

Digital I&C Working Group

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NRC Commissioner Briefing
December 17, 2015

The Case for Digital I&C – Our Opportunity

- Improve overall plant **Safety**
- Improve plant **Efficiency**
- Improve long-term **Reliability** of critical I&C systems
- Also, ... address an area expected to be a critical business consideration for 2nd License Renewal

Current State of Digital I&C

- Regulatory tools and industry guidance to address cyber security are currently making good progress
- Some excellent digital I&C implementation projects being executed that achieve the desired benefits

However, ...

- Responsibilities are not always clear for licensees, vendors, NRC
- Regulatory guidance is not always clear, with inconsistent understanding between NRC and industry
- Implementation issues remain (e.g., 10CFR50.59, CCF, etc.)
- Industry guidance is sometimes unclear or overly complex
- Resulting regulatory and implementation challenges lead to perceptions of high risk (i.e. cost/schedule) and create barriers to implementation

Gaps & Issues

- 10CFR50.59 guidance specific to Digital I&C systems and equipment
- Alignment of regulatory expectations and industry guidance for technical issues, for example:
 - Common Cause Failure (CCF)
 - Diversity
 - Interchannel communications
- Stable regulatory structure that supports reliable and efficient implementation of Digital I&C solutions
- Predictability of ITAAC closure, including expectations and process

NEI Digital I&C Working Group

- Achieve alignment on policy-level issues that affect implementation of Digital I&C solutions in operating and new nuclear plants
- Advise industry leadership on proposed strategies for effective resolution of issues
- Provide mechanism for coordination and integration of industry groups' activities
- Provide executive oversight and guidance to related task forces and focus groups
- Ensure effective action planning to identify, address and resolve remaining gaps/issues

Industry Digital I&C Roadmap

- **Industry Digital I&C Roadmap** under development to guide industry efforts and improve effectiveness
- Roadmap will be the playbook to achieve key goals
 - Provide stakeholders with the “big picture” of how the industry is working together
 - Provide framework for Focus Groups that will address specific short term objectives
 - Include milestones targeted to influence the progress of Digital I&C implementation projects
 - Outline how industry activities tie to related NRC activities

Current Industry Recommendations

- Timely NRC review and endorsement of 10 CFR 50.59 industry guidance for Digital I&C systems
- Place a *hold* on the proposed rulemaking for incorporating IEEE-603-2009 into 10 CFR 50.55a
- Support industry working groups to resolve technical issues that support Digital I&C system implementation for both operating plants and new plants
- Schedule additional Commission interactions to ensure the necessary focus on issue resolution

Industry Objective

The basic question remains:

“How can you do safety-related digital I&C in domestic nuclear power in a reliable and cost-effective manner?”

We need to resolve the remaining technical and regulatory issues so we can focus our work on this most important question

The purpose of the Roadmap is to guide us to this end