent of the electricity generated by Canada is exported to the United States, driving a hydropower boom north of the border. Northern states have been counting on Canadian hydropower to achieve their renewable energy targets. However, the U.S. environmental lobby is increasingly hostile to importation of Canadian hydropower, favouring stateside development of renewables such as wind.

For example, the North American Megadams Resistance, a New York-based advocacy group, has drawn on the experience of Marjorie Flowers, an Inuk activist imprisoned for her protest against Muskrat Falls, to argue against hydropower imports from Québec.

Meanwhile, the Conservation Law Foundation is setting the stage for a legal challenge to the U.S. Department of Energy's deference to Canadian environmental assessments in authorizing cross-border electrical connections. Currently, the DOE defers to Canada to evaluate impacts within its borders on the premise that impacts are assessed and reconciled within a democratic framework.

There is however a real and growing perception among international policy makers that Canadian natural resources are tainted by undemocratic processes and disrespect of Indigenous rights supposedly enshrined in both Canadian and international law. Notably, in June, the United Nations Special Rapporteur on human rights and hazardous substances commented publicly on the "absence of meaningful consultation" of Indigenous communities by Canadian governments regarding methylmercury impacts.

Look to Québec

In Canada, the provinces are primarily responsible for questions of environmental and human health. So, they need to invest in developing a culture of transparent, inclusive and scientifically substantiated environmental impact analysis.

Québec is by far the leading producer of hydroelectricity in Canada and has the most to lose from reduced market access. Historic confrontations with Indigenous communities over hydroelectric development in the 1970s led the province to overhaul its approach to environmental assessment and public engagement.

Virtual reality visit of a hydroelectric generating facility [360 vide...



Virtual reality visit of a hydroelectric generating facility (Hydro-Québec).

Today, decision-making at Hydro-Québec, the crown corporation responsible for electrical generation and delivery, is heavily influenced by independent, project-specific committees that include scientists and Indigenous representatives. More broadly, institutions such as the *Bureau d'audiences publiques sur l'environnement* seek to reconcile public opinion with the scope of environmental assessments and mitigation measures.

Conversely, Newfoundland and Labrador has spent years hollowing out its civil service. It is now reliant on the advice of consultants retained via short-term contract to understand the likely impacts of its natural resource endeavours.

Québec has invested heavily in creating and maintaining scientific capacity and politically independent public institutions. This has had the net result of increasing the democratic legitimacy of its economic projects. Canada's moral standing and economic survival may depend on other provinces catching up.

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