



Turkey Point Unit 3 and Unit 4

Reactor Protection System Engineered Safety Feature Actuation System Nuclear Instrumentation System Replacements

Safety System Replacement Project LAR
Eighth NRC Pre-submittal Meeting
OPEN SESSION
March 7, 2022

Agenda

- **OPEN SESSION**
 - Participant Introduction
 - Background / meeting purpose
 - Implementation Outage Schedule
 - LAR supplements
 - Human Factors Plan Changes
- **CLOSED SESSION**
 - Life Cycle Phase Schedule
 - Human Factors Information Availability
 - Comments / Questions

Introductions – On the Call today

Florida Power & Light

• FPL Nuclear Licensing

- Steve Catron – Licensing Fleet Manager
- Jarrett Mack – Fleet Licensing Lead
- David Stoia – Turkey Point Licensing Lead
- Bill Maher – Improved Technical Specification Project Director

• FPL Nuclear Engineering

- Brian Dunn – Director – Fleet Design
- Phillip Barnes – Design Manager
- Wesley Frewin – Digital Design Supervisor
- Erik Gonzalez – Simulator Engineer
- Warren Busch – Project Engineer

• FPL PTN Operations

- Jim Goodrich – Unit Supervisor

Contract and Support

• Framatome

- Brian Haynes – Licensing Lead
- Jacek Novakowski – Human Factors Lead
- Taha Abdelnaeem - Engineering Lead
- Ted Quinn – Licensing Engineer
- Bill Hannaman – Licensing Engineer (HFE)

• Sargent & Lundy (3rd Party review)

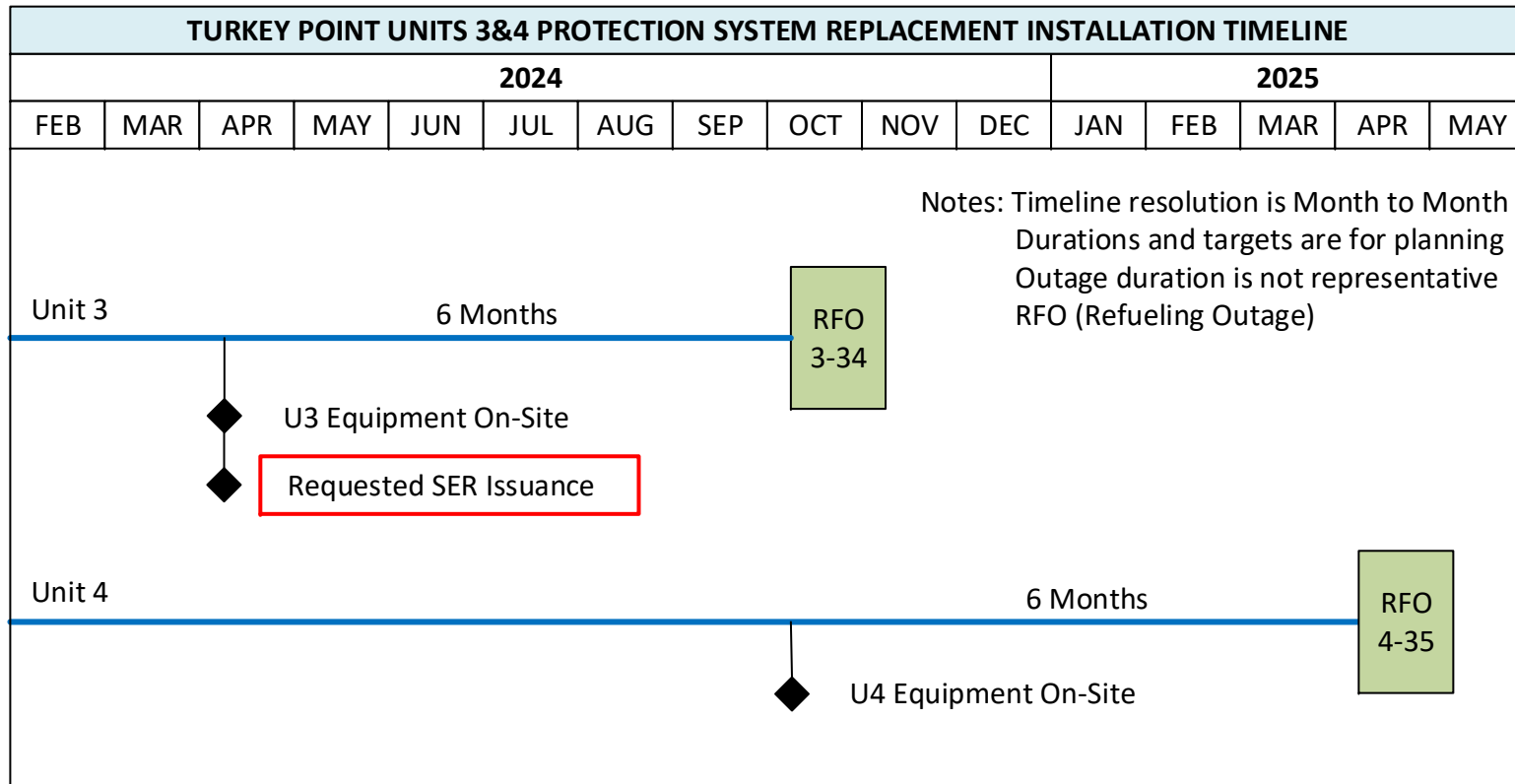
- Pareez Golub
- John McCague

Background/Meeting Purpose

- **License Amendment Request for Turkey Point Units 3 & 4 Reactor Protection, Engineered Safety Feature Actuation System, and Nuclear Instrumentation System Replacements**
- **Seven Pre-submittal meetings to date discussing:**
 - Vendor Oversight Plan (1/13/21, 2/18/21, 4/8/21, 7/22/21, 8/23/21)
 - ISG-06 Rev 2 process / LAR content (12/9/20, 1/13/21, 6/9/21, 7/22/21, 8/23/21)
 - Protection System Architecture (2/18/21, 4/8/21)
 - Human System Interface (12/9/20, 4/8/21)
 - Human Factors Engineering Program Plan (12/9/20, 4/8/21, 8/25/21)
 - Cyber Security (4/8/21)
 - Surveillance Reduction (4/8/21, 8/25/21)
 - Diversity and Design in Depth Evaluation (2/18/21, 6/9/21, 7/22/21, 8/25/21)
 - Diverse Actuation System (2/18/21, 7/22/21)
 - Equipment Qualification and Dedication (8/25/21)
 - LAR / Life Cycle Phase Schedule (2/18/21, 4/8/21, 6/9/21, 8/25/21)
- **Observation Meeting. Availability of Human Factors Engineering (HFE) Information, 2/2/2022**
- **Purpose is to update the schedule for replacement Protection System development and implementation, LAR and LAR supplement submittals and HFE activities**

Implementation Outage Schedule

- Lead Unit 3 Installed in Fall 2024
- Following Unit 4 Installed in Spring 2025
- Requested SER Issuance 2nd Quarter 2024



Licensing Amendment Request (LAR) and Supplements

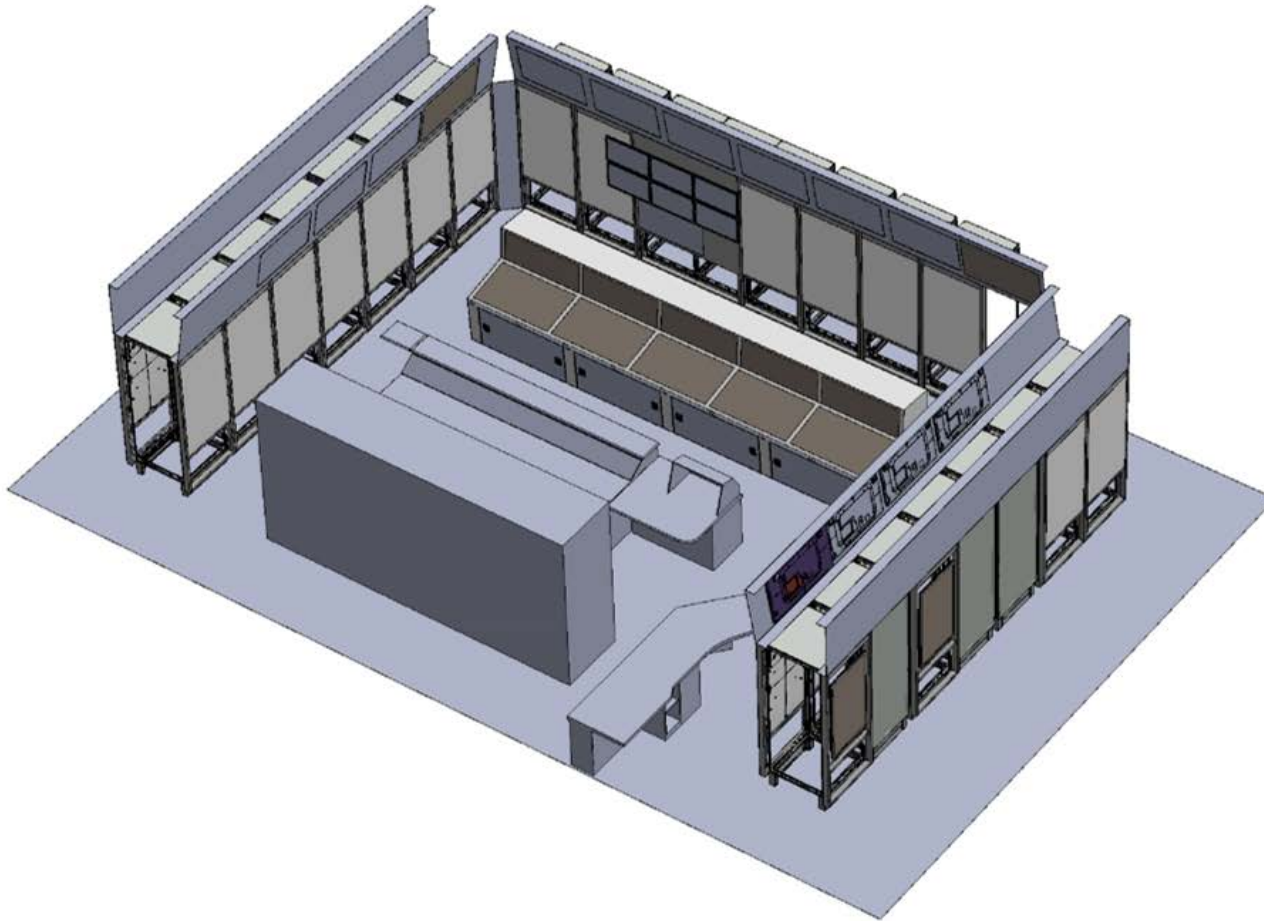
- **LAR Submittal (2nd Quarter 2022)**
 - ISG-06 Revision 2 basis for LAR content
- **LAR Supplements**
 - Surveillance Reduction (December 2022)
 - Equipment Qualification (June 2023)
 - ITS Tech Spec Mark-ups (October 2023)
- **Requested SER issuance (April 2024)**

Human Factors Engineering – Plan Changes

- **Adjusted based on NRC review approach discussed 2/2/22**
- **Conformance to NUREG-0711 Rev. 3 maintained**
- **Recognition of Pre- and Post - Safety Evaluation Activities**
- **Three successive, coordinated validation review points**
 - Conceptual Design Test – (PV1)
 - Preliminary Design Test - (PV2)
 - Integrated System Validation (ISV)
- **Combination of Full Scope Glass Top Simulator and modified U3 Certified Simulator**
- **Tracking Human Engineering Deficiencies (HED)**
- **Increase in Coordination**
 - NRC, pre-submittal and post-submittal meetings
 - Idaho National Laboratories / Industry

Full Scope Glass Top Simulator

- Available for Project Use 4th Quarter 2022



Full Scope Glass Top Simulator

- **Development and Testing Activities**
 - Dynamic display testing with functional plant model
 - Testing of critical scenarios and draft operating procedures
 - Testing of time critical operator actions
 - Testing of system and component level failures
 - Procedure development
 - Operator training (partial)

End of Open Session

- **Comments and Questions**