

Emerging NRC Licensing Challenges Associated with NuStart's COL Applications

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- NuStart Consortium – A collection of organizations comprised of the NuStart Member Companies, the Tennessee Valley Authority, General Electric, and Westinghouse Electric Company (the latter two companies are also referred to as the Reactor Vendors).

Unique Challenges

- New Licensing process combined with changing/evolving rules and regulations.
- New level of industry focus on standardization.

10 CFR Part 50

- 10 CFR Part 50 is the licensing process utilized for the existing operating units.
 - Separate construction permit and operating license is obtained.
 - Operating license is obtained during plant construction.

10 CFR Part 52

- 10 CFR Part 52 is being utilized for the new generation of proposed nuclear units.
 - Process seeks approval of both a construction and operating license simultaneously.
 - Nustart projects will reference a Design Certification Document (DCD) for the plant design.
 - The process has provisions for obtaining and referencing an Early Site Permit (ESP).

Industry Standardization

- Industry organized into Design Centered Working Groups (DCWG's).
 - Technology based groups.
 - Standard plant design.
 - Standardize across technologies whenever possible.

Code of Federal Regulation Changes

- Multiple changes needed to the existing Part 52 regulations.
 - Clarification.
 - Consistency.
 - DCD Revisions.
 - Limited Work Authorizations (LWA's).

Standard Review Plan NUREG 0800

- Document the NRC utilizes to review the COL application .
 - Outdated.
 - Not well aligned to the Part 52 process.
 - Lessons learned.

Draft Regulatory Guide

DG-1145

- Document which provides guidance on an acceptable way to meet the NRC regulations for a COL application.
- Addresses applications referencing either a DCD or a unique plant design.
- Comprehensive document.

NUREG 1555

Environmental Reports

- The Standard Review Plan for the Environmental Report.
- Focused on the environmental aspects of the plant construction and operation.
- Review is separate from the safety review (Final Safety Analysis Report) of the application.

Changes

- All regulatory rules and guidance currently under revision.
- Multiple workshops have been held during the past year to discuss and communicate expected changes.
- Good participation between industry and NRC including pre-application interactions.
- Expanded focus on communication during change process.

Change Impacts

- Regulatory uncertainty.
- Timing challenges associated COLA preparation.
 - Potential re-work for applicants.
 - Sufficiency uncertainty.
- New and different process for both the regulator and applicants.

Status of Regulatory Guidance Revisions

- DG 1145 is currently being issued for final review and use as RG 1.206.
- Standard Review Plan is also currently being issued for review and use.
- 10 CFR Part 52 (and other associated sections) being finalized in parts.
- NUREG 1555 is currently being revised with drafts expected mid-year.

Regulatory Summary

- Change, change and more change!
- Much of the change is viewed as necessary for the success of COLA development, review and approval.
- Communication between the NRC and the Industry has been a key focus.
- Lack of finality of regulations and guidance makes the application process a “work in progress”.

Industry Standardization

- Commitment to technology standardization.
 - Focused design.
 - Efficient NRC review.
 - Straightforward construction.
 - Consistent programs and procedures.
 - Efficient plant operation.

Design Centered Working Groups - DCWG's

- “Reference Plant” concept for each technology.
 - Approximately 70% of COLA is standard.
 - NuStart member review of all parts of the application.
 - Resulting COLA contains the combined experience/expertise of all participating utilities.

NRC Standardization

- NRC also organized into Design Centered Working Groups.
 - One design, one review.
 - Improves efficiencies.
 - Focuses resources.
 - Separates operating unit resources from “New Plant” COLA review resources.

Standardization Challenges

- Integrating multiple companies philosophies into one product.
- Spatial challenges (primarily limited to the southeast).
- Obtaining consensus on key issues.

Commitment to Standardization

- Executive level commitment within industry.
- Management level oversight.
- Multiple working group committees provide checks and focuses resources in target areas.
- Peer reviews for site-specific sections help to ensure consistent approach and level of detail.

Summary

- Regulations are undergoing necessary change.
- Good communication is vital at all levels and between all organizations.
- Standardization is a key to success.