

Stigma submission

Introduction

These Hearings represent our only opportunity as ratepayers to have our concerns heard and addressed. Chair Swanson opened the special session by advising that socio-economic concerns are neither sufficient nor necessary grounds to be used by the JRP in making its decision.

- Dr. Swanson opens by stating that acceptance of socio-economic interests is not a criterion to accept or reject this DGR project.

We are concerned about this statement as it is our understanding that socio-economic concerns must be addressed as part of the EIS. The following documents require that socio-economic concerns be addressed:

- CEAA definition of “environmental effects” is broadly defined to require that the impacts of the Project on social, economic and cultural environments be included in the EIS;
- EA Guidance, s.10.2 requires an assessment of socio-economic conditions;
- s.11 requires a description of changes on health and socio-economic conditions; and
- s 11.5 requires a description of socio-economic effects.

In the Introduction to the EIS, OPG notes:

- I-21 The EA is a forward looking planning tool. ... This approach is consistent with Principle 15 of the 1992 Rio Declaration on Environment and Development and the Canadian government’s framework for applying precaution in decision-making processes.

OPG, and with it this JRP, recognise the significance and importance that an informed and willing host community plays in determining the success of a DGR.

The municipality of Kincardine had to make a decision about hosting the DGR without knowing many salient features about it, including the costs and dangers of hosting ILW, and especially refurbishment wastes. From a radiological perspective, this latter group contains radioactive elements identical to used fuel wastes and their half-lives, the very characteristics that define high level wastes, or HLW. Kincardine engaged in a polling of ratepayers without informing those polled the extent of their decision. The poll reached a pitifully small number of ratepayers. OPG’s PAR poll indicates that in spite of more than eight years of considerable efforts publicizing this DGR, most of those polled still hadn’t heard of it. On the basis of these inconclusive results, OPG determined it had sufficient community support to go forward with its plan for the DGR.

As this submission will demonstrate, there are serious deficiencies with OPG’s approach to socio-economic issues and, in particular, with its approach to stigma. OPG has been aware of the issues and has known of the concerns ratepayers have had about the stigma associated with the

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DGR and its impacts on the Kincardine area as well. Equally certain, with the submissions from the Inverhuron Committee, the Inverhuron and District Ratepayers Association and my wife and me, it is clear that OPG's efforts have highlighted the serious and threatening dangers to us as a community that is likely to result from the DGR.

The DGR is premature. OPG is not yet in a position to embark on this ambitious programme because it has failed to consult with necessary stakeholders. It has failed to communicate how we will not be harmed: financially, physically or emotionally. Other necessary stakeholders find themselves equally at a loss to account for how they have been consulted and the Saugeen Ojibway Nation is on record with grave concerns about the DGR.

This JRP can choose to ignore community concerns when it make its decision and to give the green light to OPG to proceed. But with the obvious and serious deficiencies currently noted, it seems clear that such a decision will in no way ensure that the DGR proceeds smoothly.

Addressing the problems associated with nuclear wastes is a grave concern. An environmental assessment could be used as a planning tool. There are many informed and willing members of the public who have shown themselves to be actively involved in this process. There is every desire in the population-at-large to resolve the issues relating to nuclear wastes. To date, however, we have not been permitted to be involved, no matter how hard we try.

The Presence of Stigma

In the Socio-economic Technical Session, both OPG and the Panel members discussed the issue of stigma as if this were some future hypothetical condition. It is not. Naturally, OPG has concluded that no stigma exists. Most tellingly, OPG has appeared to reach this conclusion without ever considering property value data from either Inverhuron itself, or the LSA, the two locations where stigma is most likely to occur.

OPG fails to take into account that its data actually and conclusively have proven that a stigma exists now in Kincardine as a result of OPG's current operations. This stigma has accelerated since 2010, coinciding with the release of this environmental impact statement.

Kincardine residents have already paid a heavy price for the DGR as indicated by the loss in property value when compared to municipalities in the RSA or, more generally, in Ontario. Compared with Saugeen Shores homeowners in 2012, those in Kincardine have seen a relative loss in value of more than \$38,000 since 2001. Worse yet, between 2010 and 2012, Kincardine property values have **decreased** by \$2,300 even as those in Saugeen Shores **increased** by more than \$15,000. One must wonder why these two neighbouring municipalities are on different trajectories when it comes to supporting their ratepayers' wealth as represented by property.

- By **May of 2001**, average prices across Kincardine fully recovered and were at

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- approximately \$117,000 per unit. p 82 IAS
- Over the period **2001 to September 2010**, average value of properties sold increased by **110%** in Kincardine and by **128%** in Saugeen Shores. p 145 IAS
- OPG claims in Slide 93 that property values in the municipality of Kincardine rose by **108%** between **2001 and 2012**. *It is important to note that the properties in Kincardine are considerably lower than the increase of property values in Saugeen Shores where they have increased by some 141%.*

For Ontario, as reported on Sept. 26, 2012 in the Globe and Mail, property values in general have risen since 2008. Except for the municipality of Kincardine.

- After a bruising recession temporarily dragged down real-estate prices in Ontario, homeowners have seen the assessed value of their homes jump 18 per cent on average since 2008 – the first increase to assessed values in four years.
- The increases in residential property values, determined by the Ontario Municipal Property Assessment Corp., vary widely across the province, from about nil in the beleaguered manufacturing belt of Windsor to 20 to 30 per cent in the Greater Toronto Area, Ottawa and Northern Ontario, which has experienced a resurgence in mining.
- The cost of farmland, on the other hand, has soared, in part because of growing urban development, increased ethanol production, and droughts in the U.S., which have strained supplies of corn and grain and sent commodity prices soaring. In turn, the value of Ontario farm properties has increased an average of 34 per cent.

A stigma already exists here and is likely to get worse in terms of our property values. A reasonable question raises whether this has been taken into account and OPG has concluded through its surveys that indeed people are concerned about their wealth as property.

- Adequate housing provides privacy and security, each having a symbolic value that contributes to psychological health and a sense of personal safety. Housing has a substantial effect on spending power. Housing is often an individual's largest single personal expenditure and therefore its cost or rent is a key determinant of one's quality of life. Housing is often the most important determinant of an individual's use and enjoyment of property and their satisfaction with community. To municipalities and communities, housing affects an area's character, cohesion and a municipality's financial health. p. 92 IAS
- The PAR results indicate that, of the respondents that chose to describe the greatest threats to their community, most indicated that the greatest threats were to financial assets. (48%)
- In conversation with a present managing worker of this project who came to our store, he indicated that he intends to purchase a property locally so that his family can live here with him during the construction of the DGR. When another couple showed up whose small rural property is currently for sale and which represented his ideal property, this

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manager said he would wait until after the project began because properties would likely be cheaper at that time. This comment speaks directly to the very likely scenario that Inverhuron residents will see further property value erosion during the construction phase itself as this project moves forward.

Lest it be misunderstood, LSA residents are not melancholy folk. Rather, this same IAS identifies us as:

- In general, Local Study Area residents enjoy good environmental quality. Regional and Local Study Area residents provide high ratings of their feelings of personal health and sense of safety; they are satisfied living in their communities and are committed to living there. Overall, the municipalities in the Local and Regional Study Areas can be characterized as having a healthy balance of community assets that contribute to their well-being. p 146

And how could it be otherwise?

- In describing Inverhuron, the EIS states that hamlet communities such as Inverhuron, located to the south of the Bruce nuclear site, are to be protected as settlement areas “*providing limited services and facilities, and offering an alternative living area*”; and that the community of Inverhuron has a distinctive character as a cottage area with several hundred dwellings, nestled in and beside an environmentally sensitive region of Ontario. As such, the community of Inverhuron is identified as Shoreline except for a narrow band designated Natural Environment. The remainder of the Lakeshore Area is a combination of Shoreline, Natural Environment and Open Space. One of the goals of the Shoreline designation, as provided in Section D8.1, is “*to recognize and preserve the historic character of Inverhuron*”, a provincially significant historical site.

Our property values are important to many, if not all, of us here in Inverhuron. Most of the seasonal residents and many permanent residents are retired. Homes often form a very important base to retirement incomes, including being used as a Home Equity Line of Credit. Time and again, OPG has been informed about this significance of the DGR to LSA ratepayers.

- The EIS also notes that residents of Inverhuron are concerned about this potential loss in value: 2-69 *At a community outreach event in Inverhuron in July 2006, one resident expressed concern about the potential for the DGR Project to have an effect on property values. It was explained that the DGR Hosting Agreement includes provision of a Property Value Protection Plan.*
- The Bruce site has stigmatized properties in the past, with one Inverhuron resident being awarded a permanent 15% property tax reduction in 1998 due to a stigma from the BNDP as a result of non-radiological contamination.
- The Independent Assessment Study states clearly that the DGR itself will stigmatize the

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local and regional areas: *p 45 The deep rock vaults would have the greatest negative effect on the attitudes and security of community members of any of the four options being considered in this report.*

- p 46 IAS For those who believe there may be an effect, it was generally felt that the deep rock vaults would have the largest negative effect in the community as a place to live and operate a business; as well, one quarter of those surveyed felt that the surface concrete vault option would also have a significant negative effect. 60% denied that the overall effects on business would be positive.
- p 49 IAS Deep rock vaults would have the largest negative effects on tourism to the region.
- The EIS states that: “the value of one’s property is often one of the most important determinants of an individual’s use and enjoyment of property and their satisfaction with community”.

How did this happen?

As if by magic, a Memorandum of Understanding is tabled with Kincardine in April, 2002.

OPG met behind closed doors with municipal council members and afterwards the Mayor of Kincardine surprisingly announced that our municipality had entered into an agreement with OPG to build a final repository for LLW and some ILW at the Bruce site:

- 2-78 *Experience in other countries has shown that success in siting a waste disposal facility is greatly improved in situations where the community supports the proposal. ... No other sites volunteered to participate in the feasibility studies or to host the facility. (Section 3.4.2)*

A recent FOI request of Kincardine relating to the history and evolution leading to an MOU with OPG as well as the development of the Property Value Protection Plan is ongoing. Apparently, there are neither written nor formal records of these meetings, but the bylaws confirm that OPG had contracted with Strategic Counsel to conduct 6 focus group sessions concerning the DGR approximately a year or so earlier: Bylaw 2004-176, pg. 12.

The Strategic Counsel was hired, at OPG’s recommendation, to conduct the 2005 telephone poll, to assist municipal council in understanding its results and determine whether the public supported the construction of the DGR. We know this from Bylaw 2004-176.

Neither municipal council nor its residents knew much about the ILW at the time in 2005 when the poll was conducted. The only study available to municipal council at the time of the poll was a work known as the Independent Assessment Study. This study described the various option available to store LLW, along with their approximate costs. We know from Bylaw 2004-189, pg. 2 that the DGR specifically excluded both **high level wastes** and **used fuel wastes** from being

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buried here. It is important to note that at the time of the poll:

- p 27 of IAS Deep rock vaults are assessed in this report only for LLW, i.e., radionuclides with a half-life less than 300 years.
- p 9 Current designs and cost estimates [in this report] are for low-level wastes only and not for intermediate-level wastes. Therefore, the half-life characteristics represent just those of low-level wastes.
- pp 26-7 Surface concrete vaults are suitable for LLW and some short-lived ILW, but not for **all the ILW**. These would need to be addressed as the **used fuel waste** repository is resolved.
- p 35 Table 7 demonstrates that the status quo option offers the lowest annual operating costs and the lowest total spending and operating costs combined. *The deep rock vault option will cost 50% more than the status quo option and more than 100% if the ILW are included, by my calculations.*
- 3-5 of EIS For shorter-lived radionuclides, near-surface disposal facilities provide the required protection; however, for long-lived radionuclides, deep geological disposal ... is the solution consistent with international guidelines and practice. This contradicts the stated purpose of the DGR which was only to store LLW and some ILW.
- 3-14 However, the 'status quo' option was the preferred economic choice (i.e., it was the least expensive).
- no one else wanted it: 2-78 *No other sites volunteered to participate in the feasibility studies or to host the facility. (Section 3.4.2) (IAS)*

On this basis, Kincardine was accepted by OPG as the host community.

How will we know if a stigma occurs?

As we have already noted, Kincardine is currently suffering from a stigma that appears to have been caused by the mere proposal of a DGR and its feared consequences. While municipal property values here have fallen between 2010 and 2012, those in our neighbouring community have risen substantially.

The hosting bylaw, Bylaw 2004-157, recognises the potential for a stigma at the outset by incorporating a Property Value Protection Plan. The JRP too expressed concern about property protection when:

- Dr. Archibald asks about the benefits of the hosting agreement: these are given as payments to communities, the Centre of Excellence and the Property Value Protection Plan.

In the next section on the Property Value Protection Plan, the plan and its purported benefits themselves will be considered. The plan itself, however, will only come into effect after the

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cavern has been dug and nuclear waste packages are deposited. The Property Value Protection Plan offers no relief during either the pre-construction or construction phase.

- Dr. Muecke asks what the current status of the PVPP and raises issues that parallel HSAL #18. OPG responds that the current status of the hosting agreement is such that the PVPP will take effect only after operations themselves begin, and not during the construction phase. He (Sullivan of OPG) also confirmed that the PVPP would only be made available in the event that the stakeholder could demonstrate radionuclides from the DGR project itself caused the stigma. There is of course no feasible way for an affected ratepayer to demonstrate this.
- when asked whether OPG has communicated the benefits of the PVPP to potentially affected stakeholders and its immediate site neighbours, OPG states that it has only held a few discussions and will only hold discussions in the future with the municipality.
- The discussions held in the past with the Nuclear Steering Committee have been held in confidence and not immediately available to the public to review when requested through an FOI with the municipality. It goes without saying that the details of such an important consequence of the DGR for ratepayers should have been disclosed to the public.

Slide 73 of the technical session outlines the very conditions and indicators that OPG would look for if it were considering the stigma effects resulting from this project. It states in this slide:

- No strong indications that the Bruce area has been stigmatized

If it were so, these five indicators would be present:

- Hazard with perception of high risk consequences.
- A standard of what is 'right and natural' has been overturned.
- Effects inequitably distributed across social groups or geographic areas.
- Effects of the event are unbounded.
- Management of the hazard is brought into question.

Once these indicators are met, OPG points to the three preconditions required for a stigma to exist:

- Precipitating event or trigger
- Information confirms belief of threat
- Behavioural changes

OPG supports the choice of these indicators by referring to the EIS where a literature search is identified. However:

- Dr. Muecke refers to section 8.5.3.3 of the EIS (p 248) and to p 61 of OPG's written

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submission. It claims that details of stigma, as well as the theoretical framework supported by available literature searches, is available in this section. However, no such references are found in this section. This was corrected at the end to section 8.1.1 of the Socio-economic TSD where one of the references cited uses these criteria of stigma.

Each of these indicators currently is in place and both the JRP as well as OPG have evidence of this as given by the CEARIS record.

- the DGR does represent a hazard with perceptions of high risk consequences. *All the cards and letters sent to CEARIS from ordinary Canadians and Americans, from Michigan to California, from service organisations like the Provincial Council of Women of Ontario, speak of the dangers of storing these wastes so close to the lake.*
- the ‘standard of what is right and natural’ has been over-turned: *again as evidenced by the cards fearful of the impact on the Great Lakes, the involvement of the Mayor of Sarnia and the Cities Initiative, the Inverhuron Committee.*
- the effects are inequitably distributed across social groups or geographic areas: *Inverhuron and its residents, along with the 4 Baie du Dore households, will alone bear the negatives associated with construction noise, dust and fear of increased radiological contamination, as well as the unsightliness of waste rock pile.*
- the effects of the event are unbounded: *especially with a time frame extending into the hundreds of thousands of years.*
- management of the hazard is brought into question: *Inverhuron residents, among others, have questioned the purported safe management of nuclear wastes espoused by the industry. Each of its in-ground storage projects to date, for example, have **failed** to safeguard the surrounding ecosystem from radiological contamination and continue to pollute the groundwater and Inverhuron wetlands today.*

Each of the preconditions for a stigma has been met by this proposed DGR:

- There must be a precipitating event or trigger. *The DGR itself represents this. The IAS confirms this to be true in the mind of the general public that participated in their surveys. The hosting agreement with Kincardine confirms that both the municipality and OPG believe this will be a precipitating event by including a Property Value Protection Plan. This PVPP, far from protecting stakeholders in the LSA, protects the municipality and OPG at the expense of stakeholders.*
- the information confirms the belief or threat. *The current submission from the Inverhuron Committee confirms this; the Maccomb Water Board submission confirms this; more than 150 cards and letters from all over North America confirm this; NGOs like Sierra Club, CELA, Greenpeace, Citizens for Renewable Energy, Northwatch confirm this.*
- there must be behavioural changes. *The members of the Inverhuron Committee, except for me, have never before participated in such a public hearing and now are doing so.*

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John Mann has not heretofore participated in such an event, and is now doing so. In each case, this is evidence of behavioural change.

An independent peer review by Hardy Stevenson was completed for municipal council in respect of the Socio-economic TSD. It too believes that a stigma is a very real concern and likely to occur because of the DGR and especially during construction activity, citing noise, dust and the waste rock pile as potentially stigmatizing agents, as, for example, on page 46 when it discusses the potential for such construction activity to be stigmatizing.

- Dr. Muecke further refers to HSAL's peer review of these issues for the municipality. HSAL states otherwise in Appendix B, #60 where it states that there is a disagreement with OPG that there would not be a stigma created by the DGR as well as other potential projects, including construction.
- Dr. Muecke also asks whether OPG has conducted an analysis of how stigma will affect specific groups and requests the stratification data outlining this. OPG states it has no such data and has not undertaken such a study. **This information would be necessary for OPG to determine the impact of stigma on the affected population.**

The Property Value Protection Plan

The Environmental Impact Statement refers to this plan:

- *2-69 At a community outreach event in Inverhuron in July 2006, one resident expressed concern about the potential for the DGR Project to have an effect on property values. It was explained that the DGR Hosting Agreement includes provision of a Property Value Protection Plan.*

It is an integral part of the hosting agreement bylaw, Bylaw 2004-157. The plan assumes no responsibility for stigma until after nuclear wastes begin to be deposited and then only if DGR-related radiation contaminates the property. If the claimant and OPG do not agree as to the appropriate remedy for compensation, OPG reserves the right to offer to purchase the property at what it deems to be fair market value. If this still does not resolve the differences, the matter will proceed to arbitration under the terms given by this hosting agreement, with no right of appeal.

From a property owner's perspective, this agreement leaves much to be desired. As a director of the IDRA, I raised this issue of remedy with OPG and, although we have invariably been promised a response, we continue to wait, year after year and have not yet received a response.

The agreement fails to consider the obvious. The DGR itself is the stigmatizing agent. There is ample evidence to support this fact and some of it has been presented in this submission. The PVPP waits until after a significant toll has already been extracted from the LSA ratepayer before providing any possible remedy. The problems caused by the PVPP include but are not limited to

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the following scenarios:

- A young and struggling couple who renews a mortgage may well discover that their property no longer represents the value of the mortgage.
- A retiree who uses property to sustain more complex medical conditions may discover that this property no longer supports these necessities.
- A individual may discover that his or her line of credit has been removed or reduced at a most inappropriate time.
- A stock market speculator may discover that margin loans are no longer covered by property.
- Someone who needs to sell the property to go into a long-term care facility may discover that their property no longer approaches the cost of long-term care.
- Someone who needs to move may discover that he or she no longer receives what ought to have been a fair market value for their property and need to move further into debt to purchase another property elsewhere.

OPG has been aware of these concerns from well before 2004 and appears to have crafted the PVPP with itself as the primary beneficiary. From our FOI request with the municipality, we have so far been unable to locate any drafts of this plan for the bylaw and as a result we have been unable to determine how much of the plan was developed by municipal councillors seeking to protect ratepayers and how much was developed by OPG. Whoever developed the plan, it appears to have been done so at the expense of affected ratepayers: the more severe the stigma, the greater the expense.

Under questioning from Panel Member Dr. Muecke, more information on the Property Value Protection Program emerged. The program was required as part of the hosting agreement with Kincardine. ***The PVPP only comes into effect if and when the DGR is built and licensed. The PVPP would cover damages arising from radioactive contamination, but no other forms of nuisance (or presumably stigma). The property in question could include crops and livestock. However, it is unclear whether the PVPP would apply to seasonal residences or property in adjacent municipalities.***

The Hosting Agreement with the municipality of Kincardine, as set out in Bylaw 2004-157, recognises that radioactivity from the DGR Project could have a negative impact on local property values and has provided a Property Value Protection Plan as given in this agreement to address this concern.

Conclusion

I hope this Panel will have the wisdom to defer its decision until OPG has satisfactorily resolved its many and outstanding socio-economic deficiencies in the host community.