

**Canadian nuclear regulator finds “no fundamental barriers” to licensing
AECL’s Advanced CANDU Reactor (ACR-1000)**

Mississauga; September 10, 2009 – The Canadian Nuclear Safety Commission (CNSC) has completed Phase 2 of a Pre-Project Design Review of Atomic Energy of Canada Limited’s Advanced CANDU Reactor (ACR-1000®) and concluded that there are no fundamental barriers to licensing the ACR-1000 in Canada.

“This is a tremendous milestone for the Canadian nuclear industry as it signals the strength of the CANDU nuclear design to the global marketplace,” says AECL President and CEO Hugh MacDiarmid. “The CNSC has found no fundamental barriers to licensing an ACR-1000 here in Canada, which gives a strong indication that our design is safe and robust.”

The objective of a Pre-Project Design Review is to verify, at a high level, the acceptability of a nuclear reactor design with respect to Canadian safety requirements and expectations. To achieve this objective, CNSC staff assessed specific safety and security aspects of the ACR-1000 design to identify any potential technical issues that could constitute a potential fundamental barrier to licensing a new reactor design in Canada.

“I am pleased to recognize the completion of the Phase II Pre-Project Design Review of the ACR-1000 for AECL,” says CNSC President & CEO Michael Binder. “This is a positive result in the assessment of whether there are any fundamental barriers to safety in the proposed design provisions of the ACR-1000.”

The CNSC Phase 2 Pre-Project Design Review concluded:

- AECL has provided sufficient design and analysis information for the purpose of the review;
- At a high level, the design intent is compliant with CNSC regulatory requirements and meets the expectations for new nuclear power plants in Canada;
- CNSC staff did not identify any fundamental barriers to licensing the ACR-1000 in Canada;
- An adequate design process is in place, and the CNSC has made some observations regarding its implementation;
- As part of a licence application, CNSC staff would expect a commissioning program to be submitted that is commensurate with industry best practice that would verify to the extent practicable that the new features of the ACR-1000 design will function in accordance with their design requirements; and,
- The overall ACR-1000 R&D program was derived logically from the existing knowledge base and appears to be comprehensive — addressing key safety-related and first-of-a-kind R&D requirements.

While the overall conclusion indicated that there are no fundamental barriers to licensing the ACR-1000 in Canada, it should be noted that this is subject to the successful completion of AECL’s planned activities, in particular those related to R&D.

Mr. MacDiarmid added, "We are confident in the merits of the ACR-1000 as it's built on the fundamentals of our existing CANDU reactor fleet, including the CANDU 6, which has been built on-time and on-budget on four continents in the last 12 years. AECL and its Team CANDU partners are ready to build the first ACR-1000 on Canadian soil and the positive conclusions of the CNSC's Pre-Project Design Review provide more confidence in our readiness."

AECL will now proceed with finalizing the detail aspects of the design in anticipation of an ACR-1000 reactor build in the near future.

A copy of the Phase 2 Executive Summary is available for downloading from the CSNC website at: www.cnscccsn.gc.ca.

About the ACR-1000

The ACR-1000 is Atomic Energy of Canada's evolutionary, Gen III+*, 1200 MWe class pressure tube reactor. It is a light water cooled, heavy water moderated pressure tube reactor derived from the well-established CANDU line. The ACR-1000 retains the basic, well-proven, features of the CANDU® plant design such as a modular, horizontal fuel channel core, a low-temperature heavy-water moderator, water-filled vault, two independent diverse shutdown systems, on-power fuelling and reactor building accessibility for on-power maintenance.

** Gen III+ is the classification given to nuclear technologies by an international team, including Canada, that is collaborating on the research to develop the next generation, Gen IV reactors. ACR-1000 is one of the technologies that are considered as a Generation III+ design.*

About AECL

Atomic Energy of Canada Limited is a full service nuclear technology company providing services to nuclear utilities around the world. Established in 1952, AECL is the designer and builder of CANDU technology including the ACR-1000 and the CANDU 6, one of the world's top-performing reactors. AECL is actively developing CANDU markets in Romania, Argentina as well as other international markets. AECL's 5,000 employees deliver cutting edge nuclear services, R&D support, design, and engineering, construction management, specialized technology, refurbishment, waste management and decommissioning in support of CANDU reactor products. More information on AECL and CANDU technology can be found at www.aecl.ca.

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