



Dominion Energy SLR Digital I&C Project Update

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Digital I&C Vision

- Vision

- Full replacement of major I&C systems at Surry and North Anna Power Stations
 - Phased approach
 - Digital team -> Operations, I&C, Engineering, Management
 - Surry will lead -> North Anna to lag
- Standardize on a common SR and NSR Platform
- Upgrade the MCR to soft control system
 - Build a second Simulator
- Upgrade Technical Specifications/UFSAR



Drivers for the Digital I&C Project

- Drivers for making the changes
 - Obsolescence and sustainability
 - Single point vulnerabilities
 - I&C Technicians
 - Engineering
 - Goal is to reduce O&M costs
 - Labor reduction
 - Harvesting person-hours
 - Increased future Operator proficiency
 - Automation and Enhancements



Benefits

- Benefits
 - Maintenance
 - Condition based
 - Reduced training
 - Engineering
 - Diagnostics and fault detection
 - Plant/system performance and health monitoring
 - Measurement precision improvements
 - Operations - enhanced Operator interface
 - Automated control functions
 - Condition-based alarms
 - Human Factor Engineered MCR changes
 - Simplified Operator training



Benchmarking

- Key takeaways
 - Must include MCR in upgrades
 - Leverage automation
 - Fewer Operator person-hours needed
 - Much less expensive up front
 - Organizational changes
 - Digital team established
 - Training – train the Operators, I&C, Engineering and Management
 - Must develop a comprehensive digital life-cycle plan



Major Systems In Digital I&C Scope

Safety Related	Non-Safety Related	Non-Safety Related
RPS	NSSS Control/BOP	MCR/Existing Simulator
Process Protection	Analog RPI	Rod Control Logic
ESFAS	Feedwater Heater	Plant Computer
EDG Controls/Sequencer	Annunciators	Cond. Polishing
RVLIS/ICCM	Alternate AC Diesel	AMSAC
Nuclear Instrumentation	Cyber Security	Second Simulator
	Cyber Secure Test Facility	



Summary

- Current Activities
 - Selecting Vendor for Project
- Schedule
 - First installations Fall of 2022
 - Five Phases
 - Will extensively utilize innage work scope
 - Project Completion - 2028 for Surry Power Station
 - North Anna Completion - 2031