



# **Codes and Standards to be Applied to the ACR-700 Design in the U.S.**

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Presentation to US Nuclear Regulatory Commission**

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# Application of Codes and Standards

- **U.S. regulations, codes and standards will be applied to the ACR-700 design.**
- **Certain CANDU-specific aspects of the ACR-700 design will necessitate the use of additional requirements (i.e., such as those found in Canadian Standards)**



# Background Information

## CANDU Nuclear Standards

- **Developed over the last 30 years (National Standards of Canada)**
- **Define acceptable requirements and design methods.**
- **Accepted by regulator as part of standards ballot process.**
- **Applicable to plants built in Canada, to the extent agreed with the regulator.**
- **Used as input to the design, part of the design requirements.**
- **Compliance with the Canadian standards is not necessarily required by regulators in other countries.**



# CANDU Nuclear Standards

- **CANDU standards series:**
  - **N285 : Systems and Components (pressure boundary)**
  - **N286 : Quality Assurance**
  - **N287 : Concrete Containment Structures**
  - **N288 : Environmental Radiation Protection**
  - **N289 : Seismic Design**
  - **N290 : Control Systems, Safety Systems, and Instrumentation**
  - **N293 : Fire Protection**



# Application of U.S. Codes and Standards

- **Pressure Boundary Systems and Components (N285)**
  - **Code classification**                      **SRP 3.1, 3.2, RG 1.26, ANSI / ANS 51.1**
  - **Design**                                      **10CFR50.55a, ASME Section III, B31.1, etc.**
  - **Supplemental requirements**      **See next presentation**
  - **Metal containment**                      **ASME Section III**
  - **In-Service Inspection**                  **ASME Section XI**
  - **Material standards**                      **ASME Section II, supplemented for  
ACR specific components**



## Summary

- **The ACR-700 DCD will use U.S. codes and standards**
- **For CANDU-specific aspects of the ACR-700 design not addressed in the U.S. regulations, codes and standards, requirements from CANDU standards may be used**
- **The following presentations provide a detailed discussion of how this can be done for the ACR-700 RCPB**



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