

September 9, 2011

VIA RESS AND COURIER

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
P.O. Box 2319
2300 Yonge Street, 27th Floor
Toronto, ON
M4P 1E4

Dear Ms. Walli:

**EB-2011-0056 – Ontario Power Generation – Section 92 Application
for Leave to Construct Transmission Line – Smoky Falls
Generation Station**

Attached please find interrogatory responses from Ontario Power Generation Inc. (OPG) in the above noted proceeding.

Pursuant to the Board's Procedural Order No. 1, provided are two (2) hardcopies of OPG's responses and one electronic copy in searchable / unrestricted PDF format filed through the Board's Regulatory Electronic Submission System (RESS).

Please direct any comments or questions in this matter to the undersigned.

Yours truly,

[Original Signed By]

Andrew Barrett

Attach

cc: Regulatory Affairs Records, OPG
Fred Cass, Aird & Berlis via e-mail
EB-2011-0056 Intervenors via e-mail
Robert Caputo, OEB via e-mail
Ljuba Djurdjevic, OEB via e-mail

Board Staff Interrogatory IR-1 for OPG

Interrogatory

Re: Alternatives Considered

Please provide the results of any studies, cost/benefit analysis etc. that would support the conclusion that Alternative 3 is not economically justified.

Response

“Alternative 3” refers to the modified connection arrangement identified on page 5 of the SIA under the heading “IESO Recommendations”. This alternative was identified by the IESO as a means of addressing general reliability issues and transmission requirements for Northeastern Ontario and the Lower Mattagami region, and includes a major upgrade to Little Long Substation (“Little Long SS”).

The modified connection arrangement was raised during the discussions regarding OPG's request to connect the redeveloped Lower Mattagami generation facilities to the transmission system. However, the IESO determined that this larger connection arrangement was not necessary to enable OPG's generation to be connected to the transmission system. Similarly, Hydro One did not see OPG's connection request as a sufficient driver to undertake the Little Long SS expansion. The IESO also agreed that the need for expanding Little Long SS may be addressed through another forum.

Given that the modified connection arrangement was not necessary for the connection of OPG's generation and in fact, was directed to other general transmission system issues, this alternative could not be economically justified in the context of OPG's project.

Board Staff Interrogatory IR-2 for OPG

Interrogatory

Re: Alternatives Considered

Please provide the results of any studies, cost/benefit analysis etc. that would support the conclusion that Alternative 3 is more costly than Alternative 2 and is therefore not recommended.

Response

See response to IR-1.

Board Staff Interrogatory IR-3 for OPG

Interrogatory

Re: Alternatives Considered

Please provide the results of any studies that would support the conclusion that the existing Hydro One 115 kV single circuit lines S3S and S4S are insufficient to carry the new Smoky Falls GS output.

Response

Transmission assets must be operated within their maximum ratings. The proposed generation at Smoky Falls GS (294 MVA) is significantly higher than the maximum operating rating of the S3S/S4S lines (104 MVA). Connecting to these circuits would result in curtailing (rejecting) upwards of two thirds of Smoky Falls GS's generation capability.

The existing S3S and S4S lines therefore do not have anywhere near sufficient capability to carry the output of the new Smoky Falls GS, and any attempt to operate the expanded Smoky Falls GS with the existing S3S/S4S lines would result in thermal overloading causing the lines to become inoperable. The option of continuing to utilize the existing S3S/S4S lines was therefore not considered further.

Board Staff Interrogatory IR-4 for OPG

Interrogatory

Re: Alternatives Considered

Has OPG considered the option of upgrading the existing 115 kV circuits S3S and S4S so that they can carry the new Smoky Falls GS output? If not, please explain why not. If yes, please provide the results of any studies, cost/benefit analysis etc that would support the conclusion that Alternative 5 should be ruled out on technical and/or economic grounds.

Response

Upgrading the S3S and S4S circuits to carry the output from the expanded Smoky Falls GS is not technically feasible. The S3S/S4S lines are an integral part of the Hydro One 115 kV system and would need to remain in operation at the 115 kV level. The S3S/S4S circuits lead to Kapuskasing TS, which does not have 230 kV facilities. Upgrading circuits S3S/S4S to 230 kV is not technically feasible as the towers are designed to accommodate a specified conductor size, and the height, spacing and connection hardware of the existing towers cannot accommodate a conductor large enough to handle the amount of planned generation at Smoky Falls GS.

Board Staff Interrogatory IR-5 for OPG

Interrogatory

Re: Project Cost, Economics and Rate Impact

Please provide a brief explanation of how the cost for the Proposed Line will impact consumers through the Global Adjustment and why the impact on consumers is not material in the context of the overall cost for the LMR Project.

Response

The Ontario Power Authority ("OPA") website (<http://www.powerauthority.on.ca/understanding-electricity-prices/opa-cash-flows-global-adjustment-mechanism-gam>) defines the Global Adjustment as follows:

- *The Global Adjustment (GA) is the difference between the total payments made to certain contracted or regulated suppliers of electricity and conservation services and any offsetting revenues they receive from sales to customers.*
- *The GA is calculated by taking into account the payments made for the following functions:*
 - *Non-Utility Generation (NUG) contracts established by the former Ontario Hydro and now administered by the Ontario Electricity Financing Corporation (OEFC)*
 - *Nuclear generation operated by Ontario Power Generation (OPG)*
 - *Certain "prescribed" hydroelectric generation owned by OPG (plants at Niagara Falls, St. Catharines and Cornwall)*
 - *Generators and suppliers of conservation services contracted to OPA*

The output from OPG's Lower Mattagami River Hydroelectric Complex is sold to the OPA through a supply contract between OPG and the OPA. The terms of the contract facilitate inclusion of the increased output from each of the new units developed as part of the Lower Mattagami River Project, including Smoky Falls GS, as the new units come into service. The Proposed Line, as part of the cost of the redeveloped Smoky Falls GS, will therefore be recovered through this contract. As indicated in the above definition for the GA, the GA is calculated by taking into account payments made for generators contracted to the OPA.

The overall cost for the LMR Project is estimated to be approximately \$2.5B. The Proposed Line, with an estimated cost of \$6.6M, represents about 0.26 percent of the cost of the LMR Project. The impact on consumers is therefore not material in the context of the overall cost for the LMR Project.

Board Staff Interrogatory IR-6 for OPG

Interrogatory

Re: System Impact Assessment (SIA)

Please confirm that OPG will fulfil the IESO's Requirements for Connection contained in the SIA report and also ensure that the requirements specified for Hydro One and for OPG/Hydro One will be completed.

Response

Confirmed.

Hydro One Networks Inc. and OPG are currently negotiating a contract that will cover the requirements identified in the SIA report. Requirements specified under "IESO's requirements for connection for Hydro One" are planned to be completed on or before the connection of the new Lower Mattagami generation.

Board Staff Interrogatory IR-7 for OPG

Interrogatory

Re: System Impact Assessment (SIA)

Please provide a signed copy of the IESO's Notification of Conditional Approval for the SIA.

Response

Please find attached the IESO's Notification of Conditional Approval of Connection Proposal addressed to OPG in reference to the Lower Mattagami Generation Development, dated March 31, 2010.

March 31, 2010

Mr. Xiadong Sun
Senior Engineer
Electrical, P&C and Compliance, Hydro Engineering
Ontario Power Generation
14000 Niagara Parkway, RR#1, Niagara on the Lake, Ontario
L0S 1J0

Dear Mr. Sun :

Lower Mattagami Generation Development
Notification of Conditional Approval of Connection Proposal
CAA ID Number: 2006-239

Thank you for the information regarding the proposed *Lower Mattagami Generation Development*.

We have concluded that the proposed changes at *Lower Mattagami Generation Development* will not result in a material adverse impact on the reliability of the integrated power system.

The IESO is therefore pleased to grant **conditional approval** for the modification detailed in the attached assessment report. Any material changes to your proposal may require re-assessment by the IESO in accordance with Market Manual 2.10, and may nullify your conditional approval.

Final approval to connect the facility to the IESO-controlled grid will be granted upon successful completion of the IESO Market Entry process including, without limitation, satisfactory completion of the requirements set out in the System Impact Assessment report. During this process you will be expected to demonstrate that you have fulfilled the requirements and that the facility you have installed is materially unchanged from the proposal assessed by the IESO. Please refer to the 'External Guidelines for Connection to the IESO' attachment in your approval email for key steps in the Market Entry process. In order to initiate this process, please contact Market Entry at market.entry@ieso.ca at least eight months prior to your energization date.

For further information, please contact the undersigned.

Yours truly,



Barbara Constantinescu
Manager – Market Facilitation
Telephone: (905) 855-6406
Fax: (905) 855-6319
E-mail: barbara.constantinescu@ieso.ca
cc: IESO Records

All information submitted in this process will be used by the IESO solely in support of its obligations under the *Electricity Act, 1998*, the *Ontario Energy Board Act, 1998*, the *Market Rules* and associated policies, standards and procedures and in accordance with its licence. All information submitted will be assigned the appropriate confidentiality level upon receipt.

Board Staff Interrogatory IR-8 for OPG

Interrogatory

Re: Customer Impact Assessment (CIA)

Has Hydro One's recommendation that affected customers review the adequacy of their equipment to withstand the increased fault and voltage levels been carried out?

Response

OPG has no direct information on the actions that customers took regarding the adequacy of their equipment. Based on information provided by Hydro One, the intention of the CIA report is to identify the impacts resulting from potential projects, and that as part of the assessment process, there is a customer review period where customers have an opportunity to comment on the assessment findings. Area customers received a draft copy of the assessment and either provided comments that were incorporated in the final CIA or accepted the findings of the CIA.

Board Staff Interrogatory IR-9 for OPG

Interrogatory

Re: Customer Impact Assessment (CIA)

If the answer to IR-8 is “yes”, what is the outcome and status of any outstanding requirements?

Response

There are no outstanding requirements from the CIA.

The CIA did identify that the future fault levels in the area are nearing the Transmission System Code (“TSC”) threshold level. It is also identified that the existing fault level is already nearing the threshold level without the Lower Mattagami Redevelopment Project. Based on information provided by Hydro One, however, no upgrades to the transmission system in the area are required because the fault levels are below the equipment ratings. Further, no upgrades to customer facilities are required as no customers have indicated concerns about the fault levels.

Board Staff Interrogatory IR-10 for OPG

Interrogatory

Re: Customer Impact Assessment (CIA)

If the answer to IR-8 is “no”, what is the status of the recommendation and when does OPG expect that it will be completed?

Response

As the answer to IR-8 was “yes”, the status of the recommendation is addressed in IR-9.

Board Staff Interrogatory IR-11 for OPG

Interrogatory

Re: Environmental Assessment

Has the MOE provided official confirmation that the variance to the line route is considered minor and that no further consultation will be required?

Response

The Ministry of the Environment ("MOE") has provided official confirmation, in a letter to OPG dated July 21, 2011, that the variance to the line route is considered minor and that no further consultation will be required.

Board Staff Interrogatory IR-12 for OPG

Interrogatory

Re: Environmental Assessment

If the answer to IR-11 is “yes”, please provide a copy of the MOE’s confirmation documents.

Response

Please see attached letter dated July 21, 2011, from the Ontario Ministry of the Environment to Mr. Paul Burroughs, OPG.

Ministry of the Environment

Environmental Assessment and
Approvals Branch

2 St. Clair Avenue West
Floor 12A
Toronto ON M4V 1L5
Tel.: 416 314-8001
Fax: 416 314-8452

Ministère de l'Environnement

Direction des évaluations et des
autorisations environnementales

2, avenue St. Clair Ouest
Étage 12A
Toronto ON M4V 1L5
Tél. : 416 314-8001
Téléc. : 416 314-8452



July 21, 2011

Paul J. Burroughs
Ontario Power Generation
700 University Avenue
Toronto ON M5G1X6

Dear Mr. Burroughs:


Thank you for your June 2, 2011 letter regarding variances to Ontario Power Generation's (OPG) Hydroelectric Generating Stations Extensions, Mattagami River Environmental Assessment, 1994 (Ontario Hydro).

As provided in Section 2.2.1 of the environmental assessment (EA), OPG has conducted an assessment of the proposed changes together with the proposed mitigation. As part of this assessment, OPG has consulted with the Mattagami Extensions Coordinating Committee as well as the Ministry of the Environment (MOE) and Ministry of Natural Resources (MNR).

The MOE and MNR have reviewed the information you provided and note that aspects of the EA Variance List are out of date including, for example, references to permits which have already been approved. However, based on the information provided, the MOE agrees with OPG that the changes proposed are minor in nature and do not warrant an amendment to the EA. As a result, OPG may implement the proposed changes, subject to any applicable terms and conditions of the EA approval and/or permit and approval requirements.

If you have any questions, please feel free to contact Ross Lashbrook, Supervisor, Environmental Assessment Project Coordination, at 416-314-7765 or by e-mail at ross.lashbrook@ontario.ca.

Yours truly,


Agatha Garcia-Wright
Director
Environmental Assessment and Approvals Branch

- c. Rob Galloway, Chair, MECC Committee
Bill Greenaway, Project Coordinator, Ministry of Natural Resources

Denis Durocher, Timmins District Manager, Ministry of the Environment

Board Staff Interrogatory IR-13 for OPG

Interrogatory

Re: Environmental Assessment

If the answer to IR-11 is “no”, please provide the status of the consultation including any outstanding requirements and the date that the EA requirements are expected to be completed and confirmed by the MOE.

Response

As the response to IR-12 was “yes”, a response to IR-13 is not applicable.

Board Staff Interrogatory IR-14 for OPG

Interrogatory

Re: Aboriginal Peoples Consultations

Is OPG of the opinion that its requirement for consultation of Aboriginal Peoples has been fulfilled? If so, please explain why OPG believes this is the case. If not, please advise of any outstanding consultation requirements.

Response

Yes, OPG believes that its requirements have been fulfilled.

The duty to consult ultimately rests with the Crown. OPG, as the proponent of the LMR Project and applicant for the Proposed Line, carried out the procedural aspects of consultation ensuring that the potentially affected aboriginal communities were informed of the LMR Project, which included the proposed transmission requirements, and provided with the necessary capacity to review the information and appreciate the impacts, if any, on their aboriginal and treaty rights. Those communities who expressed any concerns with respect to potential impacts, and in particular with respect to any impacts associated with the proposed transmission route, were provided with further consultation in relation to the routing options and their concerns were appropriately taken into consideration.

As part of OPG's policy, we will continue to work with the affected communities to appropriately address any additional concerns that Aboriginal Peoples may have.

Board Staff Interrogatory IR-15 for OPG

Interrogatory

Re: Aboriginal Peoples Consultations

Please provide the status of OPG's partnership agreement with the MCFN.

Response

Following on the Comprehensive Agreement and an agreed-to term sheet respecting partnership, a confidential partnership agreement with the MCFN was completed and executed on September 2, 2011.

Board Staff Interrogatory IR-16 for OPG

Interrogatory

Re: Land Related Matters and Other Approvals

Who is the owner of the OPG leased lands?

Response

The owner of the OPG leased lands is Her Majesty the Queen in the right of Ontario as represented by the Minister of Natural Resources.

Board Staff Interrogatory IR-17 for OPG

Interrogatory

Re: Land Related Matters and Other Approvals

Please provide the status of any outstanding approvals and permits needed to complete construction of the Proposed Line on the OPG leased lands.

Response

No approvals or permits are required to complete construction of the Proposed Line on the OPG leased lands.

OPG leases the lands under Water Power Lease Agreement No. 121 “for the development of water power” as per the Lease, which “development” pertains to all works necessary to that function including the construction of control dams, the powerhouse, and transmission lines.

In addition, the owner of the leased lands is the Crown, as represented by the Ministry of Natural Resources (“MNR”), with which there has been extensive consultation under the Environmental Assessment process, resulting in approval of all aspects of the re-development of the Smoky Falls Generating Station, including the proposed Smoky Falls Transmission Line.

Board Staff Interrogatory IR-18 for OPG

Interrogatory

Re: Land Related Matters and Other Approvals

Please provide the status of any outstanding approvals and permits needed to complete construction of the Proposed Line on the Crown land.

Response

The status of outstanding approvals and permits needed to complete construction of the Proposed Line on the Crown land is as follows:

- a) Ontario Ministry of Natural Resources ("MNR") Work Permit (to Construct) – to be applied for by Kiewit Alarie Partnership ("KAP") and OPG Real Estate Services when construction of the Proposed Line begins.
- b) Land Use Permit – OPG Real Estate will apply for a Land Use Permit ("LUP") from MNR when construction of the Proposed Line is nearing completion, for the right to maintain the structure on Crown land.
- c) Easement from the Crown (MNR) for the Transmission Line – application to be made by OPG Real Estate after Proposed Line is constructed and operational; allows for registration of the transmission line on title.