

From: SOS Great Lakes [mailto:info@sosgreatlakes.org]

Sent: June 20, 2017 6:10 PM

To: catherine.mckenna@parl.gc.ca

Cc: Deep Geologic Repository Project/ Projet de stockage de déchets radioactifs[CEAA\ACEE];
<contact information removed>

Subject: SOS Great Lakes_Information Request to Minister McKenna_June 20 2017

To the Honourable Minister of Environment and Climate Change Catherine McKenna,

Please find attached a letter from SOS Great Lakes, and an attachment containing the referenced texts.
A copy of this letter and its attachments will also be sent by registered mail.

Thank you in advance for your kind attention to this important matter.

Regards,

Annabel Westell

SOS Great Lakes

www.sosgreatlakes.org



June 20, 2017

Honourable Catherine McKenna
Minister of Environment and Climate Change
House of Commons
Ottawa ON K1A 0A6

Re: Information Request Related to the Class 5 Cost Estimate for the OPG Deep Geologic Repository Project in Kincardine, Ontario

Honourable Minister McKenna:

Following the Ontario Power Generation (OPG) Response submitted to you December 28, 2016, (posted to the Canadian Environmental Assessment Agency website on January 3 2017), SOS Great Lakes made a request through the Agency that was key to our public review submission. Our letter to the Agency dated January 25, 2017 is attached. The letter requested that the Agency require OPG to release the Class 5 Cost Estimate that was prepared for the DGR in Kincardine, and referred to in their response to your Ministry.

The reason for our request was that there appeared to be very significant variation in the cost estimates that have historically been attributed to the DGR construction and operation. OPG used a base cost for the DGR of 2.4 billion dollars, including operation, but did not provide detail on how that cost was derived, or present the Class 5 Estimate that they referred to in their Response of December 2016.

This is important, because OPG's comparative analysis of the value of construction a DGR in 'alternate locations – 2 regions' presumes that there is capital cost value that has been sufficiently assessed for the Bruce Power Site proposal.

There is ample evidence that the DGRs that are under consideration (none of which have been built in sedimentary rock or have been built at that level, that are in operation), have used cost estimates for capital construction and operation that are greater than that estimated by OPG for the Bruce Power Site.

When we wrote to the Agency and did not receive the information we requested, we approached OPG ourselves.

When we contacted Mr. Kevin Powers of OPG, he returned our questions with an email to our administrator, indicating that he had consulted with staff around the requests. "...The requests are very labour-intensive and will require a large volume of work from OPG employees. Given the amount of work required, and the cost to the company to gather that information, we feel the request is best addressed through a Freedom of Information Act request. With an FOI request, OPG can more accurately assess the extent of the information request, and provide you with a cost estimate for gathering the information" (see attached).

I have consulted with our Board of Directors. We feel that it is an unfair burden for a not-for-profit, volunteer organization to have to go through the cost and effort of preparing an FOI, and then waiting for the results of that FOI. In our experience, the FOI process is one that could take many months, and the cost of the process and the FOI itself, could amount to many 1000s of dollars. We feel that if this cost estimate exists that it should be released as a matter of public record, according to the principles of transparency, that are part of this public process of review and commentary.

Surely it would benefit all Canadians, and Ontarians, to understand the true capital and operating cost of the DGR in Kincardine as now projected, so that we can use the available material to assess the true cost of this endeavour, and its relative cost, in relation to transportation off site to alternative locations or regions.

We respectfully request that your Ministry asks to have the Class 5 Cost Estimate for the capital cost and operational cost of the DGR made public on the CEAA Registry.

Yours very truly,

<Original Signed by>

Jill Taylor, President
SOS Great Lakes,
On Behalf of the Board
of Directors

c.c. Robyn Lynn Virtue, CEAA
Kevin Powers, OPG

Attachments to the SOSGL Letter to the Minister dated June 20, 2017

Table of Contents

Request from SOS Great Lakes to Canadian Environment Assessment Agency	3
TABLE 1: SOS Great Lakes Information Request to CEAA (January 25, 2017)	4
Response from the Canadian Environmental Assessment Agency	7
Request from SOS Great Lakes to Ontario Power Generation	8
TABLE 1: SOS Great Lakes Information Request to Mr. Kevin Powers, OPG (May 11, 2017)	9
Response from Ontario Power Generation	12



January, 2017

Deep Geological Repository Project
Project Manager
Canadian Environmental Assessment Agency
160 Elgin Street, 22 Floor,
Ottawa ON
K1A0H3

Attention: Ms Robyn-Lynne Virtue (CEAA.DGR.Project-Projet.DGR.ACEE@ceaa-acee.gc.ca)

Re: Information Requests with Respect to 'Additional Information Provided by Ontario Power Generation: Ontario Power Generations' Deep Geologic Repository Project.

Dear Ms. Virtue:

Further to the 3 January 2017 posting on the CEAA public registry of the December 2016 reports by Ontario Power Generation, with respect to the Deep Geologic Repository project, we have attached a number of initial questions and requests for information. These questions relate to one aspect of our review of the seven reports filed by OPG.

This information is necessary to fulfill our review of the OPG filing, and to developing our analysis during the public comment period, now less than one month away.

Please do not hesitate to contact me if clarification of any of these eight questions and requests for information on the issue of Cost.

Yours very truly,

Jill Taylor, President
SOS Great Lakes
On behalf of the Board of Directors

Attachment: Table 1

-sent by email and Canada Post.

TABLE 1 : SOS Great Lakes Information Request of January 25, 2017 to CEEA

Regarding OPG's Deep Geologic Repository Project, For Low and Intermediate Level Waste, DEC 2016:

- Referencing : Study of Alternate Locations Main Submission 00216-REP-07701-00013
- Referencing: Cost and Risk Estimate for Packaging and Transporting Waste to Alternate Locations Prepared by Energy Solutions Canada, December 2016. 00216-REP-03450-00001

Subject: Back up to the Capital Cost and Life Cycle Costs of the Deep Geological Repository Referred to in the OPG Report.

1.0 Cost and Risk Estimate for Packaging and Transporting Waste to Alternate Locations Prepared by Energy Solutions Canada, December 2016. 00216-REP-03450-00001

The *Cost and Risk Estimate for Packaging* of the waste inventory for transportation and road transport costs document does not include any information on the base capital cost projections in 2015/2016, or other dollars, for the pre-construction, construction, operation, decommissioning and post-closure periods of the DGR 1 proposed for Kincardine, or the proposed hypothetical DGR on alternative sites.

2.0 The Study of Alternate Locations Main Submission 00216-REP-07701-00013

2.1 Incremental Increases at Alternate Locations

page vi: "OPG's study shows that the incremental costs for implementing a DGR at an alternate location would range from \$1.2B and \$3.5B (this is in addition to the current cost of \$2.4B (2017\$) for the DGR Project at the Bruce Nuclear site). These additional costs are attributable to the range of activities that would be required for an alternate location including a multi-year consent based siting process; acquisition of land; development and implementation of services to support facility operation; repackaging and transportation; and re-starting the regulatory approvals and licensing process."

2.2 OPG States that a Safe and Cost Effective Option Exists at the BNP DGR Location

Page vi : indicates that international experts agree...," They believe that deferring costs to future generations, when a safe, cost-effective option already exists, is not necessarily in the best interests of society."

2.3 All Phases of the BNP site for DGR: 2.4 Billion life cycle costs from 2004 through Decommissioning in 2017 dollars

Page 12 paragraph 5 indicates that the 2.4 billion is if for all phases of the Bruce Nuclear site project starting from 2004, through licensing and regulatory approvals, construction, retrieval, operations and ultimately decommissioning.

2.4 Ability to Finance

Page 18 on Economic Feasibility indicates: “The threshold for the economic feasibility criterion is whether OPG reasonably expects to be able to finance the cost of the DGR at an alternate location from internal resources, or through debt financing, or a combination of the two. The economic feasibility threshold is satisfied because in OPG’s judgment OPG expects to be able to secure financing for the DGR at either of the alternate locations through one or more of the mechanisms, if required...”

2.5 Non Transportation Costs

Page 63 : OPG has also developed an estimate of the non-transportation related additional costs associated with establishing a DGR at an alternate location. These costs are incremental to the base costs of implementing the DGR Project at the Bruce Nuclear site and are estimated to range between \$0.8B and \$2.1B (in 2016\$). The incremental costs are associated with the following major work activities:.....”

Page 64 Table 6-1 indicates incremental Project Cost Estimates in Millions (2015/16 dollars) at the Sedimentary and Crystalline locations but does not have a comparative column for the same costs for the Bruce Nuclear Plant / Kincardine Location in Sedimentary Rock in 2015/16 dollars.

2.6 Reference to Cost in the Early 2000s and in 2011 and in Nov 2016 for the BNP/Kincardine DGR (Capital Cost)

The only cost that has been indicated for the Kincardine DGR is in the EIS 2011 at ‘about a billion’. This figure was repeated in our meeting and the power point presentation of OPG on November 11, 2016 at their headquarters. This cost, ‘about a billion’, is also indicated in a newspaper article from Kincardine during the discussion of whether or not to proceed with the DGR in the early ‘2000s.

Questions

Question One: What is the cost in 2015/2016/or 2017 dollars for the Elements listed in the Table 6-1 for the BNP/Kincardine DGR, including: site characterization that has been done to date, and will need to be done in the future; regulatory approvals done in the past and that still need to be done; site preparation and infrastructure that has been undertaken to date, and still needs to be done; DGR operational requirements; additional repository work and WWMF Infrastructure improvements during the period of construction and operation?

Question Two: Do the costs in Table 6-1 page 64, represent work during operations and decommissioning and post closure periods. Would those be the same at alternate facilities, as they would be at the Kincardine DGR? What are the costs of operations, decommissioning and for post-closure estimated for the BNP/Kincardine DGR site?

Question Three: What is the breakdown of the 2.4 Billion dollar life cycle cost for the BNP/Kincardine DGR in terms of : costs to date by category of expenditure 2004-2016 end; future regulatory approvals; hard construction costs for the facility including contingencies; soft costs by category associated with planning, design, permits, testing and due diligence reporting, emergency measures, project management and authorities/agencies management costs, design and construction contingencies, etc. associated with construction; operations costs and maintenance including labour and materials and soft costs and anticipated emergency measures; decommissioning costs including labour and materials and soft costs and anticipated emergency measures; post closure costs labour and materials and soft costs and anticipated emergency measures. Was the estimate a Class 5 estimate, as is the estimate presented for the alternate sites?

Question Four: Does the 2.4 billion dollar estimate include the payments to Municipalities and Counties that will come due during that period?

Question Five: What are the investment risk factors that were used to establish the credibility of the estimate?

Question Six: Does the 2.4 billion dollar estimate include the expansion of the BNP/Kincardine DGR to accommodate the additional 200,000 cubic metres of decommissioning /refurbishment waste from the Pickering, Darlington and Bruce Nuclear Plants? Did the Alternate Site Estimate include the transportation and accommodation of that waste on site?

Question Seven: The name and credentials of the cost estimating firm that prepared the report on the Transportation and Storage of Waste are clearly stated. What firm prepared the estimate of 2.4 billion dollars, and when was it prepared? What background documents were they given to prepare the estimate?

Question Eight: We request that the cost estimates for the 2.4 Billion Dollar estimate noted in the OPG response be posted on the CEEA website.

Thank you,

Jill Taylor, President SOS Great Lakes on behalf of the Board of Directors.

-end.



Canadian Environmental
Assessment Agency

160 Elgin St., 22nd floor
Ottawa ON K1A 0H3

Agence canadienne
d'évaluation environnementale

160, rue Elgin, 22^e étage
Ottawa ON K1A 0H3

ELECTRONIC MAIL

January 26, 2017

Jill Taylor
President
SOS Great Lakes
<contact information removed>

Dear Ms. Taylor:

Thank you for your letter of January 25, 2017, concerning Ontario Power Generation's Deep Geologic Repository for Low and Intermediate Level Radioactive Waste Project.

On February 18, 2016, the Minister of Environment and Climate Change requested additional information and further studies from Ontario Power Generation (the proponent). The additional information was submitted by the proponent on December 30, 2016 and posted on the Canadian Environmental Assessment Registry (the registry) on January 3, 2017.

On January 18, 2017, the Canadian Environmental Assessment Agency (the Agency) began a public comment period to assist the Agency in assessing the technical sufficiency and merit of the proponent's additional information. Your letter concerning cost issues will be considered along with submissions from the public, Indigenous groups, government departments and agencies during this comment period and posted on the registry. I strongly encourage you to continue on with your review of the other aspects of the proponent's additional information during the public comment period.

Thank you for your input during the review process of the additional information for the Deep Geologic Repository Project.

Please contact me if you require further information, I can be reached at CEAA.DGR.Project-Projet.DGR.ACEE@ceaa-acee.gc.ca.

Yours sincerely,

<Original signed by>

Robyn-Lynne Virtue
Panel Manager



May 11, 2017

Ontario Power Generation
700 University Avenue
Toronto, ON M5G1X6
Attention: Mr. Kevin Powers
Director Nuclear Public Affairs

Re: Information Request Related to the Costs of the Kincardine Deep Geologic Repository Project

Dear Mr. Powers:

Further to the January 3, 2017 posting on the CEEA public registry of the December 2016 reports by Ontario Power Generation, with respect to the Deep Geologic Repository project, our organization, SOS Great Lakes, has a number of information requests that were not clearly answered by your submission to the Additional Information provided to the Minister. These requests are a result of questions raised by our members, and questions that have arisen in presentations that we have made to allied groups.

Please do not hesitate to contact me if you wish to clarify the questions that are attached to this letter.

Yours very truly,

Jill Taylor, President
SOS Great Lakes
On behalf of the Board of Directors

Attachment: Table 1

-sent by email and Canada Post.

TABLE 1: SOS Great Lakes Information Request May 11, 2017 to Mr. Kevin Powers, Ontario Power Generation.

Regarding OPG's Deep Geologic Repository Project, For Low and Intermediate Level Waste, Additional Information Response to the Minister, DEC 2016:

- Referencing: Study of Alternate Locations Main Submission 00216-REP-07701-00013
- Referencing: Cost and Risk Estimate for Packaging and Transporting Waste to Alternate Locations, Prepared by Energy Solutions Canada, December 2016. 00216-REP-03450-00001

Subject: Information Requested on the Capital Cost and Life Cycle Costs of the Deep Geological Repository Referred to in the OPG Report.

1.0 Cost and Risk Estimate for Packaging and Transporting Waste to Alternate Locations Prepared by Energy Solutions Canada, December 2016. 00216-REP-03450-00001

The *Cost and Risk Estimate for Packaging* of the waste inventory for transportation and road transport costs document does not include any information on the base capital cost projections in 2015/2016, or other dollars, for the pre-construction, construction, operation, decommissioning and post-closure periods of the DGR 1 proposed for Kincardine, or the proposed hypothetical DGR on alternative sites.

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The only cost that has been indicated for the Kincardine DGR is in the EIS 2011 at ‘about a billion’. This figure was repeated in our meeting and the power point presentation of OPG on November 11, 2016 at their headquarters. This cost, ‘about a billion’, is also indicated in a newspaper article from Kincardine during the discussion of whether or not to proceed with the DGR in the early ‘2000s.

Questions and Requests for Information on the Following:

Question One: What is the cost in 2015/2016/or 2017 dollars for the Elements listed in the Table 6-1 for the BNP/Kincardine DGR, including: site characterization that has been done to date, and will need to be done in the future; regulatory approvals done in the past and that still need to be done; site preparation and infrastructure that has been undertaken to date, and still needs to be done; DGR operational requirements; additional repository work and WWMF Infrastructure improvements during the period of construction and operation?

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associated with construction; operations costs and maintenance including labour and materials and soft costs and anticipated emergency measures; decommissioning costs including labour and materials and soft costs and anticipated emergency measures; post closure costs labour and materials and soft costs and anticipated emergency measures. Was the estimate a Class 5 estimate, as is the estimate presented for the alternate sites?

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Question Five: What are the investment risk factors that were used to establish the credibility of the estimate?

Question Six: Does the 2.4-billion-dollar estimate include the expansion of the BNP/Kincardine DGR to accommodate the additional 200,000 cubic metres of decommissioning /refurbishment waste from the Pickering, Darlington and Bruce Nuclear Plants? Did the Alternate Site Estimate include the transportation and accommodation of that waste on site?

Question Seven: The name and credentials of the cost estimating firm that prepared the report on the Transportation and Storage of Waste are clearly stated. What firm prepared the estimate of 2.4 billion dollars, and when was it prepared? What background documents were they given to prepare the estimate?

Question Eight: We request a copy of the 2.4 Billion Dollar estimate noted in the OPG response to the Minister.

Thank you,

Jill Taylor, President SOS Great Lakes on behalf of the Board of Directors.

-end.



Ellen Dailey <info@sosgreatlakes.org>

RE: EXTERNAL – Re: Information Request Related to the Costs of the Kincardine Deep Geologic Repository Project

1 message

POWERS Kevin -CORPRELCOMM <contact information removed>
To: SOS Great Lakes <info@sosgreatlakes.org>

Thu, May 25, 2017 at 10:43 AM

Bahar,

Thank you for the letter, which I received in hard copy on Thursday, and for the follow-up note Tuesday.

Since receiving your requests for information, I have consulted with staff around the requests.

The requests are very labour-intensive and will require a large volume of work from OPG employees. Given the amount of work required, and the cost to the company to gather that information, we feel the request is best addressed through a Freedom of Information Act request.

With an FOI request, OPG can more accurately assess the extent of the information request, and provide you with a cost estimate for gathering the information.

Thank you for your ongoing interest in this file.

Kevin

From: SOS Great Lakes [mailto:info@sosgreatlakes.org]**Sent:** Tuesday, May 23, 2017 1:03 PM**To:** POWERS Kevin -CORPRELCOMM**Subject:** EXTERNAL – Re: Information Request Related to the Costs of the Kincardine Deep Geologic Repository Project

*** Exercise caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Dear Mr. Powers,

Our President, Jill Taylor, was wondering when we would hear back from you on this request for information.

Many thanks,

Bahar Banaei

SOS Great Lakes

www.sosgreatlakes.org

On Thu, May 11, 2017 at 6:06 PM, SOS Great Lakes <info@sosgreatlakes.org> wrote:

Dear Mr. Powers,

I am contacting you on behalf of the president of SOS Great Lakes, Jill Taylor. Attached, please find a copy of a letter regarding the "Information Request Related to the Costs of the Kincardine Deep Geologic Repository Project". We have also sent a hard copy in the mail.

Please let me know if you have any questions regarding the attachment.

Many thanks,

Bahar Banaei

SOS Great Lakes

www.sosgreatlakes.org

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