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The Canadian Neutron Facility for Materials Research: A Key to Innovation and Productivity for Canada

P.J Fehrenbach and I.J Hastings
Atomic Energy of Canada Limited

The Canadian Neutron Facility for Materials Research (CNF) is the subject of a joint proposal between the Canadian National Research Council (NRC) and Atomic Energy of Canada Limited (AECL) to build a 40 MW_t MAPLE research reactor at Chalk River Laboratories. The CNF will replace the NRU reactor and support next-generation neutron-based materials research and innovation in Canada. The purpose of the CNF is twofold: to provide the advanced materials research capability to meet the needs of Canadian industry and universities, and to provide an essential testing facility to advance the CANDU® power reactor design and ensure the future competitiveness of the Canadian nuclear industry.

This paper will discuss the impact of the facility on the Canadian nuclear industry, and will describe the unique design which has been developed to meet the two separate needs of NRC and the nuclear industry. The paper also will provide an update on the status of the joint proposal to the Government of Canada for funding of this key capability for Canada.