

Canadian Coalition for Nuclear Responsibility

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Spreading the Bomb – Will Ottawa revisit Canada's support for plutonium reprocessing?

Today, the Canadian Coalition for Nuclear Responsibility and researchers from five universities are urging Ottawa to reconsider its financial and political support for reprocessing in Canada – extracting plutonium from used nuclear fuel.

Plutonium is one of the key materials needed to make nuclear weapons—the other alternative is highly enriched uranium. Plutonium is created as a byproduct in nuclear reactors. Once extracted, plutonium can be used either as a nuclear fuel or as a nuclear explosive. The chemical process used to separate plutonium from other radioactive substances produced in nuclear reactors is called reprocessing.

In 1974 India used plutonium from a Canadian reactor to explode an atomic bomb in an underground test. The entire world was shocked to realize that access to plutonium and the making of an atomic bomb may be separated only by an act of political will.

Last week, a House of Commons committee released a [report](#) recommending that the government “work with international and scientific partners to examine nuclear waste reprocessing and its implications for waste management and [nuclear weapons] proliferation vulnerability.”

The recommendation by the House of Commons committee echoes numerous calls by civil society groups and by U.S. and [domestic](#) researchers after Canada [announced](#) a \$50.5 million grant in March 2021 for a New Brunswick project to develop a plutonium reprocessing facility at the Point Lepreau nuclear site on the Bay of Fundy.

Allowing plutonium reprocessing in Canada sends a dangerous signal to other countries that it is OK for them to extract plutonium for commercial use. Such a practice increases the risk of spreading nuclear weapons capabilities to countries that currently do not possess the means to make nuclear weapons. The risk is that much greater if Canada sells the technology, as is currently envisaged.

“By supporting the implementation of reprocessing technology intended for export, in connection with a plutonium-fuelled nuclear reactor, without regard for the weapons implications, Canada may be once again spreading the bomb abroad,” says Dr. Gordon Edwards, President of the Canadian Coalition on Nuclear Responsibility.

Reprocessing is often justified as a solution to the problem of dealing with nuclear waste, but in reality, it only makes the challenge even harder. Instead of having all the

radioactive materials produced in solid spent fuel, these get dispersed into multiple solid, liquid and gaseous waste streams.

Researchers from the University of British Columbia, Princeton University and three New Brunswick universities are supporting the call for an international review. “We're heartened that the House of Commons Committee listened to the concerns about plutonium reprocessing raised by numerous experts and concerned citizens,” says Dr. Susan O'Donnell, Adjunct Professor at the University of New Brunswick.

Dr. Edwards cited [three letters](#) written to Prime Minister Justin Trudeau by nine prominent nonproliferation experts, including plutonium expert Frank von Hippel. “The Prime Minister’s failure to respond indicates an appalling lack of good governance on the proliferation of nuclear weapons,” said Dr. Edwards.

To date the government has not responded to the letters or even acknowledged the monumental significance of the nuclear weapons connection with reprocessing. The House of Commons Science and Research Committee cited the letters by Dr. von Hippel and others as rationale for their recommendation to conduct the review.

Commercial reprocessing has never been carried out in Canada but in the past, Canada has been complicit in the production of nuclear weapons. During the Cold War some reprocessing was done at the federal government's Chalk River Nuclear Laboratory, at a time when Canada sold both uranium and plutonium to the US army for use in nuclear weapons. These operations resulted in a permanent legacy of nuclear waste and radioactive contamination in Canada.

The first reactors were built to produce plutonium for bombs. The first reprocessing plants were built to extract plutonium to be used as a nuclear explosive. Following India’s use of plutonium from a nuclear reactor supplied by Canada in its 1974 weapon test, the United States banned commercial plutonium reprocessing in 1977 to reduce the danger of weapons proliferation.

Canada has had an [informal ban](#) on reprocessing since the 1970s. A 2016 Canadian Nuclear Laboratories [report](#) stated that reprocessing used CANDU fuel would “increase proliferation risk.” That CNL admission was fully confirmed in a [major report](#) (330 pages) released three months ago by a U.S. National Academy of Sciences. The expert panel reached a consensus that the reprocessing technology proposed for New Brunswick by the Moltex corporation “does not provide significant proliferation resistance.”

The need for an independent international review is urgent, as Moltex announced just last week that the company is seeking an additional \$250 million in government funding.

The researchers supporting the call for an international review of plutonium reprocessing in relation to the spread of nuclear weapons are:

[Dr. Gordon Edwards](#), President, [Canadian Coalition for Nuclear Responsibility](#)

[Dr. Susan O'Donnell](#), Adjunct Professor and Principal Investigator of the Rural Action and Voices for the Environment project, University of New Brunswick

[Dr. Janice Harvey](#), Assistant Professor, Environment & Society Program, St. Thomas University

[Dr. Jean-Philippe Sapinski](#), Assistant Professor of Environmental Studies, Université de Moncton

[Dr. M.V. Ramana](#), Professor and Simons Chair in Disarmament, Global and Human Security, School of Public Policy and Global Affairs, University of British Columbia

[Dr. Frank von Hippel](#), Senior Research Physicist and Professor of Public and International Affairs Emeritus, Program on Science & Global Security, Princeton University

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