

NRC Stakeholder Meeting

Topic #10: Effectiveness of Current Regulatory Framework



Dale Atkinson

***Chief Operating Officer and
Chief Nuclear Officer
NuScale Power, LLC***

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Level of Detail in Applications and Review Efficiency

- Incorporate recent plant licensing lessons learned
- Risk-inform DCA review for graded level of detail
 - NRO-trained technical branch staff to risk-inform NuScale DCA review (more detail for safety and risk significant SSCs—less detail for nonsafety or non risk-significant SSCs)
 - expected positive outcome for a focused and efficient review
- Level of detail in applications
 - size of DCA grows AP1000 (6,900 pages) to KHNP (11,000 pages) to NuScale (estimated 12,000 pages)
 - KHNP APR-1400 is **not** the example for appropriate level of design completeness (already constructed design)
 - not limited to DCAs
 - TVA ESP 8,800 pages following in-depth readiness assessment, and acceptance review not completed in 60 days

Small Modular Reactor/Advanced Reactor Security

- Use of security by design
- Physical security framework suitable and predictable for SMR/AR designs
- NEI white paper, consequence-based approach, encourages security by design
 - consistent with the concepts that form the basis for the consequence-based EP rulemaking currently underway
 - efficiencies will be realized by clarifying the regulatory basis upfront in order to support a rulemaking and near-term exemptions

Off-Site Power

- Public health and safety are protected by some SMR/AR designs without reliance on off-site power (GDC 17)
- Basis of GDC 17 is large LWR operating fleet which requires electric power for safety functions—not the case of SMR/AR designs
- DOE and DOD national security power require, for mission critical activities, no reliance on off-site power
- Regulatory guidance and acceptance criteria needed for these designs

Tier 2*

- Original intention for Tier 2* has not been realized in its application
- Tier 2* implementation has caused excessive regulatory burdens and LARs with no safety benefit
- Tier 2* should be eliminated
- Elimination of Tier 2* should not result in expansion of Tier 1
- NRC should adhere to Tier 1 first principles



*6650 SW Redwood Lane, Suite 210
Portland, OR 97224
503.715.2222*

*1100 NE Circle Blvd., Suite 200
Corvallis, OR 97330
541.360.0500*

*11333 Woodglen Ave., Suite 205
Rockville, MD 20852
301.770.0472*

*6060 Piedmont Row Drive South, Suite 600
Charlotte, NC 28287
704.526.3413*

*1933 Jadwin Ave., Suite 205
Richland, WA 99354*

<http://www.nuscalepower.com>

