

## **CANADA-KOREA NUCLEAR RELATIONS**

### **ISSUE**

Korea has a recent, but dynamic and rapidly expanding nuclear power programme, which is its main tool to promote energy self-reliance in the context of continuing increases in electricity demand of 7% or higher annually.

### **BACKGROUND**

Currently, Korea has nine nuclear reactors in operation and two under construction. The Korean nuclear power programme, which in addition to the CANDU unit includes eight U.S. pressurized light water reactors (PWRs) and two French supplied PWRs, will present installed capacity of 9,616 MWe, or over 30% of Korea's electrical generating capacity. Korea's nuclear power programme currently accounts for over 40% of normal electricity output. Korea intends to become one of the world's primary users and developers of nuclear power.

Canada-Korea nuclear relations are carried out under the Canada-Korea Nuclear Cooperation Agreement which came into force on January 26, 1976 and provides all the appropriate non-proliferation and safeguards guarantees for nuclear transfers. The motivation for concluding this agreement was provided by AECL's successful efforts in the mid-1970's to secure a contract for the construction of a CANDU reactor in Korea at Wolsung on the southwest coast of the country. AECL has subsequently pursued the sale of additional CANDU reactors to Korea and has provided considerable assistance to Korea in the areas of reactor safety and operations. AECL successfully negotiated a contract for Wolsung- II.

AECL also works closely with the Korea Advanced Energy Research Institute (KAERI). AECL and KAERI signed a master agreement for cooperation in research and development in 1982. Since then, eight subsidiary agreements have been concluded on a variety of topics from nuclear fuel technology transfer to waste management. The Canada-Korea nuclear relationship has been very extensive as a result of AECL/KAERI cooperation, underlining the Canadian commitment to technology transfer.

In 1988, a decision by Korea to engage AECL as the principal contractor/consultant for a 30 MWe multi-purpose research reactor (KMRR) gave further impetus to Canada-Korea nuclear relations. Based on the Canadian MAPLE concept, the KMRR can be utilized for isotope production, material research, neutron radiography and fuel examination.