



March 7, 2022

**VIA ELECTRONIC MAIL**

Honourable Michelle Phillips, Secretary  
State of New York Public Service Commission  
Three Empire State Plaza  
Albany, NY 12223-1350

**RE: Case 15-E-0302: Comments of Grand Riverkeeper Labrador, Inc. regarding  
Proposed Tier 4 Contract Award to the Champlain Hudson Power Express Project**

Dear Secretary Phillips:

You may be wondering why a group from Labrador is making comments about the proposed awarding of a Tier 4 contract to a transmission project in New York, USA. Please let us explain.

Grand Riverkeeper Labrador is a Federally Incorporated Non-Profit organization located in Labrador, Canada, whose mission is to preserve and protect water quality and the ecological integrity of the Grand (a.k.a. Churchill) River and its estuaries for present and future users and for posterity through actions of public awareness, monitoring, research, networking, intervention and habitat restoration.<sup>i</sup>

We have been a member of the New York based Waterkeeper Alliance which unites a global network of over 300 Waterkeeper groups protecting more than 2.5 million square miles of rivers, lakes, and coastal waterways on six continents since June, 2005.

Our river is already impacted by two dams: The Muskrat Falls dam, 824 MW, about 36 km from the communities of Happy Valley-Goose Bay, MudLake, North West River, and Shesheshiu, construction of which is nearly complete, and the Churchill Falls project (5400 MW) at the head waters of the river which has been operating since the early 1970's. A third dam on this river the Gull Island project is looming and would completely annihilate what's left of this partially free flowing, 7<sup>th</sup> largest river in Canada.

So, why then should you consider comments from a group 2300 km from New York City and in another country? Answering that question is the purpose of this missive and we sincerely hope

you will seriously consider that although we and the Grand River are so far away, the current and proposed hydro projects on our river and their impacts on our ecosystems, our communities and on climate change should definitely be considered in your decision about whether the hydro power being proposed to come to New York by way of the Champlain Hudson Power Express should be awarded the Tier 4 designation as “Clean Energy”.... We hope you will agree that it definitely should not.

First let us explain why our river the Grand (a.k.a. Churchill) River is part of the equation.

As you may or may not know, 90 % of the power (5400 MW) from the Churchill Falls project on the Grand River belongs to Hydro Quebec under contract until the year 2041. The Churchill Falls project is the second largest plant under Hydro Quebec’s control and therefore, at any given moment power can be flowing from the Grand River onto the Hydro Quebec transmission lines and on into New York over the CHPE. The newest project, Muskrat Falls, once it is operational, is under contract to Emera, (a US based company) doing business in Nova Scotia as Nova Scotia Power. The third proposed project, Gull Island, if built, would be a merchant project, totally for sale to the United States and perhaps eastern Canada and we are convinced that Hydro Quebec is the only entity in Canada that could build the Gull Island project.

We hope to show in the details below and the documents linked at the end of this document that Canadian hydropower is definitely not a low carbon alternative and that it cannot reduce greenhouse gas emissions; also, that many of the social and environmental justice issues of Canadian hydropower are unacceptable and we ask you to stand in solidarity with all hydro-impacted communities in Canada, and around the globe, calling for a halt to the cultural genocide of Indigenous Peoples taking place wherever megadams are constructed.

**NEGATIVE IMPACTS OF MEGA HYDRO PROJECTS GLOBALLY (INCLUDING THOSE IN QUEBEC AND LABRADOR) AND LINKS TO DOCUMENTS FOR YOUR REVIEW:  
DAMS...**

- Fragment and strangle rivers, as nutrients and sediment get blocked behind dams. <sup>iiii</sup> (starving fisheries in the estuaries and oceans)
- Destroy fresh water and marine habitat along with the fisheries dependent on them, <sup>ivvviiviii</sup> (Fishers reported the cod disappeared off the Hamilton Banks in Labrador within a year after the Churchill Falls project came on stream in the early 1970s).
- Pollute riverine and marine waters with heat and cold at the wrong times of the year for fish and larve survival. <sup>ix</sup> Larve cannot tolerate more than one or two degrees of temperature change.
- Produce significant volumes of greenhouse gas emissions including methane: (see Dr. Bradford Hager references below)
- Poison wildlife, fish, and the Indigenous Peoples who depend on them with the neurotoxin methyl mercury, <sup>xxi</sup> (90 % of proposed Canadian hydro projects may

expose indigenous communities to methyl mercury-Harvard John A. Paulson School of Engineering)

- Repeatedly violate treaty rights obligations and Indigenous rights, as prescribed by the UN Declaration of the Rights of Indigenous Peoples (UNDRIP) (The United Nations Special Rapporteur on human rights and hazardous substances, Baskut Tuncak, had this to say about the Muskrat Falls project in Labrador: “ I urge the Federal Government to use its leverage as the largest investor in the project to review whether UNDRIP compatible procedures were followed for **ALL** affected Indigenous Peoples, and to prevent the release of methylmercury.” (bolding and caps added) (However, the Province and the Proponent “MISSED” the deadline to clear the reservoir, a mitigation measure recommended to decrease methyl mercury contamination, which was recommended by their own Independent Committee.) Yet they had information on these recommendations for capping the wetlands and clearing vegetation for almost a year before the reservoir was eventually filled. <sup>xii</sup> This is totally unacceptable and directly contravened the UN Special Rapporteur’s recommendation and calls into question Canada’s commitment to UNDRIP on this project as well as many more extractive projects across the country where Indigenous people’s traditional territories have been pillaged and their rights contravened time and time again.
- Cause depletion of phytoplankton and diatoms which produce 20% of the oxygen we breathe on earth. <sup>xiii</sup> <sup>xiv</sup> Silicon (sediment) retention in river basins have far reaching effects on Coastal Marine Environments. Since diatoms are able to photosynthesize, they convert dissolved carbon dioxide in the water into oxygen. If Diatoms are depleted by silicon retention behind dams, carbon dioxide increases in the oceans and oxygen decreases in the atmosphere. Which causes acidification in the oceans. <sup>xv</sup>
- Release warm water from stagnant reservoirs at the wrong time of the year when electricity is needed and have contributed to warming the oceans of the planet which some marine ecologists say have warmed to a “point of no return” <sup>xvi</sup> <sup>xvii</sup>
- Flooded forests and wetlands are changed from carbon sinks to carbon emitters,
- And a multitude of other negative impacts-too many to mention here,

The construction of nearly every dam in Canada has inundated traditional hunting, fishing and in some cases burial grounds of Indigenous peoples, (at Churchill Falls in Labrador Innu graves were flooded), <sup>xviii</sup> the destruction of Indigenous lands in Manitoba, <sup>xix</sup> and also in British Columbia on Treaty 8 First Nations traditional land with the Site C mega hydro project. <sup>xx</sup>

Several First Nations in Quebec and Labrador have sued Hydro-Quebec, asking for compensation for not consulting with them before building hydro projects on their lands. <sup>xxi</sup> Treaty 8 First Nations in British Columbia have also sued their government over the construction of the Site C hydro project on their traditional lands with no consultation and no consent. Inuit at Nunatsiavut in Labrador were told Muskrat Falls would not impact their hunting and fishing rights and that no methyl mercury would accumulate beyond the mouth of the Grand river and into Lake Melville, but they did not believe them and reached out to

Harvard and Memorial Universities and with a multi-year study, proved that methyl mercury would contaminate the fish, seals and wildlife that they consume as part of their traditional diet. <sup>xxii</sup> <sup>xxiii</sup> Nalcor Energy (Muskrat Falls proponent) dismissed the Harvard Mercury Study which clearly indicates that flooding of Muskrat Falls would result in a substantial increase in methylmercury outputs to Lake Melville where Inuit hunt and fish. The Nunatsiavut government was outraged by their response. <sup>xxiv</sup> Building one more dam on the Grand river, (Gull Island) would increase methyl mercury contamination by three times more for all users of the resource but especially for the Inuit people of Nunatsiavut who must supplement any shortage of country food with extremely expensive store food from the government controlled grocery stores. Think about paying over \$100.00 for a thanksgiving turkey and you will certainly understand why eating neuro-toxin contaminated country food would likely still be how most people in these communities will have to continue to feed their families. This is unacceptable!

There are multitudes of environmental justice issues with the dams in Quebec, Labrador and all across Canada. Ignoring these environmental justice issues is morally and ethically wrong and is akin to cultural genocide of the Indigenous Peoples of Canada.

#### **OUR UNDERSTANDING OF TIER 4 DESIGNATION:**

We researched the organization NYSERDA (the New York State Energy Research and Development Authority) in order to understand it's mandate and some of the work it has accomplished in New York and we note that this organization has a Publications and Technical Reports Section. We searched for information about large hydro projects but were unable to find any. (This does not mean none exist but with the time on hand we did not locate anything) We did, however, find a document called The New York Energy Institute Project report and it is to this report and the section on it's responsibilities that include "Conducting a multifaceted energy and environmental research and development program to meet New York State's diverse economic needs"(underlining added), that we hope some of the scientific documents we are attaching to this submission are forwarded, even though they may not be energy research that has been worked on at New York Universities. Had NYSERDA considered the latest science on GHG emissions from hydro reservoirs and dams, we believe they could not have supported or chosen the CHPE project as the best choice to reduce emissions. Also, Hydro Quebec, in our opinion, is currently not able to provide peaking power unless more hydro projects are built and one of those we fear they are eyeing is the third proposed project on our river in Labrador, The Gull Island project (2230 MW).

In 2019, New York's Climate Leadership and Community Protection Act (CLCPA) set mandated targets for decarbonizing the state's electricity. These mandates call for 70 % renewable energy by 2030 and 100 % ZERO-emissions energy by 2040 and that these targets are to be implimented by the state's Clean Energy Standard (CES).

The Tier 4 program, we understand, was established under the CES by the Public Service Commission in October 2020 and is designed to address the state's targets by bringing large-scale renewable energy to the New York City grid.

Since the CES runs on renewable energy credits (REC's) which are certificates that represent the environmental attributes—e.g. avoided greenhouse gas emissions and air pollutants of a MWh or renewable energy, and since those certificates can be bought and sold as commodities to generate revenue for renewable energy projects and transfer emissions reduction value to the purchaser, and since to be eligible for Tier 4 REC's, a resource must either be located in NYC or **delivered to NYC over a new transmission line**, then it is our understanding that your regulators are now considering the Champlain Hudson Power Express (CHPE) for the Tier 4 Certificates based on the highlighted eligibility criterion above, and because they claim that Quebec hydropower is among the lowest greenhouse gas emissions of all electricity generation options and that methane is not an issue in Quebec reservoirs.

These claims are dubious and are questioned by many available science reports. We urge you to take a much closer look at those documents. <sup>xxvxxvixxvixxvixxvixxix</sup>

Should those certificates be awarded to the CHPE project and Transmission Developers Inc. (TDI) we believe the Tier 4 designation can be considered a subsidy that should not be awarded because the company and the project will do nothing to actually decrease GHGs in the overall and especially since the power transmitted over the CHPE line comes from the mega-reservoirs in Quebec and at any given moment, from our river, the Grand (a.k.a. Churchill) in Labrador. According to Dr. Hager and others, the Smallwood reservoir and the Churchill Falls dam emits at least 10 times the amount of GHG's currently estimated by Hydro Quebec. Other reservoirs in Quebec, where the power can be transmitted from at any given moment can emit as much GHGs as coal powered energy plants or natural gas plants. (per Dr. Hager's report referenced below.) We urge you to review his report before making any decision on Tier 4 designation for CHPE.

### **A RISKY MULTIBILLION-DOLLAR BET ON CANADIAN HYDROPOWER:**

On March 4<sup>th</sup>, 2022 we read with much interest the document by Danielle Muoio Dunn and Marie J. French titled "New York City is making a multibillion-dollar bet on Canadian Hydropower. Some say the wager is too risky."<sup>xxx</sup> The document lays out the concerns of Ms. French and Ms. Muoio Dunn as stated in the article name, with emphasis on some very important reasons for their concern.

The article delves into the idea of whether the CHPE will achieve its main goal of shutting down *some peaker plants* in New York; as they say, "some of the dirtiest power facilities in New York that only run when demand is high."

We at GRK question the same goal when just two months ago, on January 21<sup>st</sup>, 2022, Hydro-Quebec asked its residents to lower their electricity use to reduce the use of power-hungry

appliances like dryers and dishwashers and by turning down their thermostats by a degree or two. <sup>xxxix</sup> This was during a cold snap in Quebec where the company said they were anticipating historic levels of electricity consumption for the days of the 21<sup>st</sup> and 22<sup>nd</sup>. Are there no “cold snaps” in New York during January? Isn’t it conceivable that the same days cold snaps hit Quebec that New York could experience the same temperatures? How then can New York consider shutting down dirty peaker plants; a stated goal of the CHPE project?

Considering the above information, how is it possible that Hydro-Quebec plans to send 1200 Mw of power over the CHPE line, AND about the same amount over the NECEC line to Boston while still maintaining the same number of dams it currently has in operation, or, is it possible that Hydro-Quebec will send power from other sources which are even more polluting than some of its hydro plants? New York states it will shut down dirty peaker plants once the CHPE project is complete. We fear the only way Hydro-Quebec can make good on both proposed contracts is to build more hydro projects, which by the way, is the stated strategic goal of the company in their 2020-2024 strategic plan, <sup>xxxix</sup> and, that if more hydro dams are needed, Hydro Quebec will not hesitate to work out a plan in the political backrooms to build the third dam on the Grand River, (Gull Island) and the Atlantic Loop which would be in direct contravention of your Tier 4 regulations only allowing “legacy hydropower” and preventing new dams from being eligible.

It is our understanding that hydro projects built in Canada would, in no possible way, pass the compliance tests of FERC Regulations contained in this document <sup>xxxix</sup> as our environmental assessment process is far less stringent than your US laws. We therefore ask why the New York Public Service Commission would even consider importing from projects north of the border that emit more greenhouse gas than some gas plants?

The Smallwood reservoir which serves one of HQ’s power plants in Labrador, the Churchill Falls plant, was reportedly emitting 35 kg CO<sub>2</sub>e/MWh in a document written over 20 years ago (while today, HQ states their power projects only emit 17 kg CO<sub>2</sub>/MWh) <sup>xxxix</sup> and now, considering the newest available science which we have provided at the end of this submission, the new estimate for the Churchill Falls project is 450 kg CO<sub>2</sub>e/MWh..... (13 times the original reported amount and almost 27 times what HQ currently states).

Most of Hydro Quebec’s dams and the Churchill Falls dam in Labrador (of which 90% of the 5400MWs of power belong to Quebec undercontract until 2041) are over 50 years old and are at increased risk of failure. Just two years ago, the entire Grand (a.k.a. Churchill) River had to be re-routed to it’s original path due to repairs to one of it’s dykes. <sup>xxxix</sup>

Just a year ago, January 2021, rime ice formed on the newly built Labrador Island Link, <sup>xxxix</sup> the transmission line built to carry power from the Muskrat Falls Project to the Island of Newfoundland and on to Emera in Nova Scotia, and a section of the electrode line “broke and fell to the ground”. Tests that were being conducted had to be stopped until an investigation was done. Nalcor Energy noted that repairs were required on eight towers but did not acknowledge that just one damaged tower is a huge problem for a DC power line running a huge distance in the wilderness, in a Labrador winter, while 8 towers needing repairs is a

catastrophe. . A consultant, Manitoba Hydro International, warned Nalcor before the transmission line was built that because of climate uncertainties and because of the terrain the line was built through, that their proposed design criteria was inadequate and that they should built the towers and the line to withstand a 1 in 500 year storm. They stuck with most of their original design.

Rime ice storms in Southern Labrador have not been common in the past, but climate change could and did exacerbate these risks due to increased snowfall, rainfall and ice formation and certainly the power lines in Northern Labrador and Northern or Southern Quebec are now more susceptible to those kinds of risks.

**Bringing power from thousands of kilometers over this type of terrain from Labrador or Quebec has many risks** and NYSERDA certainly should have considered those risks when deciding to purchase power from such a long distance versus using scarce funds to build truly clean energy right in the State, providing long term jobs to local citizens and keeping New Yorks rate funds circulating within the State.

Considering to what extent the CHPE project contributes to grid reliability and enables reliance on thermal generation we wish to remind the Public Service Commission of the types of risks mentioned above and ask, “what plan does New York have in place in the case of a massive outage for two or more weeks in any area of Quebec or Labrador where CHPE power is produced? “ Will HQUS-TDI have back-up power? If so, will it be produced from fossil fuels? If so, then CHPE cannot and should not receive credits that ultimately provide them with higher prices per kwh produced.

Considering that Canadian projects could likely never pass FERC regulations or the Clean Water Act, why would the Public Service Commission even consider purchasing power from Hydro Quebec and transferring billions of dollars over the length of the contract to a Canadian Provincial Crown Corporation, knowing the greenhouse gas emissions and the social and environmental justice issues connected with power? We understand that you have been provided with documents from NorthBridge Energy Partners which show that any additional capacity from Quebec is variable dependent on Quebec’s needs in the Province and the document we provided here showing that Hydro Quebec called for it’s citizens to curtail usage as much as possible in January of this year certainly seem to collaborate that statement.

Greenhouse gas emissions from all sources impact the entire globe. Climate Change will not go away from New York because you ignore emissions from plants operating in Canada and providing power over CHPE. Greenhouse Gas emissions are ubiquitous throughout the globe and the impacts of climate change will impact New York in much the same way as it will impact every other city and territory on earth. Consideration of environmental justice issues In Canada, where First Nations are impacted dis-proportionately by hydro dams and in New York where citizens in disadvantaged communities are disproportionately impacted by emissions from dirty power plants, must be your paramount consideration. Replacing dirty fossil fuel plants in New York with dirty hydro in Canada is unethical and better alternatives exist. We implore you,

please, review the science and other evidence we have provided on the environmental issues and environmental justice issues and reject the request of Hydro Quebec/US-Transmission Developers Inc to obtain Tier 4 credits for the Champlain Hudson Power Express.

Thank you for considering our submission.

Respectfully,  
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<sup>i</sup> <https://www.grandriverkeeperlabrador.ca>

<sup>ii</sup> <https://www.pnas.org/doi/10.1073/pnas.1912776117>

<sup>iii</sup> <https://www.sciencedaily.com/releases/2019/11/191111180058.htm>

<sup>iv</sup> <https://news.mongabay.com/2020/02/past-and-future-tropical-dams-devastating-to-fish-the-world-over-study/>

<sup>v</sup> <https://news.mongabay.com/2020/02/past-and-future-tropical-dams-devastating-to-fish-the-world-over-study/>  
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<sup>vi</sup> <https://www.sciencedaily.com/releases/2019/03/190313143226.htm>

<sup>vii</sup> <https://news.ucr.edu/articles/2019/03/13/coastal-ecosystems-suffer-upriver-hydroelectric-dams>

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<sup>ix</sup> <https://earth.stanford.edu/news/hydropower-dams-threaten-fish-habitats-worldwide#gs.sqzz60>

<sup>x</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6415951/>

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- xxv Ocko, I.B., and S.P.Hamburg, Climate Impacts of Hydropower: Enormous Differences among Facilities and over Time, Environ.Sci.Tech., 2019
- xxvi <https://www.dora.lib4ri.ch> (Greenhouse gas emissions from reservoir water surfaces)
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