

May 23, 2019



Dear 

Re: Your request for access to information under Part II of the *Access to Information and Protection of Privacy Act* (File # NR-83-2019)

On May 13, 2019, the Department of Natural Resources received your request for access to the following records/information:

The March 2019 Briefing Note "Data Centres Electricity Supply".

I am pleased to inform you that a decision has been made by the Department of Natural Resources, confirmed by the Deputy Minister, to provide access to the requested records. The records are attached.

We are providing access to the most information possible but have made redactions in accordance with Sections 29(1)(a), 35(1)(d), 35(1)(f) and 35(1)(g) of *ATIPPA, 2015* as follows:

29. (1)(a) The head of a public body may refuse to disclose to an applicant information that would reveal advice, proposals, recommendations, analyses or policy options developed by or for a public body or minister;

35. (1)(d) The head of a public body may refuse to disclose to an applicant information which could reasonably be expected to disclose information, the disclosure of which could reasonably be expected to result in the premature disclosure of a proposal or project or in significant loss or gain to a third party;

35. (1)(f) The head of a public body may refuse to disclose to an applicant information which could reasonably be expected to disclose positions, plans, procedures, criteria or instructions developed for the purpose of contractual or other negotiations by or on

behalf of the government of the province or a public body, or considerations which relate to those negotiations;

35. (1)(g) The head of a public body may refuse to disclose to an applicant information which could reasonably be expected to disclose information, the disclosure of which could reasonably be expected to prejudice the financial or economic interest of the government of the province or a public body.

Please be advised that you may ask the Information and Privacy Commissioner to review the processing of your access request, as set out in section 42 of the *Access to Information and Protection of Privacy Act* (the *Act*). A request to the Commissioner must be made in writing within 15 business days of the date of this letter or within a longer period that may be allowed by the Commissioner.

The address and contact information of the Information and Privacy Commissioner is as follows:

Office of the Information and Privacy Commissioner
2 Canada Drive
P. O. Box 13004, Stn. A
St. John's, NL A1B 3V8

Telephone: (709) 729-6309
Toll-Free: 1-877-729-6309
Facsimile: (709) 729-6500

You may also appeal directly to the Supreme Court Trial Division within 15 business days after you receive the decision of the public body, pursuant to section 52 of the *Act*.

Please be advised that this letter will be published following a 72 hour period after it is sent electronically to you or five business days in the case where records are mailed to you. It is the goal to have the letter posted to the Completed Access to Information Requests website within one business day following the applicable period of time.

If you have any questions, please feel free to contact me at 709-729-0463 or rhynes@gov.nl.ca.

Sincerely,

A handwritten signature in cursive script that reads "Rod Hynes".

Rod Hynes
ATIPP Coordinator

Information Note
Department of Natural Resources

Title: Data Centres Electricity Supply

Issue: New Data Centre Customer Impacts on Electricity Rate

Background and Current Status:

- Newfoundland and Labrador Hydro's recent and ongoing requests from data centre customers for new or expanded service on the Labrador interconnected electricity system have raised concerns about the capacity of the existing Labrador transmission system infrastructure to accommodate data centre growth in both Labrador East and Labrador West.
- Data centre operators are attracted to Labrador's lowest electricity rates in North America and its cold climate that reduces computer cooling costs. A key cost of business for a data centre is electricity. Across North America and around the world, media reports detail the growing demand for electricity from this industry.
- A "Data Centre" is a broad term that typically refers to a facility that houses computer servers or other computer equipment to store or process computer data. Data centre customers include large-scale cloud storage for multinationals such as Google, Apple, and Amazon and "block-chain" data processing associated with cryptocurrencies such as Bitcoin. There is a broad range of employment and economic benefits from the sector depending on the specifics of the operation. Some data centres provide little employment particularly in comparison to traditional large-scale energy-intensive industries such as mining.
- Another key feature of many data centres is their high mobility, particularly in comparison to a mining operation. For example, blockchain data centres can often be a series of shipping containers containing computer processors that can be relocated relatively easily if electricity prices increase.
- The ability to relocate presents a challenge for utilities and electricity policy as there is a risk that data centre load growth can eventually trigger expensive transmission infrastructure construction that can lead to rate increases. Such increases could risk triggering data centres to relocate their operations, thus leaving the remaining customers to bear the cost of the new infrastructure, thus increasing rates further.
- In response to these pressures, US and Canadian utilities and regulators have various actions to limit data centre growth. For example, Quebec recently established a data centre moratorium while Hydro Quebec and the regulator study the issue and consider an auction to sell a block of power to the highest bidder.

Analysis

- While there are important risks to consider around data centre load growth, [REDACTED] there may be opportunities for the sector to assist Newfoundland and Labrador in its efforts to identify options to assist in paying the costs of the Muskrat Falls Project.

S.29.1.a

S.35.1.f

S.35.1.g

- Prior to Muskrat Falls in-service, any energy provided for data centres from Churchill Falls recapture energy yields approximately 3 cents per kWh. At the same time, using this energy for new data centres would provide less recapture power to reduce expensive energy from Holyrood. [REDACTED]
- With respect to the transmission system implications of Labrador-based data centre growth, Newfoundland and Labrador Hydro's (NLH) Labrador Interconnected System Transmission Expansion Study is currently under review by the Board of Commissioners for Public Utilities (PUB). The Expansion Study highlights the requirement for upgrades to Labrador West transmission infrastructure to accommodate any load growth.
- Additionally, on March 5, 2019, the PUB issued Order P.U. No. 9(2019) ruling that NLH had demonstrated reliability and capacity concerns in Labrador East and approved approximately \$20 million over two years to construct a new Muskrat Falls to Happy Valley-Goose Bay transmission line.
- NLH's Network Addition Policy is also currently before the PUB for approval. The PUB has granted a temporary moratorium on additions to the network exceeding 100 kW while it assessed the Network Addition Policy. This policy recognizes that new data centre customers can potentially drive new transmission infrastructure construction to meet load growth. Any such construction would primarily benefit a particular data centre customer but the cost of the additional infrastructure would be spread among existing permanent customers on the system. The Network Addition Policy proposes a formula whereby new capacity builds benefitting primarily a single customer would be paid for primarily by that customer.
- As part of the Government of Newfoundland and Labrador's efforts to pay for Muskrat Falls without causing electricity rate increases, NR and NLH are jointly exploring the potential for an auction or establishing an economic development rate to attract new customers, which could include data centres. [REDACTED]
- Allocating any of this surplus to a new customer prior to completing this work could reduce an opportunities to achieve greater value to pay the cost of Muskrat Falls.

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S.29.1.a
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Action Being Taken:

- NR and NLH continue to explore alternatives to attract new customers to the province's electricity system.

Prepared by/Reviewed by: Y. Khan / R. Bates / C. Snook
Approval: DIVISIONAL USE ONLY



March 19, 2019

