

Duke Energy
Oconee RPS/ESPS Submittal
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RPS/ESPS Upgrade

- Replaces existing analog Reactor Protective System (RPS) and Engineered Safeguards Protective System (ESPS)
- New system is AREVA TELEPERM XS (TXS) digital protection system
- Currently installed in European nuclear plants
- Involves changes to the Oconee licensing basis and Technical Specifications

Implementation

- Target implementation dates are:
 - Fall 2009 Oconee Unit 1
 - Fall 2010 Oconee Unit 3
 - Fall 2011 Oconee Unit 2
- Unit 1 TXS System is designed and fabricated
- Factory Acceptance Testing will occur in 4th Qtr 2008 with site delivery in early 2009

Rationale for I&C Upgrade

- Duke is improving key I&C systems by adopting digital technology
- Duke faced with decisions to either re-engineer existing systems or move to modern digital technology
- Duke decided to upgrade RPS/ESPS in order to enhance nuclear safety and operational reliability

Digital Licensing Submittal

- Duke developing programs to address the technical, quality, and regulatory requirements of digital technology
- Duke and AREVA worked diligently to prepare a licensing submittal responsive to the NRC guidance
- Advanced system features have been a challenge to existing regulatory guidance

Licensing Process

- Duke appreciates the efforts by the NRC and NEI to address technology issues in licensing digital upgrades
- Duke submittal should benefit from the Communications and Cyber Security ISGs and hopefully the Licensing Process ISG
- A stable, timely and predictable digital licensing process is essential to industry confidence in upgrading I&C systems