

CEAA Registry Reference No. 06-05-17520

**Saugeen Ojibway Nations' Application for a Determination on  
the Scope of Review of OPG's DGR Project and the Inclusion of a  
Project for the Long-Term Management of High Level Nuclear Wastes**

**August 9, 2012  
Toronto, Ontario**

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## I. OVERVIEW

1. The environmental impact statement (“EIS”)<sup>1</sup> submitted by the Proponent Ontario Power Generation Inc. (“OPG”) with respect to the proposed deep geologic repository (“DGR”) for low and intermediate level radioactive waste (the “DGR Project”) fails to consider a project for the disposal of used nuclear fuel within the Study Area as a cumulative effects project and is therefore fundamentally deficient.
2. The governing law,<sup>2</sup> the EIS Guidelines for the DGR Project<sup>3</sup> and this Joint Review Panel’s own terms of reference<sup>4</sup> all require that a full “cumulative effects analysis” be undertaken as part of the environmental assessment of the DGR Project. It was incumbent on OPG to ensure that all projects—certain, reasonably foreseeable and, where appropriate, hypothetical—that could result in cumulative environmental impacts when combined with the DGR Project were included in the EIS and thus could be assessed by the Joint Review Panel (“JRP” or the “Panel”).
3. In its analysis of potential cumulative effects in the EIS, OPG failed to include any discussion or analysis of a deep geological repository for used nuclear fuel (also referred to as high-level waste (“HLW”)) or other project for the disposal of used nuclear fuel (“HLW DGR Project”). Yet an HLW DGR Project is a

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<sup>1</sup> OPG’s *Deep Geologic Repository Project for Low & Intermediate Level Waste: Environmental Impact Statement* (dated March 2011, filed April 2011) (“EIS”).

<sup>2</sup> The relevant statutory provision is Section 19(1)(a) of the *Canadian Environmental Assessment Act*, S.C. 1992, c.37 (the “Act”). Under recent revisions to the Act, the section that addresses the need for an analysis of cumulative effects has been renumbered as Section 19(1)(a) from the previous Section 16(1)(a). The revised Act contains no substantive changes with respect to how a cumulative effects analysis is to be undertaken.

<sup>3</sup> *Guidelines for the Preparation of the Environmental Impact Statement for the Deep Geologic Repository for Low- and Intermediate-Level Radioactive Wastes* (January 2009) (“EIS Guidelines”).

<sup>4</sup> Terms of Reference to the *Agreement to Establish a Joint Review Panel for the Deep Geologic Repository Project by Ontario Power Generation Inc. Within the Municipality of Kincardine, Ontario Between the Minister of the Environment and the Canadian Nuclear Safety Commission* (January 26, 2009, as amended August 3, 2012) (“JRP Terms of Reference”).

“reasonably foreseeable” future project and as such its inclusion in the cumulative effects analysis is mandated by the *Act*, by relevant Canadian Environmental Assessment Agency (“CEAA”) policy and practice directives, by the EIS Guidelines for this DGR Project and by the JRP’s own terms of reference.

4. There is ample evidence to demonstrate that the construction and operation of an HLW DGR Project at the Bruce Nuclear site, or within the Study Area, is a reasonably foreseeable project. Accordingly, OPG’s failure to include consideration of an HLW DGR Project in the cumulative effects analysis constitutes a fundamental deficiency in the EIS, materially comprises the review and precludes the Panel from fulfilling its mandate.
5. This is a preliminary matter that must be addressed prior to any further steps in this review being taken and prior to the close of the technical review period. OPG must be given specific direction to amend its EIS to include consideration of an HLW DGR Project and provide full consequential data and analysis.
6. The Panel may wish to order other procedural steps as may be required in order to permit OPG to amend its EIS and to allow the Panel, intervenors, government reviewers and agencies to consider the amended EIS and resume this review.

## **II. FACTS AND BACKGROUND**

7. The Nuclear Waste Management Organization (“NWMO”) is mandated under the *Nuclear Fuel Waste Act* (“*NFWA*”) to develop, propose to government and implement a long-term project for the management of nuclear fuel wastes currently stored in interim storage facilities throughout Canada.<sup>5</sup>
8. The *NFWA* was a legislative initiative recommended as a result of the federal environmental assessment of a “Concept for Disposal of Canada’s Nuclear Fuel

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<sup>5</sup> *Nuclear Fuel Waste Act*, S.C. 2002, c.23, section 6.

Waste” proposed by Atomic Energy of Canada Limited (“AECL”). In February 1998, the Panel for that review issued its *Report of the Nuclear Fuel Waste Management And Disposal Concept Environmental Assessment*, commonly referred to as the Seaborn Panel Report.<sup>6</sup> The Report made a number of key findings and recommendations, including:

- a. The concept proposed by AECL, deep geological disposal in the plutonic rock of the Canadian Shield, while technically feasible, had not been demonstrated to be safe from a social perspective, and had not been demonstrated to have public support.
- b. A robust approach would need to be developed for building and demonstrating public support for the concept, and demonstrating safety from a social perspective.

9. Under the *NFWA*, NWMO was required to submit an approach, among others, based on the recommendations of the Seaborn Panel Report. Section 12(2)(a) of the *NFWA* requires the development of an approach based on:

[D]eep geological disposal in the Canadian Shield, based on the concept described by Atomic Energy of Canada Limited in the Environmental Impact Statement on the Concept for Disposal of Canada’s Nuclear Fuel Waste and taking into account the views of the environmental assessment panel set out in the Report for the Nuclear Fuel Waste Management and Disposal Concept Environmental Assessment Panel dated February 1998.<sup>7</sup>

10. In 2005, NWMO recommended an approach of Adaptive Phased Management leading to “centralized containment and isolation of the used fuel in a deep geological repository in a suitable rock formation, such as the crystalline rock of

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<sup>6</sup> *Report of the Nuclear Fuel Waste Management and Disposal Concept Environmental Assessment Panel*, Nuclear Fuel Waste Disposal Concept Environmental Assessment Panel (February 1998) (the “Seaborn Panel Report”).

<sup>7</sup> *NFWA*, *supra* note 5 at s.12(2)(a).

the Canadian Shield or Ordovician sedimentary rock.”<sup>8</sup> The Government of Canada accepted this recommendation on June 14, 2007.<sup>9</sup>

11. In May 2010, NWMO issued its process for the identification of a site for a deep geological repository for used nuclear fuel, entitled “Moving Forward Together: Process for Selecting a Site for Canada’s Deep Geological Repository for Used Nuclear Fuel” (the “Site Selection process”). That document sets out the key aspects of NWMO’s Site Selection process, including: (1) seeking an informed and willing host community; (2) focus on nuclear provinces; and (3) that the siting process must be led by interested communities. On this last criteria, the NWMO states specifically that “the steps in the siting process must be driven or triggered by communities expressing interest in exploring their potential suitability as host.”<sup>10</sup> In May 2010, NWMO announced that it had begun implementation of its Site Selection process.

### ***B. The Proposed DGR Project***

12. OPG has submitted an EIS for the review of a proposal to prepare a site for, construct and operate a deep geological repository at the Bruce Nuclear site on the shore of Lake Huron, Ontario. The DGR Project is intended to be a repository for low and intermediate level radioactive wastes that are currently stored in an interim facility, the Western Waste Management Facility, at the Bruce Nuclear site. The DGR Project will also be the repository for similar wastes that will be produced from the continued operation of the OPG-owned nuclear generating stations at Bruce, Pickering and Darlington.

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<sup>8</sup> *Choosing a Way Forward: The Future of Management of Canada’s Used Nuclear Fuel, Final Study*, Nuclear Waste Management Organization (November 2005) at 44 (“Choosing a Way Forward”).

<sup>9</sup> *Moving Forward Together: Process for Selecting a Site for Canada’s Deep Geological Repository for Used Nuclear Fuel*, Nuclear Waste Management Organization (May 2010) (“Moving Forward Together”) at 5 (attached as Exhibit A).

<sup>10</sup> *Id.* at 18.

13. OPG's proposal, as described in the EIS, includes the site preparation, construction, operation, decommissioning and abandonment of above-ground and below-ground facilities. Planned operations include activities required to operate and maintain the DGR facility, including the transfer of waste from the existing interim storage facility and the receipt of waste at the DGR, the emplacement of wastes in rooms within the DGR and the closure of these rooms.
14. Although not included in OPG's EIS, the proposal requires the continued transportation of radioactive wastes from OPG-owned generating facilities at Pickering and Darlington to the interim Western Waste Management Facility at the Bruce Nuclear site, as well as the continued processing of these wastes at that facility prior to transfer to the DGR.<sup>11</sup>
15. The Bruce Nuclear site currently houses two operating nuclear stations, Bruce A and Bruce B, comprised of eight nuclear reactors and associated facilities. The site also houses the Western Waste Management Facility, the Western Used Fuel Dry Storage Facility, the Douglas Point nuclear reactor and related radioactive waste storage site, an on-site landfill, two Heavy Water Production plants (currently being decommissioned) and various water supply and processing facilities, as well as numerous administrative and support buildings.<sup>12</sup>

### ***C. This Joint Panel Review and OPG's EIS***

16. In December 2008, the Minister of the Environment and the Commissioner of the Canadian Nuclear Safety Commission entered into an Agreement to Establish a Joint Review Panel.<sup>13</sup> The Joint Panel Agreement requires that a thorough

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<sup>11</sup> EIS, *supra* note 1 at s. 1.2.3.

<sup>12</sup> *Id.* at s. 10.4.1.

<sup>13</sup> *Agreement to Establish a Joint Review Panel for the Deep Geologic Repository Project by Ontario Power Generation Inc. Within the Municipality of Kincardine, Ontario Between the Minister of the Environment and the Canadian Nuclear Safety Commission* (dated January 26, 2009, amended August 3, 2012).

analysis of cumulative environmental effects is completed as part of the environmental assessment of the DGR Project. The Terms of Reference appended to the Joint Review Panel Agreement, at Part IV(a), state that “[t]he Review will include a consideration of . . . any cumulative environmental effects that are likely to result from the Project in combination with other projects that have been or will be carried out.”

17. In addition to providing the terms of reference for the Panel, the Joint Panel Agreement, at Section 4(1)(c), instructed that “[t]he JRP shall conduct the Review in accordance with the Terms of Reference . . . in a manner that permits it to obtain information and evidence about the adverse effects the project may have on potential or established Aboriginal rights, title or treaty rights as identified to the JRP by the [Saugeen Ojibway Nations (“SON”)] and enables it to bring any such information and evidence to the attention of the Minister of the Environment and the Responsible Authorities for the Project in support of consultation between the Crown and the SON.”<sup>14</sup>
  
18. In January 2009, CEAA and the Canadian Nuclear Safety Commission (“CNSC”) issued EIS guidelines to OPG to guide the preparation of its EIS for the DGR Project. As discussed further in paragraphs 65-66, *infra*, Section 14 of the EIS Guidelines requires OPG to identify and assess the cumulative adverse and beneficial environmental effects of the DGR Project in combination with other past, present or reasonably foreseeable projects and/or activities within the study area, as required by the *Act*.<sup>15</sup>

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<sup>14</sup> *Id.* On August 3, 2012 a notification was posted on the CEAA Registry that the JRP Agreement had been amended to reflect recent legislative changes to the *Act*. Changes include (1) modification to the acceptance and approval structure of the Panel’s final report, and (2) fixed time periods for the completion of the Panel’s final report and Minister’s approval. Changes to the Agreement included modifications to s. 4(1)(c) respecting the Panel’s mandate in the current review were not required as a result of amendments to the *Act* and were made without any prior consultation with or communication to SON.

<sup>15</sup> EIS Guidelines, *supra* note 3 at s. 14.



19. In April 2011 (although dated March 2011), OPG submitted its EIS for the DGR Project for consideration by the Joint Review Panel. Section 10 of the EIS addresses cumulative effects and identifies those projects for which OPG has undertaken a cumulative effects analysis in relation to the DGR Project. OPG included in its cumulative effects analysis a number of projects that are either “certain/planned” or “reasonably foreseeable” (Table 10.4-1):<sup>16</sup>

- a. The decommissioning of Bruce A and Bruce B nuclear stations
- b. Refurbishment of the Bruce B nuclear station
- c. Transfer of radioactive wastes from the RWOS1 facility to the Western Waste Management Facility (“WWMF facility”)
- d. Upgrades to the WWMF facility
- e. Expansion of the Western Used-Fuel Dry Storage Facility
- f. Transfer of fuel to a Long Term Repository
- g. Construction of a DGR for Decommissioning Waste
- h. Various smaller infrastructure projects on site

20. Regarding the DGR for Decommissioning Waste at the Bruce Nuclear Site, OPG states in the EIS that:

The decommissioning waste from OPG-owned or operated reactors will, at some point in the future, be relocated to a suitable long-term management site. The long-term management of decommissioning waste is not expected to start before 2050. Although no site has been identified, the DGR Hosting Agreement includes provision for decommissioning waste to be placed in the DGR Project and the EIS guidelines stipulate that consideration of placing decommissioning wastes in the DGR be included in the cumulative effects assessments.”<sup>17</sup> OPG confirms that the DGR project site could be extended to double its capacity with no further site clearing required.<sup>18</sup>

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<sup>16</sup> EIS, *supra* note 1 at s. 10, table 10.4-1.

<sup>17</sup> EIS, *supra* note 1 at 10-18, Table 10.4.3.

<sup>18</sup> *Id.*

21. OPG has included in its EIS cumulative effects analysis, as a reasonably foreseeable project, the removal of used fuel currently stored at the Western Used-Fuel Dry Storage Facility and transfer to a suitable long-term storage site.<sup>19</sup> OPG notes that NWMO is mandated to seek an informed willing host community for the long-term management site, that no such location has been yet determined and that used fuel transfer is not expected until 2035 or later.<sup>20</sup> Despite this, OPG, for the purposes of its cumulative effects analysis, supposes that the used nuclear fuel will be removed from the Study Area and concludes that, as a result of this removal, there will be a resulting net reduction of radioactivity at the site:

At some point in the future, used fuel and decommissioning wastes will be transferred to a long-term repository. The DGR is not for the long-term management of used fuel; therefore, the repository will be located off-site. Any dose will be solely from the transport of used fuel, and as the used fuel is transferred off-site, will result in net reduction of dose.<sup>21</sup>

22. OPG has not included as part of its cumulative effects analysis a project for the long-term storage of used nuclear fuel at the Bruce Nuclear site or within the Study Area. OPG provides no explanation or justification for this omission except for its statement that “the DGR is not for the long-term management of used fuel; therefore, the repository will be located off-site.”

#### ***D. An HLW DGR Project at the Bruce Nuclear Site***

23. As discussed in Part III, *infra*, it is a legal requirement under Canadian environmental assessment law and policy that the cumulative effects of any project that is “reasonably foreseeable” be considered during the review of a proposed project. The evidence demonstrates that a project for the long-term management of used fuel wastes at the Bruce Nuclear site or otherwise within the Study Area, *i.e.*, an HLW DGR Project, is a reasonably foreseeable project.

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<sup>19</sup> *Id.*

<sup>20</sup> *Id.*

<sup>21</sup> *Id.* at 10-37, s.10.6.4.

24. The reasonable foreseeability of an HLW DGR Project is demonstrated by the following facts:

- a. The conditions at the Bruce Nuclear site that OPG and NWMO have argued make it suitable, and operationally ideal, for the development of the DGR Project are identical to those NWMO will consider for an HLW DGR Project, are fully consistent with NWMO's Adaptive Phased Management Approach. Further, Development of the DGR Project will significantly increase the likelihood of the Bruce Nuclear site being developed as a location for an HLW DGR Project.
- b. NWMO has already commenced its consideration and screening of locations within the Study Area as a site for an HLW DGR Project through its engagement with all five municipalities within the Study Area and CNSC's consultations with those same municipalities are already under way;
- c. NWMO and OPG have steadfastly refused to provide assurances that the Bruce Nuclear site, or another site within the Study Area, would not be considered for an HLW DGR Project;

**i. Bruce Nuclear Site is a Suitable Location for an HLW Project and is Consistent with NWMO's Adaptive Phased Management Approach for an HLW DGR Project**

25. As part of its project justification and needs analysis for the DGR Project, OPG has set out a number of criteria that it argues makes the Bruce Nuclear site a suitable, and operationally ideal, location for the DGR Project. Section 3 of the EIS lists various factors that led OPG to propose the Bruce Nuclear site for the DGR Project. OPG argues that:<sup>22</sup>

- a. The geology at the Bruce Nuclear site is highly suitable from a technical perspective, offering multiple natural barriers to safely isolate and contain the waste for tens of thousands of years;<sup>23</sup>

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<sup>22</sup> *Id.* at s. 3.

<sup>23</sup> *Id.* at 3-1.

- b. The management facility could be safely constructed and operated at the site;<sup>24</sup>
  - c. The majority of the waste to be managed in the DGR Project is already stored on site at the WWMF;<sup>25</sup>
  - d. Reduced need for off-site transportation of nuclear waste;<sup>26</sup>
  - e. Location has already been a nuclear facility for 40 years;<sup>27</sup>
  - f. The land is owned and managed by OPG;<sup>28</sup> and
  - g. Local community support, as demonstrated by the Hosting Agreement with Kincardine.<sup>29</sup>
26. These same characteristics are equally applicable to the development of an HLW DGR Project and are consistent with, and virtually identical to, the screening criteria for an HLW DGR Project as set out in NWMO's Site Selection process and are fully consistent with NWMO's Adaptive Phased Management Approach.<sup>30</sup>

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<sup>24</sup> *Id.*, at 3-1.

<sup>25</sup> *Id.* at 3-21.

<sup>26</sup> *Id.*

<sup>27</sup> *Id.*

<sup>28</sup> *Id.*

<sup>29</sup> *Id.* at 3-7.

<sup>30</sup> The screening criteria set out by NWMO in its Site Selection process document include acceptability criteria for an HLW DGR Project that are functionally identical to those currently being promoted by OPG to demonstrate the suitability of its DGR Project. These criteria are set out in various NWMO materials, including *Moving Forward Together*, *supra* note 9 at 30-35, and include: (a) availability of land to accommodate surface and underground facilities; (b) location outside of heritage sites and protected areas; (c) meets key safety related questions: (i) are characteristics of the rock at the site appropriate to ensuring the long-term containment and isolation of used nuclear fuel from humans, the environment and surface disturbances caused by human activities and natural events? (ii) is the rock formation at site geologically stable and likely to remain stable over the very long term in a manner that will ensure the repository will not be substantially affected by geological and climate change processes such as earthquakes and glacial cycles? (iii) are conditions at the site suitable for the safe construction, operation and closure of the repository? (iv) is human intrusion at the site unlikely, for instance through future exploration or mining? (v) can the geological conditions at the site be practically studied and described on dimensions that are important for demonstrating long-term safety? (vi) can a transportation route be identified or developed by which used nuclear fuel can safely and securely be transported to the site from the locations at which it is stored?

27. OPG's assessment of the technical suitability of the Bruce Nuclear site geology is not specific to a repository for low and intermediate level nuclear wastes. Rather, OPG's analysis is generalized to its suitability for deep geological repository construction and radioactive containment. There is no indication in the EIS that there are unique characteristics of used nuclear fuel that would make the site unsuitable for an HLW DGR Project.<sup>31</sup> The Panel, in its Information Requests issued to OPG on July 23, 2012, identified this issue and asked OPG to clarify whether there are technical factors that would prevent the DGR Project from being transformed into a DGR for HLW.<sup>32</sup>
28. OPG has concluded, and seeks to demonstrate through its EIS, that the various facilities required to be constructed as part of the DGR Project could be safely constructed at the Bruce Nuclear site.<sup>33</sup> There is no indication that facilities for an HLW DGR Project would present unique challenges that would make the Bruce Nuclear site technically unsuitable from OPG and NWMO's perspective. As noted above, this is a key safety characteristic identified by the NWMO in its Site Selection process document.<sup>34</sup>
29. OPG has relied on the fact that the majority of nuclear waste intended for the DGR Project is already on site at the WWMF in support of its preferred location at the Bruce Nuclear site.<sup>35</sup> With respect to used nuclear fuel waste, NWMO states that as of June 30, 2011, nearly one million bundles of used nuclear fuel are housed at the Bruce Nuclear site, comprising approximately 42% of all used fuel in Canada.<sup>36</sup> NWMO states that as part of its assessment criteria, it will consider

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<sup>31</sup> EIS, *supra* note 1 at s. 4.5.

<sup>32</sup> Information Request Package #4 From the Deep Geologic Repository Joint Review Panel (July 23, 2012) IR# EIS 04-99.

<sup>33</sup> EIS, *supra* note 1 at s. 3.3.5.2. More generally, see EIS s. 4.7.

<sup>34</sup> *Moving Forward Together*, *supra* note 9 at 30-35.

<sup>35</sup> EIS, *supra* note 1 at 3-21.

<sup>36</sup> *Learning More Together: Annual Report 2011*, Nuclear Waste Management Organization (2012) at 11 (attached as Exhibit B).

- factors that have the “potential to avoid or minimize effects of the transportation of used nuclear fuel from existing storage facilities to the repository site.”<sup>37</sup> In public statements, the mayors of communities already engaged with NWMO under the Site Selection process have specifically noted as a key factor in their decision to get involved that 40% of all used fuel is already at the Bruce Nuclear site.<sup>38</sup>
30. OPG has not included as part of its EIS consideration of issues relating to the transportation of nuclear wastes from other OPG-owned nuclear facilities for eventual disposal in the DGR Project. OPG assumes and relies, however, upon the continued operation of the WWMF for the feasibility of its DGR Project,<sup>39</sup> including the existence of transportation routes and protocols that have been established for the delivery of nuclear wastes to the Bruce Nuclear site from other OPG-owned nuclear facilities in Ontario.
31. The OPG-owned nuclear facilities at Darlington and Pickering, together with the Bruce Nuclear facility, currently produce and store approximately 88% of all used nuclear fuel in Canada.<sup>40</sup> The WWMF is the only facility in Canada for the centralized storage of nuclear wastes. It is the only facility and location for which transportation routes have been developed and, from the perspective of a proponent, could be demonstrated to be “safe and secure”—a key requirement of

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<sup>37</sup> *Moving Forward Together*, *supra* note 9 at 37.

<sup>38</sup> Mayor Mike Smith of Saugeen Shores states: “We have the biggest nuclear power site here in Canada in Bruce County very close to our home and about 40% of the fuel is there”, Owen Sound Sun Times, December 7, 2011 (attached as Exhibit C). Vice Deputy Mayor of Saugeen Shores, Doug Gowanlock is quoted as saying “40 per cent of Canada’s high level waste is already stored here on the Bruce Power site”, “Repository in Saugeen Shores?”, Bayshore Broadcasting, December 6, 2011 (attached as Exhibit D). Arran-Elderslie Mayor Paul Eagleson is quoted as “fully supporting” Saugeen Shores involvement in the Site Selection process and noting “40% of the nuclear waste from Ontario nuclear plants is already being stored above ground at the Bruce County site”, “More local communities to look at nuclear waste”, The Sun Times, December 7, 2011 (attached as Exhibit E).

<sup>39</sup> EIS, *supra* note 1 at s. 3.1.

<sup>40</sup> *Learning More Together: Annual Report 2011*, *supra* note 36 at 11.

the HLW DGR Project site selection process under the Adaptive Phased Management approach.<sup>41</sup>

32. OPG has used the fact that it currently owns the site identified for the DGR Project as a factor that supports its application.<sup>42</sup> OPG has confirmed in its EIS that the current site could be expanded to double the capacity of the DGR to accommodate a DGR for other types of nuclear waste, using a DGR for decommissioning waste as an example.<sup>43</sup> While OPG has consistently stated that it will not accept used nuclear fuel waste in the DGR Project, it is clear from the EIS that the current project site could accommodate the development of a new repository project in the future.
33. A critical factor that OPG has used in support of its current application is the “community support” for the DGR Project as demonstrated by its Hosting Agreement with the municipality of Kincardine.<sup>44</sup> OPG has held out that such an agreement with a municipality is sufficient to demonstrate wide community support and “an informed and willing host community.”<sup>45</sup> As discussed in paragraphs 40 to 49, *infra*, NWMO has now engaged with all five Municipalities whose borders comprise the Study Area as part of the process to identify “an informed and willing host community” for the HLW DGR Project, a core requirement of the Adaptive Phased Management approach.<sup>46</sup>
34. As discussed more fully below, if the DGR Project proceeds, another key criteria of the Adaptive Phased Management approach—the requirement for long-term

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<sup>41</sup> *Moving Forward Together*, *supra* note 9 at 30-35.

<sup>42</sup> EIS, *supra* note 1 at 3-21.

<sup>43</sup> *Id.* at 10-18, Table 10.4-3.

<sup>44</sup> *Id.* at s. 3.2.

<sup>45</sup> *Id.* at 3-1. It must be noted that there was no legal or regulatory requirement on OPG to demonstrate, or even use the language of, a “willing host community” when developing the DGR Project—that requirement exists only for an HLW DGR Project.

<sup>46</sup> *Moving Forward Together*, *supra* note 9 at 16-17.

study<sup>47</sup>—could best be demonstrated at the Bruce Nuclear site. The requirement for practical long-term study will best be satisfied at a site where there is extensive, site-specific and practical experience with nuclear waste storage and management and with the operation of a deep geologic repository. The development, construction and operation of the DGR Project at the Bruce Nuclear site will provide NWMO many years of research and data. NWMO will not gain a comparable level of study or site-specific knowledge for any other site in Canada demonstrating the suitability of the site for an HLW DGR Project.

35. In its 2005 report to government, the NWMO recommended as the preferred approach for the long-term management of used nuclear fuel the concept of Adaptive Phased Management leading to “centralized containment and isolation of the used fuel in a deep geological repository in a suitable rock formation, such as the crystalline rock of the Canadian Shield or Ordovician sedimentary rock” (emphasis added). This language was a deviation from the AECL concept considered by the Seaborn Panel, as well as a deviation from numerous historical reports which all concluded that the preferred location for a deep geological repository for used nuclear fuel would be the plutonic rock of the Canadian Shield.<sup>48</sup> These include: (1) a 1974 report of a committee formed by AECL, Ontario Hydro and Hydro-Quebec;<sup>49</sup> (2) the 1977 Hare Report;<sup>50</sup> and (3) the 1978 Ontario Royal Commission on Electrical Power Planning (the Porter Commission).<sup>51</sup>
36. The recommendation to include “Ordovician sedimentary rock” proposed by the NWMO also differs from the language of the *NFWA*, which in section 12(2)(a) specifically requires development of an approach based on: “deep geological

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<sup>47</sup> *Id.*, at 31. See also, *Choosing a Way Forward*, *supra* note 8 at 44, s. 13.2, Chapter 15.

<sup>48</sup> Seaborn Panel Report, *supra* note 6 at s.1.1.2.

<sup>49</sup> *Id.*

<sup>50</sup> *Id.*

<sup>51</sup> *Id.*



disposal in the Canadian Shield, based on the concept described by Atomic Energy of Canada Limited in the Environmental Impact Statement on the Concept for Disposal of Canada's Nuclear Fuel Waste and taking into account the views of the environmental assessment panel set out in the Report for the Nuclear Fuel Waste Management and Disposal concept Environmental Assessment Panel dated February 1998.”<sup>52</sup>

37. The Bruce Nuclear site is not situated within the Canadian Shield. Rather, the geological formation of the area includes the Ordovician rock formation. OPG proposes to construct its DGR Project within those Ordovician layers.<sup>53</sup> The NWMO, by recommending a modification of the historical approach adopted by Canada to specifically include consideration of these Ordovician layers, has opened the door for the consideration of the Bruce Nuclear site for a HLW DGR Project. This change removed the only significant obstacle that could foreclose the Bruce Nuclear site becoming the site for an HLW DGR Project.
38. Additionally, if the DGR Project is approved and constructed, it will greatly increase the likelihood that the HLW DGR Project will be constructed at the Bruce Nuclear site, or elsewhere within the Study Area:
  - a. As indicated above in paragraph 34, a requirement of the Site Selection process, and the Adaptive Phased Management more generally, is the development of site specific data for a potential site. There is an additional requirement that the HLW DGR Project be built in a staged and incremental way, with continuous learning and site specific knowledge development. The development and operation of the DGR Project will act to satisfy these requirements for a potential HLW DGR Project site at or proximate to the Bruce Nuclear site, and within the Study Area.<sup>54</sup>

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<sup>52</sup> *NFWA*, *supra* note 5 at s.12(2)(a) (emphasis added).

<sup>53</sup> *EIS*, *supra* note 1 at Figure 6.2.6-3.

<sup>54</sup> It should be noted that the NWMO has no mandate to participate in the development of the DGR Project, and does so only by contract for the management of the Project. Under the *NFWA*, the NWMO only has a mandate to develop and implement a strategy for the disposal of used nuclear fuel. According to

- b. Successful development and operation of the DGR Project will allow the NWMO to argue that it has demonstrated, with a very high degree of certainty, the technical suitability of the site and the ability to build and construct DGR facilities on site.
- c. Successful development and operation of the DGR Project will permit the development and demonstration of key operational processes and favourable conditions, including:
  - i. Transportation of wastes from Ontario nuclear facilities to site;
  - ii. Processing of accepted nuclear wastes at site and internment in repository facilities; and
  - iii. Local community acceptance.

39. The approval, construction and operation of the DGR Project will provide a near perfect test case for the development of an HLW DGR Project at the Bruce Nuclear site or within the Study Area, making the construction of an HLW DGR Project here not merely reasonably foreseeable, but nearly certain.

**ii. NWMO has Already Begun its Formal Consideration of Sites within the Study Area**

40. A key feature of NWMO's Site Selection process, emanating from the recommendations of the Seaborn Report, is that the identification of a site for an HLW DGR Project would need to be "community driven" and could only be sited where there was an "informed and willing host community."<sup>55</sup> As stated above, NWMO commenced its Site Selection process in May 2010.

41. Since at least November 2011, the NWMO has engaged with municipalities within the Bruce region for the purpose of considering that area for an HLW DGR

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its own documentation, the NWMO is managing the DGR Project to build experience in the development of a deep geological repository project.

<sup>55</sup> *Moving Forward Together*, *supra* note 9 at 18.

- Project. Saugeen Shores, Brockton, Huron-Kinloss, South Bruce and Arran-Elderslie have all engaged with the NWMO and all are within the Study Area as defined in the EIS. More precisely, and as is explained further below, the boundaries of these five municipalities define the boundary of the Study Area chosen by OPG for its DGR Project.<sup>56</sup>
42. These five municipalities have all authorized and requested a screening of the potential suitability of their communities for the HLW DGR Project. In addition, media reports indicate that NWMO is actively pursuing consultations and information campaigns with these communities and CNSC officials have now begun similar consultation relating to the siting of an HLW DGR Project.
43. In or about December 2011, various media outlets began reporting that a number of municipalities in the Bruce and Grey regions, those surrounding the Bruce Nuclear site, had passed resolutions to be considered as “host communities” for the HLW DGR Project, formally entering into NWMO’s Site Selection process.<sup>57</sup> These municipalities were reported to include Brockton, Saugeen Shores and Huron-Kinloss.
44. On December 7, 2011, the Owen Sound Sun Times reported that other nearby municipalities were considering entering into the Site Selection process. That report included a quote from Dave Inglis, Warden of Bruce County and Mayor of Brockton, stating: “I expect a number of the municipalities in Bruce County will be doing the same. It’s just gathering information that they are going through to select a site. I think the county should be involved as we go along. If it’s going

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<sup>56</sup> See EIS, *supra* note 1 at map included as Figure 2.2.1-1.

<sup>57</sup> See, “Saugeen Shores opens door to nuke waste”, Owen Sound Sun Times, December 7, 2011, *supra* note 38. “Repository in Saugeen Shores?”; Bayshore Broadcasting, December 6, 2011, *supra* note 38; “More local communities to look at nuclear waste”, The Sun Times, December 7, 2011, *supra* note 38; Toronto Star, “Nuclear waste storage depot attracts southern Ontario towns”, February 20, 2012 (attached as Exhibit F); “Tourist town bids to host 48,000 tonnes of nuclear waste”, the National Post, December 11, 2011 (attached as Exhibit G); “Nuclear waste dump idea sparks unease in Ontario”, Canadian Press, December 11, 2011 (attached as Exhibit H).

to be in Bruce County we should all be involved.”<sup>58</sup> Explaining his Town’s decision to get involved, Mayor Inglis is also quoted as stating: “We thought: Other communities are doing it in our area, and if its going to be in our backyard, we want to know all we can about it. If it is in Bruce County, its going to affect the whole county for infrastructure and jobs”.<sup>59</sup>

45. Included in these media reports was a suggestion that the engagement between NWMO and the municipalities had predated the decision by the respective councils to enter into the Site Selection process. On December 11, 2011, the Canadian Press reported that Councilor Thead Seaman of Saugeen Shores stated “it was the waste organization [NWMO] that approached Saugeen Shores . . . looking for an invitation into the community.”<sup>60</sup>
46. A report in the Owen Sound Sun Times on December 7, 2011 stated that NWMO took Saugeen Shores officials on a tour of the WWMF site and provided “a fairly extensive briefing” on the project to Saugeen Shores politicians and staff, according to its Mayor Mike Smith.<sup>61</sup> Another article in the Owen Sound Sun Times, dated December 7, 2011, quotes Huron Kinloss Mayor Mitch Twolan as stating in relation to the nuclear fuel wastes: “It’s here already. The safest place is to be buried underground. What I hear is the geology here in Bruce County is second to none.”<sup>62</sup>
47. On May 14, 2012, the town of Saugeen Shores passed a resolution to move to the second phase of NWMO’s site selection process, including a request for a

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<sup>58</sup> “More local communities to look at nuclear waste”, The Sun Times, December 7, 2011, *supra* note 38.

<sup>59</sup> “Nuclear waste storage depot attracts southern Ontario towns”, Toronto Star, February 20, 2012, *supra* note 57.

<sup>60</sup> “Nuclear waste dump idea sparks unease in Ontario”, Canadian Press, December 11, 2011, *supra* note 57.

<sup>61</sup> “Council opens door to nuke waste”, Owen Sound Sun Times, December 7, 2011, *supra* note 38.

<sup>62</sup> “More local communities to look at nuclear waste”, The Sun Times, December 7, 2011, *supra* note 38.

- preliminary screening for the suitability of the area for an HLW DGR Project. This resolution was passed in the face of public protest from residents of Saugeen Shores, including written and oral submissions made by a grass-roots community group opposed to the possibility of an HLW DGR Project in their community.<sup>63</sup>
48. On July 9, 2012, a staff report was prepared by Larry Allison, Chief Administrative Officer for Saugeen Shores, to the Saugeen Shores Council.<sup>64</sup> This report indicated that a meeting was being arranged for members of the Saugeen Shores Council to travel to Ottawa on August 23, 2012 to receive a briefing on the HLW DGR Project by CNSC staff. The report lists by name ten CNSC staff members who would be attending the meeting(s). The report also states that a number of Saugeen Shores councilors were interested in participating and that all expenses will be covered by NWMO. An agenda for the meeting was attached and it included regulatory background sessions as well as a session on the “Technical Safety of Deep Geological Repositories – Safety Assessment/Safety Case.”<sup>65</sup>
49. In a letter dated July 19, 2012 from NWMO to the Chiefs of SON, Chief Scott Lee of the Chippewas of Nawash Unceded First Nation and Chief Randall Kahgee of the Chippewas of Saugeen First Nation, NWMO confirmed that five communities in Bruce and Grey Counties had now passed resolutions to formally enter into the Site Selection process for the HLW DGR Project – Saugeen Shores, Brockton, Huron-Kinloss, Arran-Elderslie and South Bruce.<sup>66</sup> The letter indicates

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<sup>63</sup> See, e.g., the website of the community advocacy group Save our Saugeen Shores, <http://www.saveoursaugeenshores.org>.

<sup>64</sup> Larry Allison, CAO, the Corporation of the Town of Saugeen Shores, Staff Report, July 9, 2012. (attached as Exhibit I).

<sup>65</sup> *Id.*

<sup>66</sup> In a NWMO Newsletter dated March 2012, the NWMO announced that it was suspending “expressions of interest for new communities wishing to engage in the site selection process for Canada’s Used Nuclear Fuel Repository and Centre of Expertise” on September 30, 2012.

that these communities had also requested an initial screening of the potential suitability of their communities.<sup>67</sup>

### **iii. NWMO and OPG Have Repeatedly Refused to Exclude Sites within the Study Area from Consideration**

50. SON has been engaged with OPG over the last several years with the aim of understanding the DGR Project and seeking resolution of its concerns respecting that Project. Throughout this time, and as recognized by OPG in its report on this engagement contained in the EIS,<sup>68</sup> SON has raised the issue of the connection between the DGR Project and a potential project for the disposal of used-fuel wastes. It has been SON's concern that the DGR Project would lead to the development of the HLW DGR Project within its Traditional Territory, which encompasses the Bruce Nuclear site and Study Area.<sup>69</sup>

51. In or around November 2011, SON representatives first became aware that NWMO and various municipalities in the Grey and Bruce regions were engaging in discussions regarding a HLW DGR Project in the area. On November 18, 2011, SON sent a letter to NWMO expressing concern about these developments, in light of the fact that SON had repeatedly and consistently been given assurances that the DGR Project would not "pave the way for a used fuel repository within [SON] territory."<sup>70</sup> SON's letter sought confirmation that NWMO would not proceed to develop an HLW Project at the Bruce Nuclear site, or otherwise within the SON Traditional Territory, over the objections of SON. The letter also raised concern that NWMO had begun to consider the area for a used fuel repository during, and concurrent with, the JRP process for the DGR

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<sup>67</sup> Letter from Kathrine Shaver, APM Site Selection and Engagement, NWMO, dated July 19, 2012 (attached as Exhibit J).

<sup>68</sup> EIS, *supra* note 1 at Table 2.3.4-1.

<sup>69</sup> See attached map of SON Traditional Territory (attached as Exhibit K).

<sup>70</sup> Letter from Chief Scott Lee and Chief Randall Kahgee to Ken Nash, dated November 18, 2011 (attached as Exhibit L).

Project. The letter asks specifically that NWMO provide clear assurances that NWMO is not willing to engage in any consideration of siting an HLW DGR Project in the area.

52. NWMO responded by letter dated November 25, 2011.<sup>71</sup> That letter confirms that NWMO and Saugeen Shores are engaged under the Site Selection process for an HLW DGR Project. The letter fails to provide the assurance sought by SON that NWMO would not consider the area for an HLW Project
53. On February 23, 2012, SON sent another letter to NWMO, reiterating its request for confirmation that NWMO would not move ahead with the development of an HLW DGR Project in SON Territory if SON were opposed to the plan.<sup>72</sup> That letter also corrected a mischaracterization of SON concerns that NWMO had made in its letter of November 25, 2011. SON wrote:

[Y]ou stated that neither the NWMO nor OPG has ever stated that communities in Bruce County would be excluded from consideration for a used nuclear fuel repository. You continued to say that NWMO will not seek to put used nuclear fuel in the proposed DGR for low and intermediate level wastes, which you must know has never been our concern. With these words, we are left with the feeling that our engagement with OPG and NWMO over the past years has been based on only half the story, and that OPG and NWMO have always planned to keep options open to build repositories for all of Canada's nuclear wastes, including used fuel, in our Territory.<sup>73</sup>

54. On May 3, 2012, NWMO provided a response.<sup>74</sup> That letter again failed to provide the assurances sought by SON in its letters of November 18, 2011 and February 23, 2012.

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<sup>71</sup> Letter from Ken Nash, President, NWMO to Chief R Kahgee and Chief S Lee, dated November 25, 2011 (attached as Exhibit M).

<sup>72</sup> Letter from Chief Scott Lee and Chief Randall Kahgee to Ken Nash, dated February 23, 2012 (attached as Exhibit N).

<sup>73</sup> *Id.*

<sup>74</sup> Letter from Ken Nash, President, NWMO to Chief R Kahgee and Chief S Lee, dated May 3, 2012 (attached as Exhibit O).

55. In addition to letters sent by SON to NWMO seeking assurance respecting the siting of an HLW DGR Project within SON Territory, SON has sought similar assurances from OPG directly. Over the last several years, SON and OPG have been engaged in discussions in an attempt to address SON concerns respecting the development of the DGR Project. One of the key concerns raised by SON during this process has been the connection of the DGR Project to a possible future HLW DGR Project. By letters of November 1, 2011,<sup>75</sup> and March 10, 2012,<sup>76</sup> SON asked OPG to confirm that it will not support the development of an HLW Project within SON Traditional Territory if SON opposes such a development. To date, OPG has failed to respond substantively to the request and has not provided any commitments in this regard.
56. The NWMO, under its Site Selection process, has included consideration criteria that would permit it “screen out” potential sites within the Bruce area—for example, it has stated that Aboriginal Traditional Knowledge considerations would need to be respected.<sup>77</sup> It has also indicated that Aboriginal Traditional Knowledge would guide its evaluation of sites to ensure “potential to avoid ecologically sensitive areas and locally significant features”.<sup>78</sup>
57. Most importantly, the cornerstone of Adaptive Phased Management approach is that NWMO will not develop an HLW DGR Project without the support of the local community.<sup>79</sup> The area in which NWMO has engaged the five municipalities, and whose borders comprise the Study Area for the DGR Project, is the heart of the SON Traditional Territory. They are the lands and waters

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<sup>75</sup> Letter from Chief Scott Lee and Chief Randall Kahgee to Albert Sweetnam, Exec. VP, OPG, dated November 1, 2011 (attached as Exhibit P).

<sup>76</sup> Letter from Chief Scott Lee and Chief Randall Kahgee to Albert Sweetnam, Exec. VP, OPG, dated March 9, 2012 (attached as Exhibit Q).

<sup>77</sup> *Moving Forward Together*, *supra* note 9 at 37-38.

<sup>78</sup> *Id.* at 37.

<sup>79</sup> *See, e.g., Choosing a Way Forward*, *supra* note 8 at 40.



throughout which the SON and their ancestors have exercised their Aboriginal and treaty rights since time immemorial. NWMO has given no indication that it will respect the wishes of the SON that it does not want the HLW DGR Project within its territory.<sup>80</sup>

58. Given the NWMO's persistent refusal to give SON assurances that it will not consider Bruce area sites for a HLW DGR Project, and its refusal to give assurances that it would not develop an HLW DGR within SON Traditional Territory over SON's objections, it should be concluded that the NWMO will resolutely continue down its path of developing relationships with the Study Area municipalities for the purposes of considering the area for the siting of its HLW DGR Project.

### **III. PROPER REVIEW OF DGR PROJECT REQUIRES CONSIDERATION OF AN HLW DGR PROJECT**

#### ***A. Governing Law and CEAA Policy Regarding Cumulative Effects Analysis***

59. When undertaking the environmental assessment of a project, such as this Panel's review of the DGR Project, it is incumbent on the reviewing authority to assess not merely the environmental impacts of the proposed project itself, but also the cumulative environmental impacts that may or will result from the interactions among the proposed project and other existing, planned, reasonably foreseeable and, in some cases, hypothetical projects.<sup>81</sup> As demonstrated in Part II, *supra*, an

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<sup>80</sup> It is notable that, SON is in closer proximity to the Bruce Nuclear site than many of the communities within the Study Area (including communities within the municipalities that have expressed interest in "hosting" an HLW DGR Project). For example, the Saugeen First Nation Communal Lands are approximately 30 KM from the Bruce Nuclear site but fall outside the boundaries of the study area, while the communities of Mildmay (50 KM away), Teeswater (43 KM away), Hanover (49 KM away) and Tara Siding (40 KM away) are all deemed to be within the Study Area.

<sup>81</sup> See, e.g., *A Reference Guide for the Canadian Environmental Assessment Act: Addressing Cumulative Environmental Effects*, Prepared by the Federal Environmental Assessment Review Office (November 1994) at 135 (explaining that it is necessary that consideration be given not only to the effects of the project itself, but also to "cumulative environmental effects resulting from the interaction among the environmental effects of the proposed project with those of future projects and activities.").

HLW DGR Project being constructed at the Bruce Nuclear site or otherwise in the Study Area is reasonably foreseeable.

60. Undertaking a proper cumulative effects assessment is not merely sound practice, it is a legal obligation imposed by governing law. Sections 19(1)(a)-(b) of the *Act* instruct that “assessment of a designated project must take into account the following factors . . . the environmental effects of the designated project, including the environmental effects of malfunctions or accidents that may occur in connection with the designated project and any cumulative environmental effects that are likely to result from the designated project in combination with other physical activities that have been or will be carried out . . . [and] the significance of the effects referred to [above].”
61. The specifics of how a cumulative effects analysis should be undertaken have been further developed by policy statements and other materials issued by CEAA as guidance to proponents, practitioners and review panels. Among these materials is CEAA’s Operational Policy Statement on cumulative effects analysis, the purpose of which is to provide “clarification to responsible authorities on how cumulative environmental effects should be considered in environmental assessments conducted under [the *Act*].”<sup>82</sup> The Operational Policy Statement makes clear the broad scope of the cumulative effects analysis required by the *Act*, explaining that an assessment of “cumulative environmental effects” is not limited to “biophysical effects . . . [but] can extend to the effects of changes on health and socio-economic conditions, physical and cultural heritage, and other matters.”<sup>83</sup>

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<sup>82</sup> *Operational Policy Statement: Addressing Cumulative Environmental Effects under the Canadian Environmental Assessment Act* (dated 1999, updated November 2007) (the “Operational Policy Statement”).

<sup>83</sup> *Id.*

62. CEAA has explained that it is incorrect for a cumulative effects analysis to consider only “projects that have been approved but not yet implemented or proposals awaiting planning or other formal approval.”<sup>84</sup> Such a narrow approach to determining what projects are included in the cumulative effects analysis risks “limit[ing] the ability of cumulative environmental effects assessment to contribute to informed environmental planning and decision making in the future of the project area.”<sup>85</sup> Instead, both best practices and CEAA guidance require that a cumulative effects analysis “include ‘certain’ and ‘reasonably foreseeable’ projects and, where appropriate those projects that are ‘hypothetical.’”<sup>86</sup> The Operational Policy Statement explains that “‘reasonably foreseeable’ means that “[t]he action may proceed, but there is some uncertainty about this conclusion.”<sup>87</sup>
63. When a potential future project will have similar effects to the project under review, those similar effects militate strongly in favour of including that potential future project in the cumulative effects analysis. As the Cumulative Effects Practitioners Guide that was developed for CEAA explains “[a] major criterion for selecting other actions is whether the action causes similar effects on the same [valued environment components (“VECs”)] as the action under assessment. Focusing on actions with similar effects is a good first step, and will ensure that the most appropriate actions are included in the assessment (*i.e.*, those with the greatest likelihood of causing effects that interact).”<sup>88</sup> The failure to include

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<sup>84</sup> Operational Policy Statement, *supra* note 82. Despite this clear direction from CEAA, in the EIS, OPG states that the only “reasonably foreseeable projects and activities” that it has considered are those “projects that have started in the approval process and are on the path to obtaining approval.” EIS Guidelines at 10.1. When considered in light of the Operational Policy Statement, it is clear that this approach is unduly narrow, inconsistent with statutory and regulatory guidance and, as discussed at length in this submission, serves to distort the cumulative effects analysis and exclude projects, such as the HLW DGR Project, that should properly be included.

<sup>85</sup> *Id.*

<sup>86</sup> *Id.*

<sup>87</sup> *Id.*

<sup>88</sup> *Cumulative Effects Assessment Practitioners Guide*, Prepared For: Canadian Environmental Assessment Agency; Prepared By: The Cumulative Effects Assessment Working Group (Hegmann, G., C. Cocklin, R. Creasey, S. Dupuis, A. Kennedy, L. Kingsley, W. Ross, H. Spaling and D. Stalker) and AXYS Environmental Consulting Ltd., February 1999 (“Practitioners Guide”) at 20.

reasonably foreseeable projects “is increasingly becoming unacceptable to many stakeholders if there is reason to believe that . . . [those] reasonably foreseeable projects could have a significant cumulative effect with the project under review.”<sup>89</sup> An HLW DGR Project will have similar, and exponentially greater, effects on the same categories of VECs as will the DGR Project currently being reviewed.

***B. The Importance of Cumulative Effects Analysis in the EIS Guidelines and the Joint Review Panel Agreement for the DGR Project***

64. The importance of undertaking a thorough cumulative effects analysis in the review of the DGR Project was recognized by CEAA in the EIS Guidelines for this project.<sup>90</sup> Section 4.2 of the EIS Guidelines instruct OPG that “in order to adequately understand and assess the potential adverse effects of the project . . . any cumulative effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out” must be considered and assessed.<sup>91</sup>
65. Section 14 of the EIS Guidelines discusses the issue of cumulative effects at some length. It requires that “[t]he proponent must identify and assess the cumulative adverse and beneficial environmental effects of the project in combination with other past, present or reasonably foreseeable projects and/or activities within the study area.”<sup>92</sup> The “management of decommissioning waste” is included as an example of the type of project that should be included.<sup>93</sup> The EIS Guidelines elsewhere explain that “[i]n assessing cumulative environmental effects within the study area, the proponent must consider the effects of the project in combination with other past, present and future projects that are either ‘certain’ or ‘reasonably

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<sup>89</sup> *Id.* at 19.

<sup>90</sup> EIS Guidelines, *supra* note 3.

<sup>91</sup> *Id.* at 14.

<sup>92</sup> *Id.* at 48.

<sup>93</sup> *Id.*

foreseeable’ as defined in [the Operational Policy Statement].”<sup>94</sup> The EIS guidelines also require that the proponent “provide a rationale for inclusion or exclusion” of potential future projects in the cumulative effects analysis.<sup>95</sup>

66. OPG has failed to properly observe the direction in the EIS Guidelines with respect to the inclusion of future projects in the cumulative effects analysis. It has, instead, included a range of speculative or contingent future activities in its cumulative effects analysis, and omitted analysis of the HLW DGR Project – a reasonably foreseeable project that stands to have profound and complex cumulative effects in conjunction with the DGR Project. OPG has done this contrary to the direction of the EIS guidelines and without providing any rationale for its exclusion.
  
67. Similarly, the Joint Panel Agreement requires a full analysis of cumulative effects be undertaken as part of this Panel’s review of the DGR Project. The Terms of Reference appended to the Joint Review Panel Agreement, at Part IV(a), instruct that “[t]he Review will include a consideration of . . . any cumulative environmental effects that are likely to result from the Project in combination with other projects that have been or will be carried out.” This language, which tracks the language of Section 19(1)(a) of the *Act*, expressly incorporates into this Panel’s mandate the cumulative effects analysis that is required by the governing law.
  
68. This Joint Panel Agreement, at Section 4.1(c), further makes clear that:

The JRP shall conduct the review in accordance with the Terms of Reference . . . in a manner that . . . [p]ermits it to obtain information and evidence about the adverse effects the project may have on potential or established Aboriginal rights, title or treaty rights as identified to the JRP by the SON and other Aboriginal groups and enables it to bring any such information and evidence to the attention of the Minister of the Environment and the Responsible Authorities

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<sup>94</sup> *Id.* at 27.

<sup>95</sup> *Id.* at 49.

Authority for the Project in support of consultation between the Crown and the SON and other Aboriginal groups.

69. As the excerpt from Joint Review Panel Agreement above recognizes, the DGR Project stands to have significant impact on SON Aboriginal and Treaty Rights and interests, as well as impacts on other legal rights and way of life. It is for this reason that SON engaged in consultations with the federal Crown as represented by CNSC and CEAA to ensure that the JRP Agreement and the Panel’s terms of reference would result in a robust and credible review capable of identifying impacts on SON Rights and interests, including impacts arising from cumulative effects. The development of an HLW DGR Project within SON traditional territory, in conjunction with the development of the DGR Project, will significantly magnify potential impact on SON rights, interests and way of life. It will not be possible to understand the potential impacts from the DGR Project on SON if this environmental assessment fails to include consideration of all reasonably foreseeable future projects, including the most significant of these, the HLW DGR Project. Failing to include the HLW DGR Project in the cumulative effects analysis prevents the Panel from undertaking a proper review of the project and prevents the Panel from assessing—as the Joint Review Panel Agreement requires—the potential adverse effects on SON’s Aboriginal and treaty rights.

***C. Failure to Include an HLW DGR Project in the Cumulative Effects Analysis Renders OPG’s Application Fundamentally Deficient***

70. The law, best practice and CEAA policy makes clear that when a future project is “an important future development” and “may cause significant cumulative effects with the action under assessment,” it is important to include that project in the regulatory review of the cumulative effects analysis, even if questions about the future activity’s likelihood cause it to fall “beyond statutory requirement[s].”<sup>96</sup> CEAA guidance explains that “[a] major criterion for selecting other actions is

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<sup>96</sup> Practitioners Guide, *supra* note 88 at 19.

whether the action causes similar effects on the same VECs as the action under assessment . . . [focusing on these future projects] will ensure the most appropriate actions are included in the assessment (*i.e.*, those with the greatest likelihood of causing effects that interact.”<sup>97</sup> The HLW DGR Project implicates, and adversely affects, many—if not all—of the same VECs that are implicated by the DGR Project under review.

71. The DGR Project itself is a first-of-kind project that poses unique and untested challenges. These challenges are compounded, and significantly magnified, if the DGR Project is colocated with an HLW DGR Project. The inclusion of an HLW DGR Project as a cumulative effect project will have a material and pervasive effect on the current review of the DGR Project, and will require significant new data, study and analysis, including (i) assessment of radiation effects from normal operations, transportation and accidents and malfunctions, (ii) accidents and malfunctions probability scenarios, effects and response; (iii) operations aspects for the projects resulting from increased intensification and demand on resources; (iv) socio-economic effects, including public perception, stigma effects and social acceptance; (v) transportation issues relating to increased intensification and unique issues regarding transportation of fuel wastes; and (vi) technical feasibility considerations relating to co-location. The failure to include an HLW DGR Project undermines the core conclusions of OPG’s EIS and can only be remedied through a fundamental reassessment of a wide range of potential environmental impacts flowing from the DGR Project.
  
72. The development of the DGR Project will significantly increase the intensification of the Bruce Nuclear site, creating the world’s largest nuclear site. The prospect of colocating this Project with a HLW DGR Project, along with continued operation of the WWMF, raises issues of the most serious and complex kind. These issues must be addressed in a clear and thorough manner. The recent

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<sup>97</sup> *Id.* at 20.

experience at the Fukushima Dai-ichi Nuclear Facility in Okuma, Japan stands as a stark example of the complexity of the colocation analysis for the purposes of determining impacts relating to accidents and malfunctions and emergency response.

73. The NWMO has consistently identified transportation issues as a critical consideration in the Adaptive Phased Management approach.<sup>98</sup> A proper cumulative effects analysis here must consider the combined environmental impact of the transportation of fuel wastes along routes that are already used for the transportation of non-fuel nuclear wastes. The necessity and significance of this analysis is heightened by OPG's omission from its EIS of any consideration of transportation issues and by the fact that used nuclear fuel is not currently transported in Canada and would again be a first-of-kind undertaking.
74. Social safety, public perception and confidence, and broad public support are foundational considerations for decisions respecting the long-term management of Canada's used nuclear fuel. It has been consistently affirmed by our governments, regulatory agencies, scientific and policy commentators as well as the Canadian public, that social safety and acceptance of an HLW DGR Project are as important as technical safety considerations.<sup>99</sup> The evidence here shows that there is a connection between OPG's DGR Project and an HLW DGR Project. In these circumstances, it is incumbent upon the proponent and a review panel to ensure a full and transparent review of the projects to facilitate public information, participation and confidence. A failure to do so risks eroding public confidence in the institutions responsible for implementing and regulating Canada's nuclear industry.
75. OPG has acknowledged in Section 10 of the EIS that a project for the disposal of used nuclear fuel waste is a reasonably foreseeable project that needs to be

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<sup>98</sup> *Moving Forward Together*, *supra* note 9 at 37.

<sup>99</sup> *See Seaborn Panel Report*, *supra* note 6.



considered in the cumulative effects analysis. OPG confirms this by including in its cumulative effects analysis the removal of used nuclear fuel waste from the Bruce Nuclear site. OPG has failed to include the equally or more likely project of constructing and operating an HLW DGR Project at the Bruce Nuclear site, or otherwise within the Study Area. This inconsistency is unexplained and, in the opinion of SON, cannot be explained or justified.<sup>100</sup>

76. Instead of acknowledging the reasonable foreseeability of an HLW DGR Project, and including a discussion of that project in its cumulative effects analysis, OPG does just the opposite, reframing the issue in a way that serves only to distort the cumulative effects analysis that this Panel must undertake. In Section 10-37 of the EIS, OPG states that “[a]t some time in the future, used fuel and decommissioning wastes will be transferred to a long term repository. The DGR is not for the long-term management of used fuel; therefore, the repository will be located off-site. Any dose will be solely from the transport of used fuel, and as the used fuel is transferred off-site, will result in a net reduction of dose.” OPG offers no explanation for its assertion that “the repository will be located off-site,” nor does it explain what “off-site” means in this context.
77. The exclusion of an HLW DGR Project from the cumulative effects assessment of the DGR Project materially skews the analysis and renders the cumulative effects analysis in OPG’s EIS all fundamentally inadequate. OPG, by the inclusion in the

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<sup>100</sup> This Panel has recognized that the cumulative effects analysis undertaken by OPG, and OPG’s failure to address a possible HLW DGR Project, is a cause for concern. The Panel, in information request number EIS 04-99, asked OPG to “[d]iscuss the technical and regulatory factors that would prevent the transformation and use of the DGR for high-level waste disposal.” While the transformation of the proposed DGR into a facility for high-level waste disposal is not the only issue—the possibility of construction of a new, nearby facility for high-level waste disposal appears equally, if not more, foreseeable—the Panel’s request makes clear that the issue of HLW disposal cannot simply be ignored or brushed aside in the context of this review. Further, the Panel, in information request number EIS 04-110, recognized the apparent inadequacies of OPG’s cumulative effects analysis. The Panel requested that OPG “[c]larify why ‘the DGR for decommission Bruce Power waste’ is ‘not a planned activity, but is included to meet guideline requirements’ and further, requested why a series of ‘other operations and potential projects were not included in the cumulative effects assessment.’”

EIS of less proximate projects such as the removal of used nuclear fuel, coupled with the exclusion from the EIS of an HLW DGR Project, has promoted a scenario whereby the DGR Project, when considered cumulatively with other “reasonably foreseeable” projects, will have the net effect of diminishing negative environmental effects.

78. OPG claims this specifically for its predicted effect of a long-term reduction in radioactive dose at site. More importantly, by suggesting the removal of used nuclear fuel from site as a likely future scenario, OPG implies a reduction in all other possible adverse cumulative effects that could result from collocation of a DGR Project with existing stored nuclear fuel waste on site. Further, OPG avoids consideration of the cumulative effects that would result from the collocation of the DGR Project and a HLW DGR Project at or near the site, resulting ultimately in the disposal of all of Canada’s nuclear wastes within the Study Area.
79. An HLW DGR Project is a reasonably foreseeable project. OPG’s current EIS fundamentally fails to characterize the adverse cumulative effects of the DGR Project, and in fact inverts those effects, finding a reduction in adverse environmental cumulative impacts when the exact opposite could be presumed would occur. To continue the review of the DGR Project on this basis will undermine the integrity and credibility of the Panel’s work.

***D. Issues Respecting the Scope of the Cumulative Effects Analysis Are Reviewable***

80. The Federal Court of Canada has previously held that the failure of a JRP to properly consider all reasonably foreseeable projects as part of a cumulative effects analysis is a reviewable—and reversible—error of law.<sup>101</sup> The factors “set out in subsection 16(1) . . . are mandatory. The use of the word ‘shall’ in

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<sup>101</sup> *Alberta Wilderness Association v. Cardinal River Coals Ltd.*, [1999] 3 F.C. 425.

paragraph 16(1)(a) indicates ‘that some consideration must be given to each factor.’<sup>102</sup>

81. The Court in *Alberta Wilderness* explained that failure to properly consider all projects that should have been included in a cumulative effects analysis under Section 16 of the *Act* is a breach of a panel’s duty and constitutes a failure of the panel to satisfy its statutory obligations. An “environmental assessment carried out by the Joint Review Panel in accordance with [the *Act*] is a pre-condition to [authorization of the project] . . . the assessment must be conducted in accordance with [the *Act*], including the requirements of section 16; and a ‘proper’ assessment is one conducted in accordance with [the *Act*] . . . an assessment which is not conducted in accordance with [the *Act*] is one conducted in error of law.”<sup>103</sup>
82. A panel may commit reversible error when, if after being put on notice of certain activities that should be included in a cumulative effects analysis, it fails to do so. The court in *Alberta Wilderness* explained that “the Joint Review Panel breached its duty to obtain all available information about likely . . . activities in the vicinity of the project, to consider this information with respect to cumulative environmental effects, to reach conclusions and make recommendations about this factor, and to substantiate these conclusions and recommendations in the Joint Review Panel’s report.”<sup>104</sup>
83. In light of the significant deficiencies in the EIS submitted by OPG, any review of the DGR Project on the basis of that EIS would be fatally compromised. In order to ensure the Panel is able to effectively fulfill its duty to do a full cumulative effects analysis, as demanded by the governing law and the Joint Panel

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<sup>102</sup> *West Vancouver (District) v. British Columbia (Ministry of Transportation)*, [2005] F.C.J. No. 727 at para. 50 (quoting *Bow Valley Naturalists Society v. Canada (Minister of Canadian Heritage)*, [2000] 2 F.C. 461 (C.A.)) (emphasis in original).

<sup>103</sup> *Alberta Wilderness Association*, *supra* note 101 at para. 22.

<sup>104</sup> *Id.* para. 69, 76.

Agreement, the review of the application must be halted until such time as the EIS is revised and Panel has a complete application before it.

#### **IV. RELIEF REQUESTED**

SON respectfully requests the following relief:

That the Panel direct OPG to revise and resubmit its EIS to include a proper cumulative effects analysis that includes an analysis of the cumulative effects arising from an HLW DGR Project within or proximate to the Study Area.

That the Panel take necessary steps to ensure that the Panel, government reviewers and agencies, and all intervenors, have sufficient time to review the amended EIS.

Any other relief or procedural orders that the Panel deems appropriate.

Dated: August 9, 2012

THIS APPLICATION IS BY:

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ON NOTICE TO:

**CANADIAN NUCLEAR SAFETY COMMISSION**

**CANADIAN ENVIRONMENTAL ASSESSMENT AGENCY**

**ONTARIO POWER GENERATION**

**NUCLEAR WASTE MANAGEMENT ORGANIZATION**

**REGISTERED INTERVENORS IN CEEA REGISTRY 06-05-17520**