NUCLEAR WASTE WATCH | ACTION DÉCHETS NUCLÉAIRES

# An Open Letter to the Government of Ontario

## Ontario Power Generation's Plan to Bury Nuclear Waste in Deep Underground Caverns Beside Lake Huron Must be Set Aside

Dear Premier Wynne and Members of the Ontario Legislature:

Last week, a panel appointed by the federal Minister of the Environment and the Canadian Nuclear Safety Commission in 2012 provided the Minister with its final report on the review of Ontario Power Generation's proposed Deep Geologic Repository for Low and Intermediate Level Radioactive Wastes. The Joint Review Panel (JRP) recommended that the federal minister approve the proposed repository, despite the expert evidence they heard throughout the public hearings about numerous technical uncertainties, and in the face of large and growing public opposition. The JRP conclusions are flawed.

**We are writing to the Government of Ontario, as the sole shareholder of the proponent, Ontario Power Generation, to request that Ontario Power Generation (OPG) be directed to withdraw its proposal and that the Government of Ontario initiate a needs assessment with respect to the storage and management of low, intermediate and high level radioactive wastes at OPG owned and/or operated reactors.**

In brief, Ontario Power Generation is proposing to construct a series of caverns 680 metres below-surface in a band of limestone, and to transfer into those caverns 200,000 cubic metres of nuclear waste. Some of these wastes – called "low level" radioactive wastes – do not require extra barriers to shield workers from radioactivity, although they are still hazardous. Other wastes, classified as "intermediate" wastes are highly radioactive. In fact, intermediate waste is almost as radioactive as "high level waste" and as recently as 2002 was identified as Type III waste, with similar radioactivity to used fuel or irradiated nuclear fuel waste. Elements of these wastes will remain dangerously radioactive for hundreds of thousands of years, and some for even far longer than that.

At the end of a nine year review the proposed DGR project has too many unknowns. For example:

- Ontario Power Generation's characterization and inventory of the wastes remains incomplete.
- The rate at which gas will be generated by deteriorating metal waste containers is still unknown; this is important, because these gas pressures can cause fracturing that could speed the release of radionuclides out to the biosphere.
- The chemical stability of some wastes, such as ion exchange resins, is uncertain over time.
- Many of the "design" decisions have not yet been made, including important features like the seal for the vertical shafts that connect the underground repository to the environment.

However, many things that <u>are</u> known about the Project cause concern, such as:

- The only example Ontario Power Generation offered of a similar deep geologic repository for radioactive wastes, the Waste Isolation Pilot Plant in New Mexico, is no longer operating after an underground fire and loss of containment resulted in radioactive releases to the surface in 2014.

- Management of the wastes through placement in the proposed DGR will cost approximately four times more than above-ground options, with current cost estimates at over $2 billion; OPG's pattern of persistently underestimating costs for nuclear projects over the last several decades suggests that real costs are more likely to be in the $6 to $10 billion range.
- Ontario Power Generation's proposal (2011) is for 200,000 metres$^3$ but in August 2013 Ontario Power Generation acknowledged on the public record that they intend to double the amount of waste to be placed in the proposed DGR and will seek a licence amendment after they receive a project approval based on the original volume; the final use and size of the proposed DGR remain unknown.
- 154 municipalities representing more than 20 million people have passed resolutions opposing OPG's proposed waste repository; the large and growing public opposition includes many elected representatives in the U.S.
- The Project is not supported by the Saugeen Ojibway Nation; Ontario Power Generation has previously stated that it will not proceed without the support of the Saugeen Ojibway Nation.
- This project is an unacceptable risk to the world's largest fresh water supply: the Great Lakes.

> *It would go downstream, and pollute the fresh water that people need to sustain themselves. There are enough problems with the lack of fresh water, and here we are basically creating a potential issue for the future*
> *Chief Vernon Roote, Saugeen Ojibway Nation, May 2015*

During 33 days of hearings in 2013 and 2014 it became abundantly clear that Ontario Power Generation's proposal was still very much in flux. It also became apparent that the Canadian Nuclear Safety Commission (CNSC) staff, who were attending the hearings daily, were operating as advocates rather than impartial assessors of Ontario Power Generation's incomplete proposal. CNSC staff repeatedly told the Review Panel that key decisions could be left until after an approval was issued by the Joint Review Panel, and the CNSC staff themselves would become the decision-makers.

The Joint Review Panel's 450 page report does a reasonable job of acknowledging the myriad issues raised through written submissions and hearing testimony by members of the public, independent experts, Saugeen Ojibway Nation, and the Panel's own experts. What is unreasonable is the Panel's complete dismissal of many of these issues, and the deferring of other issues to a future decision-maker. Simply leaving them unresolved – while recommending project approval – is unreasonable and concerning. In addition, the Panel report is flawed by internal contradictions and overly generalized statements which are not supported by the hearing record.

As the Joint Review Panel notes in the opening pages of its report, this Project is without precedent anywhere in the world. It is also an exercise in contradiction, as is the JRP report itself. For example:

- Ontario Power Generation argued that the repository is needed to remove the wastes from the surface and keep them "safe" from threats such as terror attacks or social collapse, yet Ontario Power Generation also contends that the wastes are safe at their present above-ground location, and continues to generate more and more of such wastes, including highly radioactive spent fuel which will have to remain on surface for decades due to heat and radiation levels.
- The Joint Review Panel contends that the proposed site was preferred above others primarily because it would avoid risks associated with further transportation, yet the wastes from the Darlington and Pickering generating stations continue to be transported long distances to the Western Waste Management Facility, adjacent to the proposed site of the repository.

- The Joint Review Panel recommends in their report that "OPG should minimize the volume of waste stored in the DGR" but in the same report states that doubling the volume of waste (with the addition of decommissioning waste) would not change project outcomes.
- The Joint Review Panel acknowledges that there are uncertainties related to many technical aspects of the project but asserts that these same aspects, in combination, provide confidence in the Project.

The evidence presented to the Joint Review Panel by expert consultants retained by the Review Panel, by independent scientists and engineers, and by other hearing participants establish that the project's proposed design and site geology is **uncertain**, the project is **unacceptable** to the public and the residents of the Great Lakes basin, the project is **unnecessary** for the management of the wastes, and **unaffordable** from a cost-benefit perspective.

The federal government may accept a flawed project, approved through a flawed review. The Provincial Government should not follow suit.

The undersigned organizations urge you as the sole shareholder of OPG to:

- Direct Ontario Power Generation to withdraw its proposal to bury nuclear waste beside Lake Huron, and
- Direct the Minister of Environment and Climate Change and the Minister of Energy jointly to convene an expert and citizens' advisory panel to conduct a needs assessment with respect to the storage and management of low, intermediate and high level radioactive wastes at OPG owned and/or operated reactors.

Respectfully submitted on May 14th, 2015 by the undersigned organizations:

Algoma Manitoulin Nuclear Awareness
Algonquin Eco Watch
Blue Water Coalition Against the Deep Geological Repositories
Bruce Peninsula Environment Group (BPEG)
Canadian Association of Physicians for the Environment
Canadian Coalition for Nuclear Responsibility
Canadian Environmental Law Association
Citizens Concerned About Nuclear Waste in Elliot Lake
Citizens Environment Alliance of southwestern Ontario
Citizens' Clearinghouse on Waste Management
Concerned Citizens of Blind River
Concerned Citizens of Hornepayne
Concerned Citizens of Renfrew County
Concerned Citizens of White River
Durham Nuclear Awareness (DNA)
Faith & The Common Good
Friends of Bruce
Grand River Environmental Network
Greenpeace Canada
Honey Harbour Fishing Club

Huron Grey Bruce Citizens Committee on Nuclear Wastes
Inverhuron District Ratepayers Association
Justice and Global Issues Committee, South East Presbytery, United Church of Canada
Kawartha Truth and Reconciliation Support Group.
Manitoulin Island Cycling Associates (MICA)
MiningWatch Canada
Nibi Emosaawdamajig
Nipissing Environmental Watch
Northwatch
Ontario Clean Air Alliance
Pax Christi Toronto
Peterborough Greenspace Coalition
Physicians for Global Survival
Prevent Cancer Now
Provincial Council of Women of Ontario
Sacred Water Circle
Save Our Saugeen Shores
Science for Peace
Sierra Club Ontario Chapter
Sierra Club Canada Foundation
Southampton Residents Association
Temiskaming Environmental Action Committee
The Council of Canadians
The Inverhuron Committee
The Kawartha Lakes Water Walkers
The National Council of Women of Canada
Veterans Against Nuclear Arms
ZeroWaste4ZeroBurning

Committee for Future Generations
Council for Public Health in Mining Communities
Inter-Church Uranium Committee Educational Cooperative (ICUCEC)
les Artistes pour la Paix
Maritime Aboriginal Peoples Council

Sept-Iles Sans URANIUM
Watershed Sentinel Educational Society (WSES)

Binational Great Lakes Committee of the Sierra Club and the Sierra Club of Canada Foundation

Alliance to Halt Fermi 3
Beyond Nuclear
Cape Downwinders
Citizens for Alternatives to Chemical Contamination
Citizens' Resistance at Fermi 2 (CRAFT)

Coalition Against Nukes
Coalition for a Nuclear Free Great Lakes
Concerned Citizens for Nuclear Safety
Concerned Citizens of Big Bay
Connecticut Coalition Against Millstone
Crabshell Alliance
Disarm / End Wars Committee, Women's International League for Peace and Freedom
Don't Waste Michigan, Sherwood Chapter
Environmentalists, Inc.
Fairmont, MN Peace Group
Heart of America Northwest
Michigan Safe Energy Future - Shoreline Chapter (MSEF-SH)
Michigan Safe Energy Future-Kalamazoo, MI Chapter
Michigan Stop The Nuclear Bombs Campaign
Nuclear Information and Resource Service (NIRS)
Nukewatch
Oak Ridge Environmental Peace Alliance
Oglala Sioux Tribe Cultural Affairs and Historic Preservation Office
Ohio CARE - Citizens Against a Radioactive Environment
Pennsylvania Alliance for Clean Water and Air
Physicians for Social Responsibility - Kansas City
Portsmouth/Piketon Residents for Environmental Safety and Security (PRESS)
Protect Our Manoomin
Rocky Mountain Peace and Justice Center
Saginaw Home for Peace and Justice
Save Our Sky Blue Waters
Sierra Club, Atlantic Chapter
Sierra Club, Michigan Chapter
Southwest Research and Information Center
The Berkeley Fellowship of Unitarian Universalists Social Justice Committee
The Colorado Coalition for Prevention of Nuclear War
The Helen Caldicott Foundation
The Hiroshima Nagasaki Day Coalition
Uranium Watch
Vermont Citizens Action Network
Women's International League for Peace and Freedom, U.S. Section/Earth Democracy Campaign

BI Umweltschutz Lüchow - Dannenberg
Platform Against Nuclear Dangers Salzburg
WISE (World Information Service on Energy)