

# Vendor Perspective – Challenges to Modernization

Clayton Scott

**invensys**<sup>®</sup>  
Process Systems

Get More from One  
Avantis • Foxboro • SlimSci-Esscar • Triconex

## Regulatory

**invensys**  
Process Systems

- **NRC Staffing and ability to support COL's and Operating Plant LAR submittals**
  - NRC is actively pursuing resources required to accommodate the expected demand from the new plant activity and operating plant modernization
  - Vendor and Utilities need to understand the resource issue and respond accordingly
    - Standardizing COL's
    - Open up early communications with the NRC regarding design
  - Standardized Chapter 7 & 18 of COL submittals
    - Provide guidance on the level of detail
    - This will help reduce confusion
  
- **Questions remain regarding NRC regulatory position on D3**
  - Interpretation and applicability of guidance documents
    - Positions based on guidance documents vs regulation
  - Utilities and Vendors need to continue their efforts with EPRI and NRC to establish a defensible regulated position with a clear focus on safety
  - Until this happens, utilities are unable to provide final design proposals to the staff
  - This issue is having an effect on the scheduling of submittals for review
  - Part of larger issue is update of NUREG 0800, Chapter 7 SRP
    - What is the expected schedule

## Regulatory (con't)

invensys  
Process Systems

- **NRC position on cyber security is unclear**
  - Vendors need to understand what will be accepted or required by the NRC regarding cyber security so that these measures can be implemented in new equipment design
  
- **Vehicle to Submit Design**
  - Utilities are in the design phase for large scale modernization projects and have not yet approached the staff for review
  - Need to determine a mechanism for plants to submit conceptual or preliminary design to the staff for overview
  - Plants are concerned that if they wait to submit a formal LAR it may be too late to make changes or that implementation will be impacted by the NRC review schedule
  
- **IEEE 603 will be law for new builds**
  - Have the differences between 603 and 279 been evaluated and how do they effect the design of I&C systems?
  
- **Chapter 7 of Revised SRP and New Plants**
  - I&C systems are many times reviewed at the end of the submittal. Open industry I&C issues, qualification status of systems selected, could impact final approval of design
    - Need to consider I&C system reviews up front in the submittal

## Regulatory (con't)

invensys  
Process Systems

- **Reevaluation of Approved Platforms**
  - Reevaluation is costly to both vendor and the utility. To mitigate obsolescence and offer technology & performance improvement, platforms must change over time. Only the delta or gap from the original SER should be evaluated
  
  - Utilities need to feel confident that the platform selected will be licensable based on the original SER plus properly documented improvements performed under QA program
  
  - Having a platform reevaluated based on different criteria could jeopardize that platform from being commercially viable and will introduce long term obsolescence issues
  
  - Will guidance be provided to identify the differences between EPRI-

## Utilities and Vendors

- **Utilities and Vendors coming forward to the NRC regarding modifications**
  - It is important for the vendors and utilities to approach the NRC very early in the plant modernization design
  - NRC needs to understand the design and how many submittals will require support
- **Can't Always Blame the NRC**
  - Vendors and utilities must be aware of published standards and regulations. *We as a team need to ensure that the designs presented to the staff meet the intent of these guidelines - as much as possible - ensuring a more positive and timely review by the NRC*
- **Utilities Need to Understand Digital World**
  - Utilities looking at modernizing need to consider mechanisms to allow for future upgrades to digital systems
  - Modernization should not lead to digital obsolescence

## Summary

- **Many Challenges as Identified by All of the Vendors**
- **As an Industry we Need to Work Collectively to overcome these challenges to ensure success**
- **Success requires a New Collaborative Relationship Between the Industry and the NRC**
- **Over coming these challenges will set in motion the Nuclear Renaissance Ahead!**