

# Preparing for A New Build

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## Overview



- Regulatory Framework for Cooperation and Assistance Program
- NRC Experiences in Preparing for New Build
- Identifying Areas for Growth

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## NRC Cooperation in Reactor Regulatory Safety and Security is with countries:



- ♦ Operating Nuclear Power Programs;
- ♦ Expanding Nuclear Power Programs; and
- ♦ Building New Nuclear Power Plants

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NRC's Assistance Program 

***Assists countries considering or expanding nuclear power programs in their efforts to establish capable and independent regulatory agencies to license and oversee operating reactors in a safe and secure manner.***

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Generic Workshops and Technical Documents 

- Sufficient detail for practical application
- In-country regulators adapt NRC's program to local laws, and prepare a plan for regulatory development for implementation;
- In-country organization uses workshop guidance and establishes strategies for their structure, and staff recruitment and training; and
- Training of staff is accomplished through the assistance program and other international and domestic opportunities.

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**NRC Assistance Workshops** 

- Staff, Training, and Technical Support
- Developing a Regulatory Oversight Program for Nuclear Power Reactors
- Generic Guidance on Organizational Structure
- Reactor Siting Risk-Informed Review
- Preparation and Review of Applications for Construction Permits
- Reactor Siting Safety Requirements
- General Safety Requirements for Licensing Nuclear Power Reactors
- Qualification Program for Reactor Licensing and Inspection

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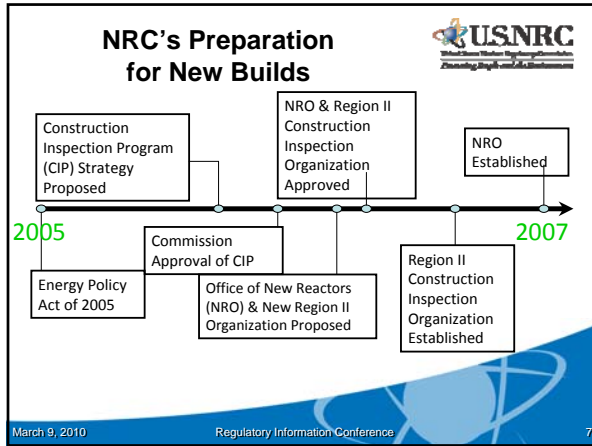
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- ### Strategies for New Reactor Licensing
- Hired and trained staff
  - Updated Rules and Guidance
  - Developed Design Centered Review Approach
  - Enhanced planning and scheduling
  - Conducted pre-application Interactions
  - Ready for Construction Inspection Program and Vendor Inspection Program
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- ### Enhancements to the Licensing Process
- Design Certification Rulemaking proposed enhancements
  - 4 phase review process
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## Construction of Plants



- Nuclear plants will be built more rapidly than their predecessors
  - ♦ Detailed engineering essentially complete by start of construction
  - ♦ Use of modular construction techniques
  - ♦ Start of component fabrication before license issuance
- Components and modules will be fabricated in other countries
- Necessitates changes in NRC approach to oversight

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## Learning from International Construction Experience



- Technical exchanges
  - ♦ China (AP-1000)
  - ♦ Japan and Taiwan (ABWR)
  - ♦ Finland and France (EPR)
- Lessons Learned
  - ♦ Early Inspection
  - ♦ Inspection of Important Systems
  - ♦ Design Completion

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## Identifying Areas for Growth



- Key Areas for Review
  - ♦ Design Safety
  - ♦ Site Safety
  - ♦ Environmental Impacts
  - ♦ Operational Programs
  - ♦ Verification with Inspections and Testing

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## Summary



- Similarities among regulators
- Responsibility of regulators to identify areas of development when preparing for new build
- Coordination among new and mature regulators as we progress through the nuclear renaissance

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