

IN THE MATTER OF An Investigation And Hearing
Into Supply Issues And Power Outages On The
Island Interconnected System.

**MOTION TO ORDER COMPLETE RESPONSES TO REQUESTS FOR INFORMATION
AND TO SUSPEND GRK DELAYS UNTIL COMPLETE RESPONSES ARE PROVIDED**

**Board of Commissioners of Public Utilities
Prince Charles Building
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**ATTENTION: Ms. Cheryl Blundon
Director of Corporate Services & Board Secretary**

November 26, 2015

1. On January 21, 2015, GRK issued RFIs GRK-NLH-93 through GRK-NLH-100.
2. On June 1, 2015, GRK reissued these RFIs, modifying one of them, and added others, issuing GRK-NLH-93 through GRK-NLH-133.
3. Hydro provided responses to all these RFIs at various dates. While some of the responses provided were complete, many others were not.
4. Specifically, NLH provided inadequate responses to the following RFIs:
 - GRK-NLH-93;
 - GRK-NLH-100;
 - GRK-NLH-104;
 - GRK-NLH-105 and GRK-NLH-107;
 - GRK-NLH-115 through GRK-NLH-117; and
 - GRK-NLH-118 through GRK-NLH-121.
5. Section 15(1)(a) of the *Board of Commissioners of Public Utilities Regulations, 1996* states that:
15(1). Where an information request has been directed to a party and served on that party in accordance with the board's directions, the party shall

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(a) provide a full and adequate response to each information request ...

6. GRK hereby requests that the Board order NLH to provide full and complete responses to the RFIs mentioned above.

GRK-NLH-93

7. The RFI reads:

Please explain in what way “the manner in which water will flow down the Churchill River from the Churchill Falls plant ... could be impacted” if Nalcor’s interpretation of the renewal of the Churchill Falls Contract is not upheld, and describe in detail the ways in which this could affect “the timing of when energy is produced at Muskrat Falls”.

In your response, please indicate whether or not NLH has carried out or received copy of any specific analysis of to the extent to which the Hydro-Quebec’s interpretation of the Churchill Falls Power Contract, as set out in its filings before the Quebec Superior Court, would limit the Independent Coordinator’s ability to respect NLH’s Delivery Requirements with respect to s. 6.3(a) of the WMA (Citation 2).

If so, please provide a copy of said analysis. If not, please explain on what basis NLH has been able to conclude that “this would not impact system reliability”.

8. Hydro’s response reads:

The “manner in which water will flow” relates specifically to the timing of water releases from the Churchill Falls plant, and therefore the timing of inflows into the Muskrat Falls reservoir.

The consequences of changes in the timing of inflows have already been addressed in the response to GRK-NLH-021 (Revision 1, Jan 14-15), as indicated above, and the mitigations were discussed in the response to GRK-NLH-044. The Board has accepted the adequacy of the previously submitted responses to GRK-NLH-021 (Revision 1, Jan 14-15) and GRK-NLH-024 (Revision 1, Jan 14-15) in Board Order No. P.U. 5(2015) at Page 3.

9. The information requested in GRK-NLH-93 is substantially different from that requested in GRK-NLH-21, which requested an explanation of “the implications for the Scheduling, Production and Delivery Mechanics of the WMA if the courts fail to endorse Nalcor’s interpretation of the renewal of the Churchill Falls Contract”. Indeed, GRK-NLH-93 requests further elaboration on the response provided to GRK-NLH-21.
10. It should be pointed out that GRK-NLH-21, rev. 1 was provided in response to the Board’s order P.U. 5(2015), which required it to respond fully to GRK’s information request, following GRK’s motion of December 22, 2014.
11. The fact that Hydro has responded to an earlier RFI does not relieve it of responsibility to respond to another, different, RFI.

12. The first paragraph of Hydro's reponse addresses the first paragraph of the RFI, but does not actually provide a response.
13. Hydro's response to GRK-NLH-93 completely ignores the explicit requests in the second paragraph to "indicate whether or not NLH has carried out or received copy of any specific analysis of to the extent to which the Hydro-Quebec's interpretation of the Churchill Falls Power Contract ... would limit the Independent Coordinator's ability to respect NLH's Delivery Requirements with respect to s. 6.3(a) of the WMA".
14. Furthermore, Hydro's response also completely ignores the explicit request in the third paragraph of the RFI to "provide a copy of said analysis" or to "explain on what basis NLH has been able to conclude that "this would not impact system reliability".
15. GRK respectfully requests that the Board order Hydro to respond fully to this RFI.

GRK-NLH-100

16. GRK-NLH-100 asks Hydro:

On what basis was it determined that "the probability of risk of failure [of the Muskrat Falls dam] is negligible"? Please provide all supporting documentation leading to this conclusion.

17. Hydro responded with a reference to its response to GRK-NLH-099, which reads:

The determination [that a potential dam breach at Muskrat Falls is very unlikely] is based on Hydro's understanding of the principles associated with the engineering design of large-scale dams. See also Hydro's response to GRK-NLH-098. This review does not include a review of detailed technical and engineering information associated with the Muskrat Falls project. Hydro's responses to GRK-NLH-044, GRK-NLH-096 and GRK-NLH-097 deal with the options available to Hydro in the very unlikely event of a dam breach at Muskrat Falls.

18. The reference to GRK-NLH-044, GRK-NLH-096 and GRK-NLH-097 are not relevant with regard to GRK-NLH-100, because this RFI is not concerned with the options available to Hydro in the event of a dam breach.

19. Hydro's response to GRK-NLH-098 reads as follows:

Hydro disagrees that the sentence in question is ambiguous. The intent ascribed to the sentence is its plain meaning:

Hydro notes that the Muskrat Falls dam is being designed similar to all other Hydro dam facilities so that the probability of risk of failure is negligible.

The design principles for dam engineering design are sufficiently conservative that, consistent with all of Hydro's water retaining structures, the probability of an outage resulting from a dam failure to be used in a reliability study is negligible.

20. Neither of the responses included by reference (GRK-NLH-098 and GRK-NLH-099) respond directly to GRK-NLH-100, as they do not state on what basis it determined that "the probability of risk of

failure [of the Muskrat Falls dam] is negligible”, nor do they “provide all supporting documentation leading to this conclusion”. Read together, they appear to suggest that there does not in fact exist any such documentation, but they do not so state.

21. GRK respectfully submits that, in order to provide a full and adequate response to GRK-NLH-100 as required by s. 15(1)(a) of its Regulations, the Board order Hydro to clearly state on what basis it determined that “the probability of risk of failure [of the Muskrat Falls dam] is negligible”, and to provide all supporting documentation leading to this conclusion. If no such documentation exists, it must so indicate clearly.

GRK-NLH-104

22. GRK-NLH-104 asks Hydro to confirm some of the effects on the operation of the WMA in the event that Hydro-Quebec’s interpretation of the renewal contract should be endorsed by the Courts, and to elaborate on the implications of these eventualities for the reliability of MFC’s deliveries to NLH.

23. The RFI reads:

Please confirm that the effects on the operation of the WMA, should Hydro-Quebec’s interpretation of the Renewal Contract be endorsed by the Courts, could include the following:

- a) That HQ would not be limited to “essentially equal amounts of energy during each month after renewal” (Citation 3), but would continue to be able to schedule its power deliveries from Churchill Falls as it sees fit;
- b) That HQ, and not CF(L)Co, would be “entitled to the entire actual and potential capacity and energy of the Churchill Falls power plant, except for those specific amounts of capacity and energy that are specifically attributed to CF(L)Co under the various contracts in force; and
- c) That, consequently, requests from Nalcor “to produce power to meet Nalcor’s delivery requirements” (Citation 5) could come into conflict with CF(L)Co’s contractual obligation to Hydro-Quebec.

Please elaborate on the implications for the reliability of MFC’s deliveries to NLH in the event of each of these eventualities.

24. Hydro’s response reads:

This Request for Information requires that Hydro respond to potential hypothetical scenarios “should Hydro-Quebec’s interpretation of the Renewal Contract be endorsed by the Courts.”

As stated in Board Order No. P.U. 41(2014) at page 23:

The Board notes that GRK-NLH-23 requires that Hydro assume alternate circumstances for 2012 and create new information. The Board does not believe it is reasonable to require Hydro to create information based on a hypothetical scenario as it is not clear how it would be of assistance and may be an undue burden to produce.

Further, in that same Order at page 14, the Board noted in a separate context that addressing possible alternative approaches is “not relevant or necessary to address the matters before the Board and would serve to unduly complicate and protract this investigation”.

Hydro does not believe it is relevant or appropriate to respond to the implications of hypothetical scenarios and believes that the provision of such responses would unduly complicate the proceeding. (underlining added)

25. The citation from P.U. 41(2014) in the response is incomplete and taken out of context. The full paragraph is as follows:

As discussed earlier in this decision the Board finds that the details of the Quebec litigation, including the schedule and issues being addressed, are not relevant in this proceeding. This is the substance of the information sought in GRK-NLH-16 to 20, 28 and 29. Nevertheless the Board acknowledges that the consequences of an unfavourable ruling in relation to this litigation may be relevant to the issue of reliable and adequate power on the Island Interconnected system. The Board notes that GRK-NLH-23 requires that Hydro assume alternate circumstances for 2012 and create new information. The Board does not believe it is reasonable to require Hydro to create information based on a hypothetical scenario as it is not clear how it would be of assistance and may be an undue burden to produce. The Board notes that, to the extent that the information sought in GRK-NLH-21, 22, 24, 25 and 26 relates to the implications on the power available on the Island Interconnected system if the results of the Quebec litigation are unfavorable, some aspects of these questions may be relevant. Therefore the Board accepts Hydro's motion with respect to GRK-NLH-16 to 20, 23, 28 and 29 but does not accept Hydro's motion with respect to GRK-NLH-21, 22, 24, 25 and 26, to the extent that the responses can address consequences regarding the availability of a reliable and adequate supply of power to the Island Interconnected system associated with the risks of the scenarios outlined. (underlining added)

26. Read in context, it is clear that the Board denied RFIs which would “require Hydro to create information based on a hypothetical scenario ... [where] it is not clear how it would be of assistance and may be an undue burden to produce”. It should be noted that some of the RFIs to which this paragraph was the response included requests to carry out quantitative analysis of various hypothetical scenarios and to produce new data. The Board rejected these RFIs, on the basis that it was not clear how the results would be of assistance, and that it might constitute an undue burden to produce them.
27. That is clearly not the case in the GRK-NLH-104, which requests no quantitative analysis nor any data. This RFI does not ask Hydro to “create new information based on a hypothetical scenario,” but

rather to elaborate on the reliability implications in the event that the Courts decide in favour of Hydro-Québec's interpretation of the Renewal Contract.

28. More specifically, as this RFI "relates to the implications on the power available on the Island Interconnected system if the results of the Quebec litigation are unfavorable", and as a response would "address consequences regarding the availability of a reliable and adequate supply of power to the Island Interconnected system associated with the risks of the scenarios outlined", it should be allowed, under the standard set out in P.U. 41(2014).
29. As the eventualities invoked are entirely plausible and bear directly on the Board's mandate to investigate the reliability of the Integrated Island System (IIS) after the Muskrat Falls interconnection, GRK respectfully requests that the Board order Hydro to respond fully to this RFI.

GRK-NLH-105 and GRK-NLH-107

30. These RFIs ask Hydro to consider certain hypothetical scenarios under the two conflicting interpretations of the Renewal Contract.
31. Specifically, the RFIs read:

GRK-NLH-105

Please consider a hypothetical scenario in which, for a particular hour, a) Hydro-Quebec has scheduled the maximum capacity of the Churchill Falls generating station and b) MFC has scheduled the return of 400 MW of banked energy.

In this hypothetical scenario, please explain how power from the Churchill Falls generating station will be apportioned between Hydro-Quebec and MFC for the hour in question a) if Hydro-Quebec's interpretation of the Renewal Contract is endorsed by the Courts, and b) if Nalcor's interpretation of the Renewal Contract is endorsed by the Courts.

and

GRK-NLH-107

Please consider a hypothetical scenario in which reservoir levels are low and both Hydro-Quebec and MFC have indicated the need for high levels of power over the coming months.

In this hypothetical scenario, please explain how energy available in the Churchill Falls reservoirs will be apportioned between Hydro-Quebec and MFC a) if Hydro-Quebec's interpretation of the Renewal Contract is endorsed by the Courts, and b) if Nalcor's interpretation of the Renewal Contract is endorsed by the Courts.

32. Hydro's response to both RFIs is to refer to its response to GRK-NLH-104, quoted above.

33. As indicated in paragraphs 26 through 29, above, the Board's comments cited by Hydro are irrelevant to GRK-NLH-105 and to GRK-NLH-107. The hypothetical scenarios described bear directly on IIS reliability after the Muskrat Falls interconnection, and no quantitative analysis is requested.
34. For these reasons, GRK respectfully requests that the Board order Hydro to respond fully to GRK-NLH-105 and GRK-NLH-107.

GRK-NLH-115 through GRK-NLH-117

35. GRK-NLH-115 reads:

Please confirm that no progressive failure analysis has been carried out in relation to the North Spur. If it has, please provide a copy.

36. Hydro's response reads:

The studies that have been carried out are listed in GRK-NLH-045 (Revision 1, Feb 14 27-15). That response further goes on to specifically state that:

The approach used to stabilize the North Spur focuses on eliminating triggers to progressive failure to prevent them from disturbing the site and then to undertake specific analysis to address the remaining triggers (such as seismic events) to ensure they will not trigger a slide event.

As the Board noted in its Order No. P.U. 5(2015) at Page 4, it has already clarified in Order No. P.U. 41(2014) that it is "not necessary for Hydro to provide detailed technical information or reports related to engineering and construction issues".

As required by the Board, Hydro has directed its responses to the risks and consequences to the Island Interconnected System of the scenarios and issues raised.

37. GRK-NLH-116 reads:

Please confirm that no evaluation of the risk of retrogressive spreads, downhill progressive landslides or "bottleneck slides" at the North Spur site has been carried out in relation to the North Spur.

If it has, please provide a copy.

38. Hydro refers to its response to GRK-NLH-115.

39. GRK-NLH-117 reads:

Please confirm that no risk analyses have been completed that specifically consider risks to the physical integrity of the Muskrat Falls dam related to the risk of retrogressive spreads, downhill progressive landslides or "bottleneck slides" at the North Spur.

If such studies exist, please produce them.

40. Hydro again refers to its response to GRK-NLH-115. It adds:

Hydro also notes that this is generally the same question as posed in GRK-NLH-046 that has been previously responded to by cross reference to Hydro's response to GRK-NLH-045 (Revision 1, Feb 27-15).

41. In each of these three RFIs, Hydro is requested to confirm that a particular type of study has not been out. The Board should first require a clear answer to each of these three questions.

42. Regarding the request to provide a copy of these studies, should they exist, GRK notes that, in its Amended Reply to its earlier Motion to order complete responses to requests for information, dated January 22, 2015, GRK prayed acte to Hydro's assertion, in its response to the motion filed on January 14, 2015, that the risk of failure of the North Spur is "negligible".

43. By making this assertion, Hydro rendered relevant and admissible any evidence that would contradict it or put into question its validity. The documents requested in GRK-NLH-115, GRK-NLH-116 and GRK-NLH-117 will help to test the validity of this assertion, and so are admissible and relevant to these proceedings.

44. Furthermore, GRK respectfully submits that it has a right to be heard concerning those assertions. In order for GRK to be meaningfully heard in this regard, its expert Dr. Stig Bernander requires access to said documents in order to prepare his testimony.

45. Therefore, in the event that one or another of the types of studies mentioned have, in fact, been carried out, GRK respectfully requests that the Board order Hydro to provide a copy, as requested.

46. In the event that it chooses to ask the Board to relieve it of the responsibility of providing said studies, Hydro should be required, at a minimum, to identify the specific study it is refusing to provide (title, author, date) and the specific reasons for so doing.

GRK-NLH-118 through GRK-NLH-121

47. These RFIs read:

GRK-NLH-118

Was the MWH team provided with detailed specific soil properties for the Upper Clays 1 and 2 in the North Spur?

If so, please provide the data that was provided to the MWH team.

GRK-NLH-119

Was the MWH team provided with detailed specific analyses of the residual shear resistance of undrained and undisturbed clay samples from the North Spur?

If so, please provide the analyses that were provided to the MWH team.

GRK-NLH-120

Was the MWH team provided with any detailed analyses of the large forward progressive landslides that have occurred in the Churchill River valley in the past?

If so, please provide the analyses that were provided to the MWH team.

GRK-NLH-121

Aside from reviewing the materials provided them during the project briefing, did MWH reviewers undertake any independent study of the North Spur geotechnical conditions?

If so, please provide any materials they submitted in this regard, other than the report filed as PUB-NLH-201, Att. 1.

48. Hydro's response to GRK-NLH-118 reads:

The IE was provided with information as requested so as to permit to the IE to formulate its opinion.

This Request for Information repeats GRK-NLH-047:

Please provide copies [*sic*] the most recent and detailed studies that exist with respect to soil structure and soil properties at the North Spur.

The Board determined in Order No. P.U. 41(2014) that the information requested in GRK-NLH-047 was outside of the scope of the current proceeding, and consequently the current request does not inform the matter before the Board.

49. Hydro's responses to GRK-NLH-119 through GRK-NLH-121 are limited to references to its response to GRK-NLH-118.

50. The first paragraph of the response ("The IE was provided with information as requested so as to permit to the IE to formulate its opinion.") is a transparent attempt to avoid responding to the RFIs, which seek specifically to identify the information that was provided to the IE. No motives have been provided by Hydro to justify its refusal to identify this information.

51. Furthermore, it is incorrect to state that this RFI repeats GRK-NLH-047, which requested copies of studies concerning soil structure and soil properties at the North Spur.
52. Each of these three RFIs begins with a yes-or-no question regarding what information was provided to the IE. Hydro has presented no valid reason not to respond to these yes-or-no questions.
53. Subsidiarily, the RFIs request copies of the information that was provided to the IE. While this information may indeed, in some cases, be related to the information requested in GRK-NLH-047, Hydro has made it relevant to the present proceeding by its response to PUB-NLH-210, which presented the IE's report in response to the Board's question regarding risk analyses carried out regarding the Muskrat Falls project.
54. It should be noted that, in PUB-NLH-210, Hydro does not include the North Spur among "the key risks for the project which have already been successfully mitigated". The responses to these RFIs will help to clarify whether that is because it does not consider the North Spur to be a key risk, or whether it is because it did not consider it, as of the date of that response, to have been successfully mitigated.
55. Furthermore, the documents requested in GRK-NLH-118 to -121 are relevant to these proceedings for the reasons set out in paragraphs 42 through 44, above.

Conclusions Sought

For the reasons set out above, GRK respectfully requests that the Board:

- A. Order NLH to provide full and complete responses to the following RFIs:
 - GRK-NLH-93;
 - GRK-NLH-100;
 - GRK-NLH-104;
 - GRK-NLH-105 and GRK-NLH-107;
 - GRK-NLH-115 through GRK-NLH-117; and
 - GRK-NLH-118 through GRK-NLH-121.
- B. Suspend all delays applicable to GRK until such time as those responses are provided; and
- C. Make any Order the Board considers reasonable in the circumstances.

Respectfully submitted,

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