

# **CoC 1042 NUHOMS® EOS Amendment 89BTH Criticality Analysis Meeting**

AREVA TN

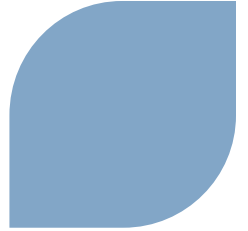
Design Engineering & Licensing Team

NRC, Rockville, MD

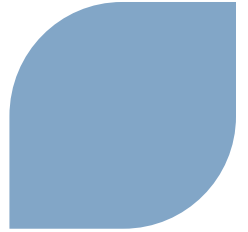
**AREVA TN**



# Agenda



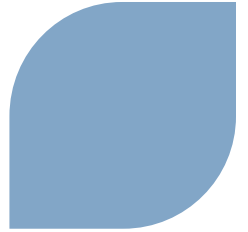
- ▶ **Introduction**
- ▶ **Background**
- ▶ **Scope of Amendment – Non-Proprietary**
- ▶ **Criticality Analysis Summary – Non-Proprietary**
- ▶ **Updated Criticality Analysis Methodology – Proprietary**
- ▶ **Submittal Format – Proprietary**
- ▶ **Questions / Open Discussion – Proprietary**



## ► Purpose of the meeting:

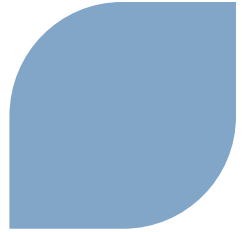
- ◆ To present AREVA TN's proposed new methodology to perform criticality analysis for BWR fuel assemblies-NUHOMS® EOS-89BTH
- ◆ Provide an opportunity to receive NRC feedback prior to inclusion in Amendment 1 to CoC 1042 application

# Background



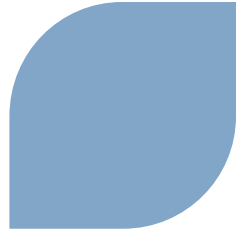
- ▶ **CoC 1042 NUHOMS® EOS Amendment 0 resubmitted for NRC review in June 2015**
- ▶ **Application Scope and Design Objectives**
  - ◆ **New DSCs (including new baskets), HSMs, and Transfer Casks**
  - ◆ **Maximize Capacity**
    - 37 PWR Fuel Assemblies
    - 89 BWR Fuel Assemblies
  - ◆ **Increase Decay Heat Rejection**
  - ◆ **Enhance Structural Performance**
  - ◆ **Maintain NUHOMS® System Overall Design Features and Operations**

# Partial Scope of Amendment



- ▶ **Revised (New) Criticality Analysis for BWR Fuel Assemblies in EOS-89BTH DSC**

# Criticality Analysis Summary



- ▶ **Existing (Amendment 0) EOS-89BTH DSC criticality safety analysis based on fresh fuel assumption**
- ▶ **Criticality Control by poison plates with minimum specified B-10 content**
- ▶ **Criticality analysis performed with SCALE 6.0 and adequate benchmarking**

» **Original criticality analysis for EOS-89BTH DSC accepted by NRC without any RAIs**



Proprietary Information in Slides 8 through 36  
Withheld Pursuant to 10 CFR 2.390