

Ecological Justice Working Group
Justice, Mission and Outreach Committee
United Church of Canada, Regions East

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Submission via email: Bruce@iaac-aeic.gc.ca

Submission to the Impact Assessment Agency of Canada
on the Draft Integrated Tailored Impact Statement Guidelines
for Bruce C Nuclear Project 88771

Ecojustice Working Group for the United Church of Canada East

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Thank you for this opportunity to submit comments on the Draft Integrated Tailored Impact Statement Guidelines for Bruce C Nuclear Project 88771. The United Church of Canada has a long history of policies, documents, and submissions to public calls for input on social, environmental and ethical issues relating to energy issues, including nuclear power issues.¹ This submission is grounded in that extensive base of information and experience.

Some excerpts of ethical reflections that underpin the work of the United Church of Canada on nuclear power and other energy issues, and bring the Ecological Justice Working Group to address concerns about the impact assessment process for the Bruce C Nuclear Project are provided in the Appendix.

The United Church has acknowledged the harmful role that past false assumptions

¹Foundational publication on the United Church ethical position, history of involvement, and key documents relating to the nuclear power chain from uranium mining to nuclear fuel wastes:

Always Changing, Forever Yours: Nuclear Fuel Wastes. (Leader's Guide)

<https://generalcouncil.ca/document/always-changing-forever-yours-nuclear-fuel-wastes>

Foundational policy of United Church of Canada: *Energy in the One Earth Community- Current Challenges and Future Options for Energy Use in Canadian and Global Contexts*

<https://generalcouncil.ca/document/energy-one-earth-community>

of human separation from and superiority over the natural world has had in the commodification of nature and environmental destruction. In its policies, the United Church has clearly articulated humanity's fundamental integration with the rest of creation along with a call towards responsibility for the care of Creation. Further, the United Church notes that such crucial understandings are at the root of the richness and wisdom of Indigenous worldviews and draws your attention to the importance of that wisdom for our Age.

Areas of Concern

The Guidelines need to ensure that Bruce Power covers these topics and issues in detail in the Impact Statement they will be producing for the Bruce C Nuclear Project.

Indigenous Sovereignty and Rights

Letters and submissions posted on the IAAC website for Bruce C Nuclear Project 88771 raise issues about failures already to uphold the rights of the Indigenous people in this impact assessment process.

The Guidelines should clarify the duties of the Crown and the responsibilities of the proponent. The Guidelines must require that the proponent not only be seen to be carrying out engagement activities with Indigenous communities but must demonstrate that

- Indigenous sovereignty is being respected and will continue to be fully respected
- constitutional and legal frameworks are being strictly adhered to, including Section 35 of the Constitution Act, 1982, which affirms Indigenous treaty rights; the United Nations Declaration on the Rights of Indigenous Peoples Act (UNDA), which mandates free, prior, and informed consent (FPIC); and related landmark Supreme Court rulings
- Indigenous communities are being meaningfully consulted and fully involved in all decisions that affect their lands, resources, and communities

- the proponent's interactions with Indigenous people meet both legal obligations and the moral responsibility to uphold the principles of reconciliation.

Reactor Design

The "Bruce C Nuclear Project" includes up to four new reactors, up to 4800 megawatt-electric production and operation for 60 to 100 years. No reactor technology has been selected while five significantly different candidates are listed.

Bruce Power must select and present their preferred reactor design in detail. Optional reactor designs can be discussed under "alternative ways to do the nuclear power project."

The impact assessment must be based on an actual reactor design with a detailed description of the reactor and design details, in order to have meaningful assessment of affects at each operating stage, including site preparation, construction, operation, decommissioning and abandonment, and meaningful descriptions of normal operating affects, and accident scenarios including worst case scenarios, for each operating stage.

Guidelines must require the detailed project description and reactor design details. The fact that the reactor design has not been chosen means this process is premature. *Bruce C Nuclear Project is not sufficiently developed at the planning stage to permit this project to proceed through this collaborative IAAC and CNSC assessment process. The pressure to move faster in assessment and consultation cannot be justified when the basic information required - what exactly is the proponent proposing to build - has not been provided by the proponent!*

The Bounding option is not applicable to this project because of the combined issues:

- size of project (up to 4800 megawatts)
- unknown number of reactors
- the number of different reactor design options
- the level of diversity in the different reactor design options
- the experimental nature in some reactor design options.

The Need, Purpose and Alternatives to the Bruce C Nuclear Project

The Guidelines must require that the proponent address the fact that the electricity needs of the Province could be met with lower risk and more cost-effective options which would have a shorter timeline from proposal to actual operation and less risk of being stranded assets or turned to military purposes.

Nuclear power production is a high-cost choice for generation of electricity that carries a risk of extreme consequences from failure, accident, attack or disaster. Nuclear power produces a range of radioactive wastes. The technology produces adverse effects along the nuclear fuel chain prior to operation of the reactors – uranium mining, milling, refining, conversion and fuel production – while consuming large amounts of energy, generating greenhouse gasses and releasing radioactivity at each step. During operation, nuclear reactors release radioactive and other emissions, carry risks of high-consequence accidents and malfunctions, and create a legacy of radioactive wastes, some of which must be contained and isolated from the environment for timeframes beyond our ability to isolate them.

The Guidelines must ensure that alternatives to the project are addressed in the impact assessment process. Refer to the Appendix for considerations to be addressed in the alternatives

Radioactive Wastes

The Guidelines must require a detailed inventory and characterization of radioactive wastes, including low, intermediate and high-level wastes in the short, medium and long term.

For high level nuclear wastes, there is a contradiction between the draft guidelines and the “Summary of Potential Federal Incidental Activities”

Section 3.4 of the draft Guidelines states that “The Impact Statement must ...describe nuclear facilities-related activities and components (e.g., reactor design, cooling water system, water intake and discharge structures, waste management strategies for low, intermediate and high-level radioactive waste (e.g., spent fuel) for the facility's lifecycle).”

- Section 2 (b) of the Summary of Potential Federal Incidental Activities - Bruce C Nuclear Project states that “Permanent storage of nuclear waste is not incidental to the Project,” however, the key reasons given for why the permanent storage of waste is not to be considered incidental to the Project are descriptions of the project or project-related activities not reasons for exclusion

On the other hand, any traffic associated with the permanent storage of waste would be included as part of the overall traffic associated with the Project.

At present, the investigation for a potential location is underway for the processing, burial and abandonment of all of Canada’s high level nuclear wastes in a single location. The addition of the current “Bruce C” proposal to develop up to 4,800 megawatt-electric of new nuclear generating capacity for 60-100 years would expand that waste inventory and extend operations significantly. Therefore, the impact on transportation, processing and burial capacity must be addressed, as well as the risks associated with the increased transportation and processing and the burden on the eventual location from the deposition of the increased inventory of irradiated fuel waste.

Erroneously Listed as Incidental Activities under 3.4.2

These activities listed as "incidental" are related directly to the overall physical activities of the Project and must be addressed fully by the proponent in the impact assessment:

- the transportation of new fuel to site;
- the potential for new long-term and interim radioactive waste storage facility; and
- the transportation of radioactive waste

These three activities, integral to the operation of the Project, each carry the potential for impacts on valued components of the impact assessment and are key issues to be addressed in emergency planning. They must not be removed from the full impact assessment requirements as just incidental activities that may be subject to conditions in a Decision Statement.

Transportation of radioactive, chemically toxic materials includes the shipping of nuclear fuel into the site and potentially nuclear waste off the site and that transportation activity (including nuclear fuel waste transportation) must be included in the impact assessment not listed as incidental.

Impacts of the Project on the Broader Context of Local Environment

Guidelines must require descriptions of normal operating, accident scenarios, and worst case scenarios, for each operational stage and transportation stages, including nuclear fuel waste, and address the impacts of the Project on the social and ecological valued components including but not limited to

- Impacts of radioactive releases to air, soil, water
- impacts on fish and fish habitat
- Impacts of increases in operations at the Western Waste Management Facility, including incineration or radioactive wastes, and releases from the incinerator and other waste management activities
- Impacts of water use
- cooling systems (water or air cooling)
- project impacts on the local social landscape, including demographic and population surges, the potential for increased urban development

Additions to Radionuclide Burden on Great Lakes System

Since the 2022 decision by Canada to exclude radionuclides from Chemicals of Mutual Concern under the Great Lakes Water Quality Agreement², a substantial number of facilities are proposed that are sources of radionuclide contamination of the Lakes. These proposals involve significant additional input of radionuclides, increasing the necessity for monitoring and preventive actions to protect the Lakes from threats posed by toxic, persistent and bioaccumulative radionuclides.

² Canadian Environmental Law Association and Toxics-Free Great Lakes Binational Network. Renomination of Radionuclides as Chemicals of Mutual Concern Under the Great Lakes Water Quality Agreement. 2022

https://cela.ca/wp-content/uploads/2022/05/1476-Re-Nomination_of_Radionuclides_as_CMCs.pdf

The Guidelines must set the Great Lakes system as a valued component that requires that the proponent address

- the existing radionuclide burden on the Great Lakes system including but not limited to, water, benthic sediments, and bioaccumulation, and
- provide information on identity, characteristics and quantity of radionuclide releases, modes of releases and potential impacts on Lake Huron and the Great Lake system from Bruce C project for individual reactors and cumulative impact of the Project over time.

APPENDIX

Some excerpts from ethical reflections within United Church Policies on major energy issues in Canada:

The full development and use of energy must be considered in assessing various options. Life-cycle analyses are useful in that they force us to broaden our perspective beyond the immediate use of energy and consider the long-term and long-range impacts.

As Canadians, we cannot concern ourselves with just the immediate and domestic consequences of our energy choices, but must recognize and take responsibility for the impacts on the Earth as a whole, both currently and in the future.

Environmental and social assessment processes, as well as the accumulating scientific evidence, point to massive destructive impacts from many of the energy sources currently in use. We must accept our responsibility and shift energy policies and approaches so that we use less energy and draw it from sources which are less polluting and less environmentally destructive than the current ones, particularly nuclear power and sources dependent on fossil fuels.

Technologies already exist which are much more energy efficient, and many more could be brought on stream quickly if the research and development resources were applied. These technologies could dramatically reduce the amount of energy that we use per unit of production, consumption, and transportation.

Future generations are not represented in our legislatures, boardrooms, or international negotiations to argue their own case. The consequences of the energy patterns of current human societies represent the most serious environmental threats to the health and well-being of future generations, specifically, fossil fuel use and nuclear power.

To care for creation is to assume responsibility for speaking on behalf of future generations of human and non-human species as energy decisions are made which could positively or negatively affect their capacity to live full and healthy lives. Protecting the Earth's biodiversity requires us to utilize energy judiciously so as to

avoid waste and inefficiency and to shift toward energy sources which carry fewer inherent destructive impacts.

Renewable energy technologies offer the most encouraging potential for energy sources which carry modest enough environmental impacts that they can be used without exceeding the carrying capacity of the Earth. Energy conservation, efficiency, and renewable sources can reflect the precautionary principle of avoidance of ecological damage.

Environmental protection can be added to the many other good reasons for pursuing non-violent approaches to conflict resolution. War, military maneuvers, and the production of military equipment utilize vast quantities of energy. Environmental impacts are among the less analyzed consequences of war. Oil refineries, nuclear power facilities and energy systems are targets for bombing, causing severe pollution of land, air, and water sources.

Nuclear power generation and nuclear bomb production are inter-related through common use of uranium, the potential for high-level nuclear wastes to be diverted for bombs, and there is no known safe method of disposing of (isolating) the high-level wastes.

People displaced by large projects should have the opportunity for full and meaningful participation in decision-making regarding such projects, especially since the energy benefits are likely to be reaped by industry and urban dwellers far away. Participation is often difficult for community groups with limited resources. It is important for governments to provide adequate intervener assistance for those most affected by the projects and to use an open and transparent decision-making process.

A comprehensive background on the United Church ethical position, involvement, and key United Church documents relating to the nuclear power chain from uranium mining to high level nuclear wastes is available in the foundational document, *Always Changing, Forever Yours: Nuclear Fuel Wastes (Leaders Guide)* (2009) at

<https://generalcouncil.ca/document/always-changing-forever-yours-nuclear-fuel-wastes>