

Stakeholder Perspectives on IEEE 603 Rulemaking

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- Common Q - AC 160 Safety System Platform approved by NRC
- New plant construction employs digital safety I&C Systems
 - 14 AP1000 units
 - 6 APR1400 units
- Digital I&C upgrades to existing units
 - Reactor protection systems
 - Engineered Safety Features Actuation Systems
 - Post accident monitoring systems
 - PWR and BWR non-safety systems upgrades primarily based on the proven Ovation Distributed Control System

Benefits of Digital I&C

- Significant decrease in probability of operating events
- Extensive capability for functional improvements
- Decrease in required maintenance and surveillance activities allows plant staff to focus on higher priority activities
- Improved Human Machine Interface
- Preferred approach to address equipment obsolescence

IEEE Nuclear Power Engineering Committee

- NPEC sponsors IEEE nuclear power related standards
- Safety Related Systems subcommittee (SC 6) is responsible for IEEE Std 603 (Working Group 6.3)
- NPEC, SC 6 and working group membership is diverse with regulators, vendors, utilities, etc. represented
- Standards, including IEEE Std 603, represent an industry consensus

IEEE Std 603 - 2009

- IEEE Std 603 was approved by NPEC and IEEE Standards Association voting as the industry consensus to provide criteria for safety systems
 - Comments during ballot process were addressed
 - Included regulatory participants
- IEEE Std 603 is currently being revised
 - Incorporates issues found during rulemaking process
- IEEE Std 603 cites IEEE Std 7-4.3.2 to address Common Cause Failure criteria (including defense in depth/diversity)
 - IEEE Std 7-4.3-2 is currently being revised with added criteria for CCF (publish date in 2016)
 - NRC staff plans to update Reg. Guide 1.152 to endorse this new version

Concerns with Proposed IEEE Std 603 Rulemaking

- Additional detailed criteria added to the proposed rule
 - These are not appropriate for the CFR
 - They are more appropriate for a Reg. Guide
- Different regulations being applied to new reactors and current reactors
- Special criteria being applied for data communications
 - Contradicts current interim staff guidance
 - Not consistent with industry consensus in the standards

Questions?

