

# **AECL Technologies Presentation to ACRS on ACR-700**

**October 7, 2004**



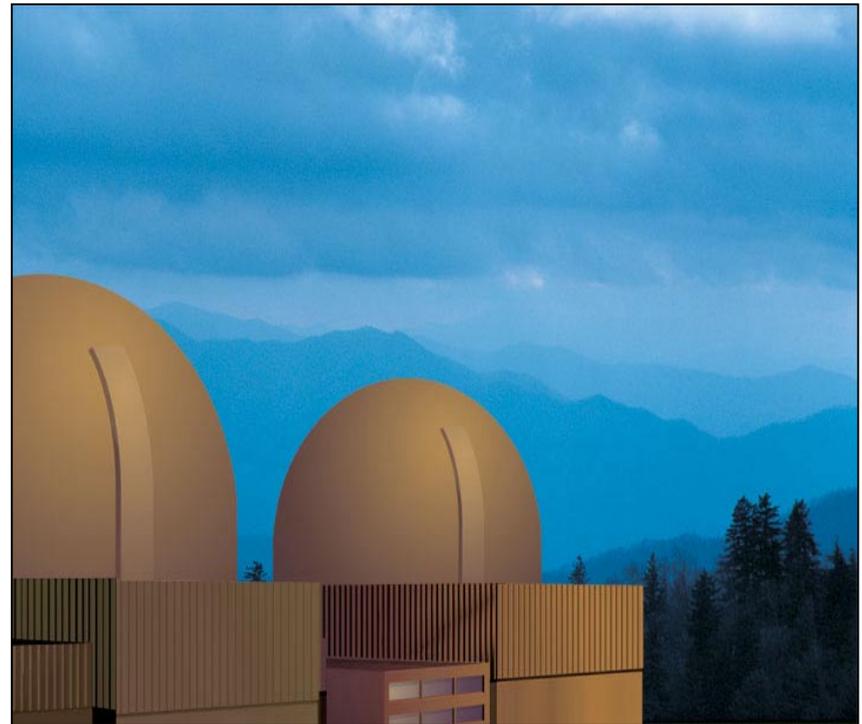
**Glenn Archinoff  
Manager ACR Licensing  
AECL Technologies  
Rockville, MD**





# Outline

- **Pre-Application Phase summary and path forward**
- **Reactor physics codes**
- **Coolant void reactivity**





# Pre-Application Review

- **OBJECTIVE:** To determine if the ACR-700 design can be certified in the US in a timely manner, emphasizing:
  - Aspects of the ACR-700 design that are not directly addressed by NRC regulations
  - Aspects of the underlying technology base that are new to NRC staff
- **ACTIVITIES**
  - Phase 1 – Familiarization, NRC review of documents, meetings
  - Phase 2 – Responses to RAIs, detailed technical meetings, address focus topics



# Results

- **The main objective of the Pre-Application phase has been met**
- **AECL's view is that the ACR-700 design will meet applicable US regulations**
  - **For CANDU-specific aspects where US regulations do not exist, Canadian requirements meet the intent of US regulations and will be applied**
- **NRC staff now familiar with ACR-700 technology**
  - **Will facilitate timely review of Design Certification application**
- **There are still issues to address**



# Path Forward – Transition Phase

- **Overall objective is to achieve high confidence in the acceptability of the Design Certification application**
- **Smaller set of focus topics for Transition Phase**
  - **Physics codes and coolant void reactivity**
  - **Evaluation models**
  - **Fuel**
  - **Safety Analysis**
  - **Thermal Hydraulics**
  - **Class 1 pressure boundary**
  - **Plus others to be determined based on discussion with NRC staff**



 **AECL**  
TECHNOLOGIES INC.