



Summary

- The National Research Council of Canada (NRC) and Atomic Energy of Canada Limited (AECL) jointly propose a new Canadian Neutron Facility for Materials Research (CNF) to support next-generation neutron-based materials research and innovation in Canada for the 21st century. The proposal is brought forward with full regard for academic, research and industrial stakeholders.
- The purpose of the CNF is to provide:
 - i) the advanced materials research capability to meet the needs of Canadian universities and industry, thus ensuring Canadian competitiveness on many fronts in the global arena
 - ii) an essential testing facility to advance the CANDU power reactor design. This will ensure the Canadian nuclear industry (\$6 billion annual contribution to the Canadian economy) remains competitive and that CANDU is available to Canada in the future, when the need for new, environmentally-sound electricity generation arises, as dictated by the Kyoto Protocol on Climate Change.
- During the construction and operational phases of the CNF, local and national economic stimulation is substantial. Ninety per cent (90%), about \$350 million, of the CNF can be provided by Canadian firms.
- All industrialized, and some newly industrialized countries, have access to neutron beams from research reactors. However, because of the growing international awareness of the critical importance of neutrons for advanced materials development, the global demand is now exceeding supply.
- Australia, China, Egypt, Germany, Holland, Japan and Thailand have identified the requirement for advanced materials research facilities in the 21st century and are already constructing, or planning to construct, new research reactors.
- All nuclear vendor countries have access to government-supported research reactors to augment their commercial programs.
- Several generations of Canadian materials researchers will be trained at this facility, providing a continuous, strong knowledge-base in Canada.