

The Importance of Materials Research to the CANDU Industry

For more than 40 years, NRU has provided the primary neutron irradiation facilities that were key to the development of the CANDU reactor as a major source of electrical power.

The independent R&D Advisory Panel to AECL's Board of Directors strongly supports the collaboration between the National Research Council of Canada and Atomic Energy of Canada Limited in proposing the Canadian Neutron Facility for Materials Research.

The Panel is convinced that the CNF and its research and development (R&D) facilities will:

- provide an essential, effective and economic testing facility to support and advance the CANDU power reactor design
- ensure the future competitiveness of the Canadian nuclear industry
- provide an advanced materials research capability to meet the needs of the Canadian Universities and industry.

The case for the CNF is based on the need for an engineering-scale, high thermal-neutron flux, high fast-neutron flux reactor to provide the essential support required for AECL to ensure long-term competitiveness of the CANDU product. This goal can only be met by providing an experimental capability for testing the behaviour of materials and components when subjected to an intense flux of neutrons.

The nuclear industry is based on the mastery of sophisticated technology, often on the leading edge of scientific development. Indeed, CANDU technology is partly responsible for Canada's international reputation for large-scale technical excellence. It is the existence of this technical and scientific maturity that is essential in attracting future national and international customers for CANDU reactors.

Four AECL-designed CANDU 6 units at the Wolsong site in Korea. Wolsong 1, in-service since 1983, was the top-performing reactor in the world in 1997.

