



# **Nuclear Power 2010 Program**

## *Strategy to Deploy New Nuclear Power Plants*

***Presentation at the  
Nuclear Energy Research Advisory Committee***



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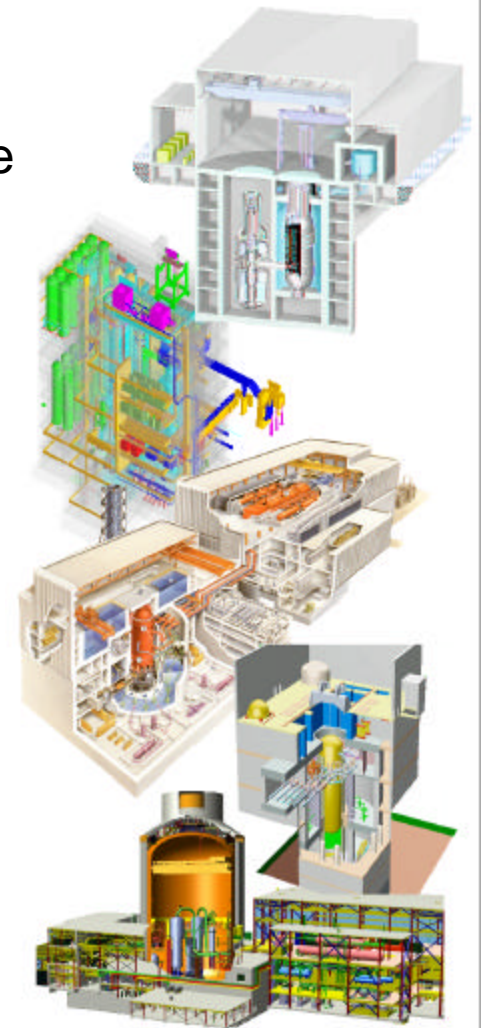
# Nuclear Power 2010: Overview

## Goal

- ◆ Achieve industry decision by 2005 to deploy at least one new advanced nuclear power plant by 2010

## Cooperative Activities

- ◆ **Regulatory Demonstration Projects**
  - Early Site Permit (ESP)
  - Combined Construction and Operating License (COL)
- ◆ **Reactor Technology Development Projects**
  - NRC Design Certification (DC)
  - First-of-a-kind engineering for a standardized plant
  - Material, component and system testing





# Nuclear Power 2010:

## *Activities/Accomplishments to Date*

- ◆ **Near-term Deployment Roadmap completed**
  - Utility-led industry Roadmap issued in October 2001
- ◆ **Business Case Study completed**
- ◆ **Site Scoping Study completed**
  - Cost-shared projects with Dominion and Exelon
  - Study commercial and federal sites
 

North Anna	INEEL
Surry	Portsmouth
Clinton	Savannah River
  - Top candidates selected by utilities
    - Commercial: North Anna and Clinton
    - Federal: Savannah River Site
  - Final Report -- end of September





# Nuclear Power 2010:

## *Activities/Accomplishments to Date (cont.)*

### ◆ “Early Site Permit” Demonstration Projects initiated

- Four-year cost-shared projects with Dominion, Exelon and Entergy
- Current utility activities
  - Coordinated application development among utilities
  - Site environmental studies and data analysis initiated
  - Finalize subcontracts and administrative (QA plans, project procedures) requirements
  - Coordinate Plant Parameter Envelope approach and present to NRC September 25
  - NRC site visits
- Applications to NRC scheduled for 4th Quarter 2003
- ESP issued by NRC scheduled for 2005



### 3 ESP Awards

- Dominion Energy - North Anna
- Entergy - Grand Gulf
- Exelon - Clinton



# Nuclear Power 2010: *Next Steps*

- ◆ **Initiate Reactor Technology Development Projects**
  - Cost-shared Projects with NSSS vendors
  - Complete Design Certification on two advanced reactor designs
    - Progress on certification will help in utility technology selection
    - Vendor schedule will not support NP 2010 goals without federal assistance
  - First-of-a-Kind Engineering (FOAKE) activities on one advanced reactor design provided:
    - Utility technology selection is made
    - Utility cost share is provided
- ◆ **Initiate Construction Technology Assessment**
  - Utility cost-shared project
  - Evaluate schedule/construction methods of advanced reactor designs
- ◆ **Initiate COL Demonstration Project(s)**
  - Form utility/reactor vendor consortium
  - Explore a multi-utility collaboration for multiple COLs
  - Award Cooperation Agreement(s) in FY 2004
  - COL application submittal to NRC scheduled for FY 2005
  - COL issuance by NRC expected in FY 2007
- ◆ **Coordinate with industry to develop an implementation plan for the Business Case recommendations**

