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Oral intervention from

Tony McQuail

In the Matter of

Ontario Power Generation Inc.

Proposed Environmental Impact Statement for OPG's Deep Geological Repository (DGR) Project for Low and Intermediate Level Waste

Joint Review Panel

September 16 to October 12, 2013

Intervention orale par

Tony McQuail

À l'égard de

Ontario Power Generation Inc.

Étude proposée pour l'énoncé des incidences environnementales pour l'Installation de stockage de déchets radioactifs à faible et moyenne activité dans des couches géologiques profondes

Commission d'examen conjoint

16 septembre au 12 octobre 2013

Canada

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DGR Joint Review Panel Hearing Written Submission in Support of an Oral Intervention

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Farmer - West Wawanosh Ward of Ashfieled Colborne Wawanosh Township
August 13, 2013
Written Submission in support of an Oral Intervention
Regarding the Deep Geological Repository proposed for the Bruce Nuclear Power Development Site

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1 - Length of interest and concern regarding radioactive nuclear wastes and energy issues.

I first became aware of the challenges and issues around the disposal of radioactive wastes from nuclear power during the 1970 earth day. I read an article in a magazine (I believe it was Scientific American) that described a situation where experts had recommended storing radioactive wastes underground in an area where they were sure the rock was impermeable and undisturbed only to have their plans undone when local residents who actually knew the area pointed out that over the previous century there had been a variety of wells and bores drilled in the area and so that it was not the solid geological structure they required.

I participated in the Porter Commission, the Royal Commission on Electrical Power Planning, in the 1970's. I was a member of the Huron-Power Plant Committee in the late 1970's. I served as chairman of the Foodland Hydro Committee in the 1980's and participated in the Joint Hearing Board hearings on Transmission in South Western Ontario. I have also had a long standing interest in renewable energy, designing and building a passive solar home in the 1970's, putting up the first Ontario grid interconnected wind generator in the late 1970's, using photovoltaic panels in various applications on our farm and most recently installing a 10 kW microfit solar array. I currently chair the Ecological Farmers Association of Ontario - Energy Committee.

2 - Public Engagement

I attended an open house at the Lucknow Legion. My experience there was not encouraging. When I started asking "tough" questions about decommissioning of the Douglas Point reactor and the wastes from that process I was taken behind the display area where other attendees could not hear my questions and told that OPG wasn't responsible for decommissioning Douglas Point so it wasn't of concern to them.
This was an obvious effort to ensure other participants didn't hear challenging questions (clearly an effort to manipulate the experience of participants at the open house.)
It was of concern to me that the folks who are supposedly going to take responsibility for decommissioning 8 massive reactors some time in the future aren't interested in how to decommission a little reactor now.

This made me much less interested in trying to participate in any further activities hosted by the proponent since they appeared to be primarily a public relations sell job rather than a discussion of the issues or serious effort to engage of the public.

3 - Nuclear Optimism - over enthusiasm undimmed by experience

In the 1970's we were told that Nuclear Power was going to be an energy source "too cheap to meter". This did not prove to be the case - it turned out to be too costly to pay for at the

time it was consumed so the electricity customers of Ontario are paying a monthly "debt retirement charge" on their monthly bills which appears destined to go on indefinitely.

At the Porter Hearings we heard testimony that Hydro Nuclear experts figured they'd have the waste problem solved within 5 years. Here we are over 30 years later with the problem not solved. The DGR is not a proposal to neutralize/detoxify or recycle and make harmless these materials. It is just a fancier, more costly and unproven way of storing these materials into the future.

At the Porter Hearings we heard from the nuclear experts that the life expectancy of the reactors should be 40 years while others argued that a 20 year time frame for the purposes of depreciation would likely be more accurate. It appeared that the 40 year depreciation was required to make the nuclear reactors appear an economically sound choice. The 20 year life expectancy seems now to have been the more appropriate one given the necessity of re-tubing and re-building that has been required.

When it was proposed to build Bruce B at the same location as Bruce A the farm community was concerned that this could require the construction of transmission lines through some of Ontario's best farm land. Hydro officials said that they would avoid prime agricultural land for transmission if they could just go ahead with building Bruce B. The plans for Transmission when they came out called for a line from Bruce to London going through prime agricultural land in Bruce, Huron and Middlesex Counties. The Foodland Hydro Committee was successful in intervening at the first hearing and the route was changed to go to Essa. This decision was overturned by the Ontario Divisional Court and the second hearing approved the Bruce to London 500 kV transmission line.

Throughout its history the nuclear industry in Canada and around the world has argued the chance of catastrophic accidents is extremely remote, unlikely in thousands of years of operation. However the nuclear industry has also been very successful insuring that its liability in the event of such accidents will be limited and that the bulk of the costs, both financial and biological, will be borne by the larger community and not its advocates. The experience with 3 Mile Island, Chernobyl and Fukishima suggests this effort to limit the Nuclear Industries liability has been wise for it if not for the rest of us.

The Technological triumphalism of the nuclear industry remains undimmed - it is much more enthused about offering assurances today than adequately considering risks and contingencies should the assurances prove unfounded or accepting the full responsibility for them when they occur.

4 - Don't Bury Stuff you need to monitor and may need to move

On our farm I have found it is much harder to monitor, repair and move pasture waterlines if they are buried. Better to have them up where you can see exactly where they are leaking, repair them easily and move them should that prove necessary. I would suggest the same might apply to long lived radioactive nuclear wastes that are being stored into the future

rather than actually detoxified. The experiences I've read about where other jurisdictions have buried radioactive nuclear wastes suggests that gravity brings in water and it is costly to deal with the resulting contamination.

5 - Don't piss in your drinking water

We fence our livestock out of the ponds and steam on our property because we don't want them to foul their drinking water or the streams, rivers and lakes into which the water from our farm runs. The idea of burying radioactive nuclear wastes below the surface of Lake Huron on a peninsula that sticks out into that lake in acid soluble limestone does not seem like a good idea to me. Maintaining the sealing of the main and ventilation shafts from ground water infiltration by "Ground Freezing and/or grouting" will require vigilance and energy far into the future. Once you start drilling into and blasting in a geological formation you no longer have an undisturbed rock formation.

6 - Renewable Energy

As a farmer I work with solar energy to grow our crops. We've also used solar energy to heat our water, run our fencers, pump our irrigation and livestock water and now with our microfit 10 kW system feed electricity back into the grid in quantities larger than our home and farm require. One of the exciting aspects of the microfit installation was it went from order to producing electricity in a matter of months. When Ontario Hydro made the decision to commit itself to nuclear power with massive base load generation it chose to construct Ontario's electrical system to serve that decision. What we may fail to realize is that this and all technologies we use has had a massive subsidy from petroleum. The mining, refining, transporting, stainless steel, concrete etc that are required to build and maintain nuclear power plants and to build the DGR are made possible by cheap and available petroleum. Peak oil is removing that economic subsidy and will limit the availability.

Choosing to commit energy and materials to building a DGR will mean other uses for those resources will be less likely to happen.

We chose on our farm to focus on shifting to renewable energy and it has made us more economically resilient, less dependent on off farm inputs and helped us develop a smaller carbon and environmental foot print.

7 - beware of one bad decision leading to a worse one.

Should a Deep Geological Repository be approved for any community, that community will then become dependent on the nuclear industry. Some of its people will be dependent on DGR construction and operation for their jobs and their daily bread.

Should the Nuclear Waste Management Organization discover, that despite its carrots, it has a hard time finding a welcoming community it will likely set its sights on the community with an existing DGR for low and intermediate wastes.

As part of its consideration of this proposal the panel would be wise to ponder whether this would be an appropriate site for all the highly radioactive spent fuel from the nuclear reactors across Canada. Given the way the current proposal has gone from mops and rags, to contaminated filters to possibly reactor decommissioning wastes I have no difficulty imagining the letter of the hosting agreement being maintained while the spirit of it is shattered by a second DRG for spent fuel being built close to the first.

Over the years we've seen the decision to go ahead with the building of nuclear reactors without a confirmed solution to the wastes. We've seen the incorrect depreciation timelines saddle Ontarians with ongoing "debt retirement" bills. We've seen the location of power plants without consideration of the need for transmission lines and then the assurances given that those lines would not impact prime agricultural lands be disregarded.

I think it is unwise to put a DGR for low and intermediate radioactive waste below the lake level beside Lake Huron. A DGR for all the highly radioactive spent fuel from Canadian reactors beside Lake Huron should be unthinkable - but given the creeping incrementalism of nuclear decisions I am concerned that it would be likely should approval for the current undertaking be granted.

a) I am asking that the panel not approve this undertaking.

b) I would further ask that the panel recommend that no counties in the Great Lakes Basin be considered for a DGR for spent fuel by the Nuclear Waste Management Organization.

c) I would also ask that the panel recommend that as part of any future application for a DGR that the costs of a segregated fund be included in the environmental assessment and be set up prior to construction. This fund would be to cover costs for removal and remediation in the event of leaks or water contamination. We are told the materials to be stored in the DGR will be retrievable in the future but there are no plans in the document to pay for this. It would be wise to have a segregated fund in place to pay for the entire retrieval costs and not burden some future generation both with the potential problem and with having to find the money to attempt to remediate it.

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