2nd CNRA International Workshop on New Reactor Siting, Licensing and Construction Experience

Atlanta, Georgia

Strategies for Licensing New Reactors

Expectations and Experience

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The Challenge

2005:

"NRC and the industry will face an unprecedented challenge in 2008, with at least eight concurrent combined license reviews, two Design Certification applications and an early site permit application"

2012:

10 active combined license reviews; 4 licenses issued; 18 applications submitted.

3 active design certification reviews; 1 completed; 1 to 5 anticipated; 2 DC renewals

1 active early site permit review

2005 Strategies for Success:

1. **Establish Clear Roles, Responsibilities and Expectations**
2. **Minimize Technical Work Load**
3. **Start Critical Path Items Early**
4. **Provide Essential Resource and Organizational Support**

Strategy 1: Establish Clear Roles, Responsibilities and Expectations

Accelerate Part 52 rulemaking to clarify new reactor requirements

- **Completed**

Hold applicants accountable for quality and timeliness of submittals by formally rescheduling reviews for clearly inadequate or untimely products.

- **Continuing… and a continuing challenge**

Resolve issues in a timely manner though prompt elevation of unresolved items to NRC line management for decisions

- **Continuing**

Hold public workshops to assure that applicants, NRC staff and interested stakeholders have a clear understanding of the technical, policy, process and legal issues

- **Completed**

Continue early discussions with DOE on Energy Policy Act issues

- Completed

Strategy 2: Minimize Technical Work Load

Maximize standardization of designs

- Continuing strategy through DCs and utility Design-Centered Working Group

Maximize standardization and coordination of approaches and applications

- Continuing Strategy

Require complete and high quality applications

- Continuing strategy … and a continuing challenge

Increase use of Design Certification rulemaking to codify issue closure. Use single technical evaluations to support multiple COL applications, implement "one issue, one review

- Continuing strategy … used successfully many times

Maximize use of technical review information from MDAP participants

- Continuing strategy … excellent cooperation and information sharing through the MDEP EPR and AP1000 working groups

Strategy 3:
Start Critical Path Items Early

Maximize use of pre-application reviews to achieve early resolution of issues

- Continuing strategy

Employ pre-application reviews for environmental and other siting issues

- Continuing strategy

Identify research or other supporting information early

- Continuing strategy

Complete development of a new Construction Inspection Program

- Complete. Called Construction Reactor Oversight Program

Strategy 4: Provide Essential Resource and Organizational Support

Plan and schedule reviews at a new level of detail with contingency planning for inevitable changes

- Implemented with Enterprise Project Management

Accelerate updating of Regulatory Guides and Standard Review Plan, as needed for new reactor applications

- Completed 2007

Hire and train NRC staff aggressively

- Established new Office New Reactor, reassigned over 200 staff and hired over 200 new staff

Acquire expert contractors for technical & environmental reviews

- Complete, especially in the environmental review area

Establish Project Management Teams for each vendor design (AP-1000, ESBWR, EPR)

- Completed with new Project Management branches for each design

Conclusions

- The NRC had strategies in place to address the anticipated challenges of multiple, simultaneous new reactor reviews
- The reality exceeded the anticipated applications
- Using the strategies established in 2005, the NRC successfully addressed each challenge