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# RADIOACTIVE WASTE MANAGEMENT IN CANADA: PROGRESS AND CHALLENGES 15 YEARS AFTER THE POLICY FRAMEWORK

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## Summary

*Introduction:* Canada's Policy Framework for Radioactive Waste Management came into being in 1996, establishing the federal Government's overarching policy on radioactive waste management. Most importantly, the Policy Framework clearly establishes the role of the federal government and the role of the waste producers for radioactive waste management. Since the elaboration of the Policy Framework, there have been major developments on a variety of waste management fronts. The paper will examine those developments and identify the remaining challenges ahead in establishing a Canadian approach to radioactive waste management that is comprehensive.

Canada's Policy Framework for Radioactive Waste Management established the Government's overarching policy for radioactive waste management. It was developed and established at a time when there was a fair degree of uncertainty regarding the role of the federal government, the provinces, and the waste producers in the area of radioactive waste management generally, and the management of nuclear fuel waste in particular. The Policy Framework clarified the roles and responsibilities of both the federal government and the operators and, in so doing, contributed to advancing radioactive waste management initiatives across Canada. The Government is responsible for developing policy, regulating, and overseeing that the owners of waste comply with legal requirements and meet their operational responsibilities in accordance with their waste management plans. The owners of the waste are responsible for funding and managing their own radioactive wastes.

Over the course of the last 15 years, since the elaboration of the Policy Framework, there have been significant strides in developing long-term management solutions for Canada's radioactive wastes. Key developments in radioactive waste management include legislation in the area of nuclear fuel waste and the associated milestones emanating from that development – the establishment of the Nuclear Waste Management Organization, the study of options for the long-term management of nuclear fuel waste, the Government's decision on the options, the agreement on a funding formula for nuclear fuel waste management, and the launch of the NWMO's siting process. In this same period, we also have witnessed progress on a long-term waste management facility for low and intermediate-level radioactive waste in Ontario – including an agreement with the hosting community. In addition, there has been further advancement in the management of uranium tailing, notably the launch of cleanup efforts at the Gunnar mine in northern Saskatchewan.

Finally, the federal government has established robust programs for the management of historic and legacy wastes across the country. In terms of historic wastes, the Port Hope Area Initiative has advanced to the point where critical decisions will be made in 2011 on the launch of the

implementation phase of that Project and the Low-Level Radioactive Waste Management Office continues to manage historic wastes at other sites across the country. As for legacy wastes, decisions are expected prior to the end of 2010 on the continuation of the Nuclear Legacy Liabilities Program which addresses decommissioning and radioactive waste liabilities at AECL sites in Manitoba, Ontario, Quebec, and Nova Scotia.

The coming years will see the further advancement of these initiatives, all which will face their own challenges. Nevertheless, there is generally a defined strategy or path and the appropriate elements are in place to achieve success.

Despite these initiatives, there remain gaps in Canada's approach to radioactive waste management. In particular, while there has been progress on the management of low and intermediate-level radioactive waste in Ontario to address wastes from Ontario Power Generation's facilities, there is, as yet, no long-term management approach defined for wastes produced by other producers of these forms of waste. Initiatives are underway that should define options for these wastes.

Other issues are associated with optimizing long-term waste management options. These issues include the optimization of management solutions for historic wastes and the identification of management solutions for very low-level radioactive wastes that will result from future decommissioning activity.

Canada has made much progress in the area of radioactive waste management since the elaboration of the Policy Framework. At the 2009 Third Review Meeting of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management the International Atomic Energy Agency highlighted Canada's "substantial progress made in the radioactive waste and spent fuel management since the last review meeting". It noted that Canada had made good progress in the implementation of the waste management programme and the programme is ongoing. Given recent progress, Canada will enter the Fourth Review Meeting in 2012 in an even stronger position as long-term waste management initiatives begun after the elaboration of the Policy Framework fifteen years ago, begin to mature.

Subject keywords: Policy Framework, Radioactive Waste Strategies, Canadian Progress