



15 September 2017

BC Utilities Commission
Site C Inquiry

Re: BC Hydro Submission Appendix M response

To whom it may concern:

I am submitting this revision to my submission to the Site C Inquiry in response to Appendix M of BC Hydro's Submission, titled: 'Flaws in Hendricks/Rafals/Baker Report "Reassessing the Need for Site C."'¹

This revision to the "About the Authors" section of our submission provides more information on the expertise of the co-authors, Mr. Raphals and Mr. Hendriks. For the Commission's convenience and as per its suggestion, we are submitting only the revised "About the Authors" section. However, we ask the Commission to treat this new section, together with the original report, as a revised version thereof.

We have deemed this revision necessary given the false, partial, and biased presentation of information in Appendix M of BC Hydro's report.

First, BC Hydro makes a false claim regarding the disclosure of Mr. Hendriks' previous work with the Treaty 8 Tribal Association. While not explicitly mentioned in the brief biographical notes included in the report itself, Mr. Hendriks' previous work with T8TA was made publicly available in the expanded biographies published alongside the five reports regarding Site C that we published on the website of the Program on Water Governance at the University of British Columbia.²

Second, the information presented in Appendix M is extremely partial. The expanded biographies appended to this letter illustrate the fact that both Mr. Raphals and Mr. Hendriks have extensive expertise in topics relevant to the Site C Inquiry. Both have also appeared as expert witnesses before regulatory bodies across Canada. However, BC Hydro does not acknowledge this expertise, and instead applies a selective bias in presenting information regarding the authors. For example, in the case of Mr. Raphals, BC Hydro goes on at length about one proceeding (at which Mr. Raphals was not even called to testify) where a judge

¹ For the record, in the title of its Appendix M, BC Hydro incorrectly spelled each one of the three co-authors' names. The correct spelling of the authors' names is as follows: Hendriks (not Hendricks); Raphals (not Rafals); Bakker (not Baker).

² <http://watergovernance.ca/projects/sitec/>.

without specialized energy knowledge chose not to receive his evidence. However, BC Hydro fails to mention the other BC Supreme Court proceeding in which his expertise was received, and many proceedings in which specialized energy regulators have recognized Mr. Raphals' expertise and relied on his expert testimony. This characterization of Mr. Raphal's expertise is clearly both biased and partial.

I also reject BC Hydro's characterization of the reports as "works of advocacy". The analysis presented was peer-reviewed by academics and experts with decades of experience in relevant fields of expertise.³ The methods and underlying assumptions are clearly identified. Detailed model outputs for each scenario are available upon request. The data in the reports is publicly accessible; in most cases, BC Hydro's own data is used. Moreover, the reports acknowledged the fact that a fully comprehensive analysis was not possible, due to a lack of publicly available data. In short, the analysis in the reports is replicable, robust, and peer-reviewed.

It is regrettable that BC Hydro has engaged in an *ad hominem* attack, and particularly regrettable that it has issued false, partial, and biased statements regarding the expertise of the co-authors engaged in this research. The biographies originally published with our reports, and provided here as a revision to our submission, provide necessary clarification and a substantive rebuttal to BC Hydro's misleading claims.

BC Hydro has also expressed disagreement with the underlying assumptions, methods, and model used in the report. We welcome constructive disagreement, expressed in a professional manner, and we will respond to the substantive issues raised by BC Hydro in our next Submission to the Commission.

Sincerely,

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³ Ian Goodman (President, The Goodman Group); Dr. Norman Mousseau (Professor, Université de Montréal and Director, Trottier Energy Institute); Dr. Mark Winfield (Professor and Co-Chair, Sustainable Energy Institute, York University); and Dr. Arthur Fredeen (UNBC).



Submission to the British Columbia Utilities Commission regarding the Site C Hydroelectric Project (revised version)

Philip Raphals

Richard Hendriks

September 11, 2017

ABOUT THE AUTHORS

Philip Raphals is cofounder and executive director of the Helios Centre, a non-profit energy research and consulting group based in Montreal. Over the last 25 years, he has written extensively on issues related to hydropower and competitive energy markets, and has appeared many times as an expert witness before energy and environmental regulators in several provinces.

Mr. Raphals has been formally recognized as an expert witness by energy regulators in the provinces of Quebec, Nova Scotia and Newfoundland and Labrador:

- In Quebec, he has provided expert testimony in 14 proceedings before the Régie de l'énergie du Québec. The Régie has recognized his expertise in fields including transmission ratemaking, security of supply, energy efficiency and avoided costs;
- The Nova Scotia Utilities and Review Board has qualified Mr. Raphals as expert in sustainable energy policy, least-cost energy planning and utility regulation (including transmission ratemaking). He provided expert testimony in two proceedings there concerning the Maritime Link, including critical analysis of long-term demand forecasts, resource options and financial analyses submitted by NSP Maritime Link Inc., a subsidiary of Emera, in support of its proposal to build an undersea transmission link between Newfoundland and Nova Scotia, and the accompanying long-term electricity supply contracts. In its decision, the Board quoted Mr. Raphals' report and relied in part on his analyses;
- The Newfoundland and Labrador Public Utilities Board has qualified Mr. Raphals as an expert in electric utility rate making and regulatory policy. He has provided expert testimony in in 2011 Muskrat Falls Review and in its hearings on the 2013 General Rate Application of Newfoundland and Labrador Hydro.

Mr. Raphals is currently acting as an expert witness in rate proceedings before the Manitoba and Newfoundland and Labrador Public Utilities Boards.

Mr. Raphals appeared as an expert witness on behalf of Grand Riverkeeper Labrador Inc. in the hearings of the Joint Review Panel (JRP) on the Lower Churchill Generation Project, which relied on his analysis of project justification. The Panel cited him in its report and relied on his analyses for several of its findings.

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In British Columbia, Mr. Raphals appeared as an expert witness on behalf of the Treaty 8 Tribal Association in the hearings of the Joint Review Panel on the Site C Hydroelectric Project. The Panel cited him in its report and relied on his analyses for several of its findings. He also presented expert affidavits in two related proceedings before the B.C. Supreme Court.¹

Mr. Raphals chairs the Renewable Markets Advisory Panel for the Low Impact Hydropower Institute (LIHI) in the United States. He has been an invited speaker before the Senate Standing Committee on Energy, the Environment and Natural Resources and at numerous energy industry conferences, including the Canadian Association of Members of Public Utility Tribunals (CAMPUT). He has also been an invited speaker at Yale University, Concordia University and McGill University.

From 1992 to 1994, Mr. Raphals was Assistant Scientific Coordinator for the Support Office of the Environmental Assessment of the Great Whale Hydroelectric Project, where he coauthored with James Litchfield and Roy Hemmingway a study on the role of integrated resource planning in assessing the project's justification.

In 1995, Mr. Raphals was commissioned by the Quebec Department of Natural Resources to prepare a report on electricity regulation in British Columbia, focussing on the structure and practices of the British Columbia Utilities Commission. The report formed part of the documentation supporting Quebec's Public Debate on Energy, which eventually led to the creation of the Régie de l'énergie.

In 1997, Mr. Raphals advised the Standing Committee on the Economy and Labour of the Quebec National Assembly in its oversight hearings concerning Hydro-Quebec. In 2001, he authored a major study on the implications of electricity market restructuring for hydropower developments, entitled *Restructured Rivers: Hydropower in the Era of Competitive Energy Markets*. In 2005, he advised the Federal Review Commission studying the Eastmain 1A/Rupert Diversion hydro project with respect to project justification. Later, he drafted a submission to this same panel on behalf of the affected Cree communities of Nemaska, Waskaganish and Chisasibi.

In 2013, Mr. Raphals was an invited participant in an expert roundtable on electricity surpluses and economic development, convoked by the Quebec Commission on Energy Issues. The Commission's report relied on several of his analyses.

In 2015, he was a finalist for the R.J. Tremplin Prize, awarded by the Canadian Wind Energy Association for "*scientific, technical, engineering or policy research and development work that has produced results that have served to significantly advance the wind energy industry in Canada.*"

¹ In one of the two cases, the expert affidavit was not received by the Court.

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Richard Hendriks is the director of Camerado Energy Consulting, an Ontario-based firm providing environmental assessment, energy planning, policy analysis, and research services to clients across Canada. For the past two decades, he has been engaged in the planning and assessment of several proposed large-scale hydroelectric developments, and provided testimony before regulatory bodies concerning their environmental effects, economic viability, socio-economic impacts and implications for Indigenous rights. Mr. Hendriks has played a key role in environmental assessment and negotiation processes regarding large hydroelectric and mining projects for several First Nations across Canada, including for the Innu Nation in Labrador with respect to the Lower Churchill Project, and for the Treaty 8 Tribal Association, with respect to the Site C Hydroelectric Project.

From 1999 to 2002, Mr. Hendriks was the environmental and engineering analyst for Innu Nation in relation to hydroelectric development proposals in Labrador. There, he participated in environmental assessment, negotiation of an environmental protection chapter of an impacts and benefits agreement in relation to the proposed Lower Churchill Project, and technical and research support for negotiation of a compensation agreement for the existing Churchill Falls Project.

In 2003, Mr. Hendriks joined Chignecto Consulting Group as an Associate where he provided resource negotiation and environmental assessment support services to Indigenous groups across Canada. His work included negotiation of impacts and benefits agreements, regulatory interventions, and assessment of environmental, economic and social impacts and benefits related to hydroelectric, transmission and mining developments.

Since 2009, as director of Camerado Energy Consulting, Mr. Hendriks has conducted and managed environmental, technical and economic review of several large-scale proposed resource projects, including the Lower Churchill Hydroelectric Generation Project, the Labrador-Island Transmission Link, the Site C Clean Energy Project, the Côte Gold Project, and the Slave River Hydro Project. He has also assessed the potential for compensation to Indigenous communities for historic and ongoing effects of hydroelectric and transmission development in Ontario, Labrador, Manitoba and the Northwest Territories.

In 2010, Mr. Hendriks testified before the Alberta Utilities Commission during its Inquiry on Hydroelectric Power Generation that was reviewing the policy, planning and regulatory context for additional hydroelectric development in that Province. The following year, Mr. Hendriks presented testimony on several economic and environmental matters before the Joint Review Panel for the Lower Churchill Project, who accepted many of his recommendations. More recently, Mr. Hendriks testified on several occasions before the Joint Review Panel for the Site C Project, who adopted several of his recommendations. In May 2014, the Manitoba Public Utilities Board qualified Mr. Hendriks as an expert in the policy and planning aspects of large-scale hydroelectric developments, including the socioeconomic implications and environmental consequences for Indigenous communities of these developments.

Submission to the BC Utilities Commission

Together with Prof. Karen Bakker of the University of British Columbia, MM. Raphals and Hendriks were the authors of “Reassessing the Need for Site C”, a study published by the UBC Programme on Water Governance in April 2017.