

CINTAC

Civil Nuclear Trade Advisory Committee

November 4, 2021

The Honorable Gina Raimondo
Secretary
U.S. Department of Commerce
1401 Constitution Avenue, NW
Washington, DC 20230

Subject: Essential Support Needed for U.S.-Canada Nuclear Commerce

Dear Secretary Raimondo:

The Civil Nuclear Trade Advisory Committee (CINTAC) serves as an advisor to you on the promotion of nuclear energy exports, and we are writing regarding the need to reinforce the longstanding mutual collaboration on commercial nuclear matters between the United States and Canada.

With the recent re-election of Prime Minister Justin Trudeau, we believe this is an appropriate time for the Biden Administration to seek closer collaboration between the U.S. and Canadian Governments on advanced commercial nuclear technologies and the resulting new business opportunities. These opportunities are also consistent with the Roadmap for a Renewed U.S.-Canada Partnership that President Biden and Prime Minister Trudeau committed to in February 2021 to strengthen implementation of the Paris Agreement to increase the pace and scale of climate action.

The U.S. and Canada have a highly integrated electricity network with some \$2.3 billion (USD) in bilateral trade carried annually over 30 major cross-border transmission lines, according to the U.S. Department of State. In fact, Canada is a net exporter of approximately \$1.4 billion each year in electricity.

Today, nuclear power provides over 60 percent of Ontario's electricity, and the Province will spend over \$25 billion to extend the life of 10 reactors at the Darlington and Bruce Stations. U.S. companies are involved in these efforts, supplying both personnel and equipment and this program has the potential to provide billions of dollars of revenue for U.S.-based nuclear suppliers. But more importantly, both the U.S. and Canada are embarking on the deployment of the next generation of advanced commercial nuclear reactors.

For example, two U.S.-based companies and a third with U.S. operations (General Electric, X-energy, and Terrestrial Energy respectively) have been down-selected by Ontario Power Generation to deploy one of their small modular reactors at the Darlington site by the end of the 2020s, with vendor selection expected by the end of 2021. Several Canadian utilities, including Bruce Power, SaskPower, and Alberta Power, may also consider these designs or other SMRs technology designs while pursuing operating licenses from the CNSC for future project deployments. Another example is Seattle-based Ultra Safe Nuclear Corporation, whose micro-modular reactor is scheduled for deployment at Canada's Chalk River Laboratories. Several U.S. utilities are closely collaborating on these efforts, and the

selection could have significant consequences for cross-border trade and the beneficial impact of providing carbon free nuclear generation. Furthermore, there are private and public entities in Europe closely watching these developments for possible deployment to reduce dependence on fossil fueled industrial and electric generating facilities. At the same time, financial markets are closely evaluating market signals for potential future vendor and/or project investment.

Importantly as well, most of these reactors will use High-Assay Low Enriched Uranium (HALEU) fuel with enrichments of up to 19.5%. Although the U.S. Department of Energy entered into a three-year project with Centrus Energy Corp. – a U.S. publicly traded corporation – to demonstrate the capability to produce HALEU material, it is for a limited duration and will not come anywhere near meeting the demand required for the advanced reactors planned and underway. Further, unlike the U.S., Canada has no enrichment capability whatsoever, so the need for the U.S. to meet the HALEU demand is vital to U.S. companies seeking to deploy advanced reactors domestically and internationally. The Government of Canada has expressed its strong support for a North American solution to meeting the demand for enriched uranium fuel needed to power advanced commercial reactors. In the absence of increasing domestic HALEU production, Russia will be the only viable source for large amounts of HALEU necessary to support new reactor development. Placing greater reliance on such foreign supply from a geostrategic rival to meet U.S. and Canadian energy needs is not a viable long-term choice, and in our view, the U.S. needs to deploy a whole-of-government approach to this issue as a matter of economic and national security. Making HALEU production a priority will also provide important signals to the stakeholder and financial communities that there will be no limitations or risks associated with fuel supply.

Along with its financial support to assist U.S. advanced reactor companies in developing their reactor technologies, the U.S. should provide robust investment in enrichment capacity needed to meet the emerging HALEU demand from these U.S. advanced reactors. Companies also could sign offtake agreements with U.S. HALEU providers that could provide a sound financial basis to finance further expansion of HALEU production.

Given the potential impact on near- and long-term exports, we request communicating this imperative to support U.S. HALEU development to counterparts specifically at: 1) Department of Energy (to include NNSA and NA-1), 2) Senate Energy and Natural Resources Committee, 3) National Security Council, and 4) National Economic Council, 5) NRCAN, and 6) the Canadian Provinces of Ontario, New Brunswick, Saskatchewan, and Alberta.

Thirty years ago, the United States was the unparalleled and dominant supplier of international nuclear trade. Unfortunately, this is no longer the case, as non-U.S., state-owned entities have become significant competitive threats. Therefore, our companies are disadvantaged and must work ever harder to maintain our competitive edge. While we are unwavering in the need to enhance U.S. nuclear technology exports, we believe Canada can be a strong ally in what could be a tremendous economic opportunity for both countries, and we urge a significantly closer level of cooperation between the Biden and Trudeau Administrations to achieve this vital goal.

To this end, we request contacting the Canadian Minister of Small Business, Export Promotion and International Trade regarding a focused discussion on civil nuclear energy cooperation between our countries. The discussion may include the following:

- Encourage both countries to agree to keep the Canada-U.S. border open in the civil nuclear sector, especially as many of our respective nuclear technology and materials companies

operate cross-border; in particular, insulate civil nuclear cooperation from other bilateral energy issues in which there may be dispute.

- Encourage continued cooperation between our nuclear regulators, Canadian Nuclear Safety Commission (CNSC) and U.S. Nuclear Regulatory Commission (NRC), to harmonize regulations with respect to licensing and movement of technologies, materials, and people between our two countries. By closely collaborating on efforts to greater align regulatory reviews, with a goal of reducing regulatory overlap and expediting the deployment of these game-changing technologies, the harmonization has the potential to result in efficiencies in both countries. It would then provide an export platform of a new generation of nuclear reactors from both countries to Asia, Europe, Latin America, and Africa, while acting as a model for other nations with limited or less established regulatory frameworks to shape and develop their own nuclear safety programs going forward.
- Emphasize one of the key areas of U.S.-Canada bilateral cooperation is in nuclear materials and fuels. With many U.S. and Canadian advanced reactor technologies and SMR designs relying on enriched uranium fuel and High-Assay Low Enriched Uranium (HALEU) fuel, the countries will need to work closely together on fuel cooperation not only between/among our companies but also national nuclear laboratories.

Thank you for your support of CINTAC. We look forward to working with you and your team on this subject and other issues of mutual concern.

Sincerely and on behalf of the members of CINTAC,



Jeff Harper, Chair



Ralph Hunter, Vice Chair

cc: U.S. Secretary of State
U.S. Secretary of Energy
U.S. Secretary of Treasury
U.S. Secretary of Defense
National Security Advisor
Chairman, U.S. Nuclear Regulatory Commission
Director, National Economic Council
Director, National Security Council
Chief Executive Officer, Development Finance Corporation
Chairman, Export-Import Bank of the United States
Chairman, U.S. Nuclear Regulatory Commission

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