Ontario Power Generation’s report of findings of a public attitudes poll towards the proposed Nuclear Waste Dump on Lake Huron

Executive Summary

A review of sampling, methodology, and reporting of the Ontario Power Generation Report of the Deep Geologic Repository Study by the Gandalf Group shows:

- the entire poll, from sampling, through question design, to reporting is highly irregular;
- most questions are loaded with false or misleading assumptions designed to skew the response in favour of the DGR;
- there is no evidence to support OPG’s claim that the majority of people are in favour of building a DGR on Lake Huron;
- the only substantive finding supported by evidence shows most Ontarians (64%) believe the DGR poses a threat to public drinking water and to the health of the Lake.

If this study is to be believed, the data supports only one conclusion about Ontario public opinion on OPG’s proposed nuclear waste dump: it may be okay to build a DGR somewhere in Ontario, but not near Lake Huron.

These views are discussed under the above headings in this report.
OOG’S PUBLIC OPINION POLL OF ATTITUDES ABOUT THE DGR, FROM SAMPLING THROUGH QUESTION DESIGN TO REPORTING, IS HIGHLY IRREGULAR.

Accuracy and clarity in design of the questions are important elements in attempting to accurately gauge public opinion. If the questions asked are ambiguous or unnecessarily complex, the results of the study are likely to be erroneous.

The wording of the questions posed in this study often omit essential facts and lack clarity.

After establishing a baseline of attitudes about nuclear waste in the first part of the survey, respondents were then presented with a series of statements which reflect OOG’s response to critical statements by opponents of the project. These statements reflect only a small part of the actual criticism and often ignore the main objections expressed by opponents.

For example, Question 38 C:

Do you strongly agree, somewhat agree, somewhat disagree or strongly disagree with the following statement:

We can’t be confident that Kincardine is a good location for the Deep Geologic Repository because OPG didn’t look at other locations.

Opponents of the project object to the Lake Huron site of the proposed DGR for three main reasons: it is too close to the source of drinking water for 40 million people; the geology of the site is questionable and unproven; and, in selecting the site, OPG ignored Canadian Environmental Law which requires the proponents to examine multiple locations and to provide detailed alternatives to regulatory authorities.

Clearer statements to test public opinion of the site location issue would be:

Since Canada’s Environmental Laws require careful examination of alternative sites, OPG should be required to conduct detailed examination of alternative sites.

Or,

Because 40 million people rely on the Great Lakes for drinking water and since every nuclear waste DGR in the world has failed, building a DGR 1.2 km from the shore of Lake Huron presents unacceptable risks to society, and the environment.
The difference between these statements and those posed by OPG, is that all the information in these statements is factual, provable and true, while OPG’s statements are largely half true, untrue or unsubstantiated statements favouring the DGR. After listening to these statements, respondents were then asked similar questions to the earlier ones.

Naturally their responses between the first set of questions and the second set of questions, changed dramatically. For example, consider Questions 38B and 50A.

Questions 38B asks:

*Do you strongly agree, somewhat agree, somewhat disagree or strongly disagree with this argument:*

*Other Deep Geologic Repositories have failed in other countries, so the science can’t be trusted.*

More than half, 56%, of respondents strongly agree or agree with this statement. Among females, 70% of respondents believe it poses a threat. Imagine what the answers would have been if the statement was more accurately phrased as:

*Every attempt at burying nuclear waste in a DGR in the world has failed, so OPG’s plans for a DGR can’t be trusted.*

Later on, in Question 50A, respondents were asked whether they agreed with the following statement:

*Deep Geologic Repositories have safely stored waste around the world including in the United States, Sweden, Germany, Korea and Finland.*

This question did not even specify that the waste was nuclear waste. Because of the intense testing that goes into the wording of survey questions, we do not believe this to be a typo.

While OPG continuously uses these countries as examples of effective DGRs, it is so misleading as to be false. ASSE Germany successfully stored nuclear waste for 30 years, until it started to leak. Now it presents a growing monumental environmental and health disaster throughout the region and appears to be unstoppable. Carlsbad New Mexico operated safely until it caught on fire. Sweden’s experience was going well until the containers started to fail much sooner than anticipated. France’s test underground research laboratory built in similar geology to OPG’s proposed DGR was progressing well until it collapsed killing workers, and so on. But this information was not presented to respondents.

Even the next statement, Question 50B, is carefully ambiguous but still inaccurate:
Experts from around the world, including the U.S. Environmental Protection Agency agree that this Deep Geologic Repository will protect the environment from nuclear waste.

It is true that some international experts support the DGR. It is equally true that some international experts, particularly those with experience, believe DGRs to be unsafe. While the U.S. EPA has asked questions about the DGR, they have not expressed an opinion that the proposed DGR will be safe.

In all, some 45 statements about the science, geology, safety, danger to the Lake, transportation risks, alternate sites, and community acceptance were all of little or no evidentiary value because they inevitably contained misleading or false assumptions or statements.
THERE IS NO EVIDENCE TO SUPPORT OPG’S CLAIM THAT THE MAJORITY OF PEOPLE ARE IN FAVOUR OF BUILDING A DGR ON LAKE HURON

We have reviewed the Gandalf poll in detail and we can find not a single question which supports OPG’s claim that a majority of the Ontario public support the idea of building a nuclear waste DGR on the shore of Lake Huron. In fact, the findings of this survey clearly and definitively oppose this project.

The only question remotely relevant to OPG’s claim of public support is the response to Question 70.

The question says:

Again, after hearing all of this information, would you say that you strongly support, somewhat support, somewhat oppose, or strongly oppose the proposed Deep Geologic Repository being built in Kincardine, Ontario?

Responses to the question would indicate support or strong support (71%) for the proposed Deep Geologic Repository being built in Kincardine, if it actually represented a random sample of the Ontario public, which, as explained below, it does not.

Quite apart from the fact that the DGR is being built not in Kincardine but on the shoreline of Lake Huron, this response in no way reflects public opinion in Ontario towards the DGR. By their own admission, a very large number of Ontarians are unaware of the proposed project.

The only dubious claim of support that OPG can make from this study is that of the 805 people who responded to this telephone survey, 71%, or 572 people support the DGR after being exposed to a number of inaccurate or untrue statements about the DGR provided by OPG. This claim is not supported by the data.

While they claim their sampling method is representative of public opinion with a reliability of 95%, they do not offer detailed information of their sampling methodology. The industry norm is to provide full details of all methodology which they do not. Furthermore, 805 people is a very small sample and their regional analysis, because of margins of error that are in the mid to high teens, are not reliable measures.
THE ONLY SUBSTANTIVE FINDING SUPPORTED BY EVIDENCE SHOWS MOST Ontarians (64%) BELIEVE THE DGR POSES A THREAT TO PUBLIC DRINKING WATER AND TO THE HEALTH OF THE LAKE.

Early on in the study, respondents were asked a number of questions about their views on nuclear energy, their knowledge of nuclear waste management and their opinion about DGRs. In question 26 some respondents were asked:

*And based on what you know, would you say that you strongly support, somewhat support, somewhat oppose, or strongly oppose a Deep Geological Repository being built in Ontario to store the waste produced by Ontario’s nuclear generation of electricity?*

Responses showed 59% of those who were asked the question, approve a DGR being built in Ontario. This is the only question that probes public opinion of the DGR and shows support, in the entire survey.

Let’s look at what it actually supports and how much support is really there.

The question was only asked of those who said they knew something about DGRs (56% of respondents) even though most of those people admittedly knew little. In professional terms, it is called unaided awareness. Among pollsters, unaided awareness carries a lot of weight because it means people are aware of the information being tested. Normally, the level of unaided awareness would be probed. Pollsters would normally attempt to separate those who said they are aware from those who actually are aware. In this study, there were no attempts to verify unaided awareness. If respondents said they had heard of DGRs they were considered knowledgeable.

Notice that the wording of this question fails to provide a specific location for the DGR. This is not support for the Lake Huron DGR. It is support for a DGR somewhere in Ontario.

Question 26 was asked to the 56% of respondents who said they were aware of DGRs. Only 33% of all respondents, expressed support for a DGR somewhere in Ontario. According to the actual data in this study, aside from the 266 respondents who approve of a DGR somewhere in Ontario, there is no evidence in this study that a single person in Ontario actually supports construction of a DGR on Lake Huron.

Whatever support OPG reports from this study is manufactured from highly biased, unsubstantiated and inaccurate statements fed to respondents.
Moreover the responses from those manufactured statements cannot be projected to reflect the opinion of the Ontario public. Again, to be clear, all respondents were asked a series of questions. Then all respondents were asked about their support for a series of statements, almost all of which were unsubstantiated, inaccurate or ambiguous. From these latter responses based on questionable information, OPG erroneously claims strong support for the DGR on the shore of Lake Huron.

This claim is not only unsupportable by the evidence in the study, but it is preposterous and false. While the respondents, some 805 people from Ontario, were presented with some questionable information and as a result, changed their opinions about the DGR, those results cannot possibly be projected to represent the views of the Ontario public because the information used to manufacture those views, has not been presented to or accepted by the Ontario public.

In the final analysis, there are only two questions relevant to the DGR whose responses can be considered a reflection of the broader public opinion.

Question 26, asked to 56% of respondents:

_And based on what you know, would you say that you strongly support, somewhat support, somewhat oppose, or strongly oppose a Deep Geological Repository being built in Ontario to store the waste produced by Ontario’s nuclear generation of electricity?_

Roughly 33% of respondents showed support for a DGR somewhere in Ontario.

Question 38A asked all respondents:

_Do you strongly agree, somewhat agree, somewhat disagree or strongly disagree with this argument?

_The DGR will be built 1.2 km away from Lake Huron, it will pose a threat to our drinking water and to the health of the Lake._

About two thirds of Ontarians (64%) believe a DGR built 1.2 kms away from Lake Huron will pose a threat to drinking water and the health of the Lake.

If this study is to be believed, the data supports only one conclusion of Ontario public opinion on OPG’s proposed nuclear waste dump: It may be okay to build a DGR somewhere in Ontario to store nuclear waste, but not near Lake Huron.