



EPRI

ELECTRIC POWER
RESEARCH INSTITUTE

BRIEFING ON FIRE PROTECTION ISSUES

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EPRI Fire PRA Philosophy

- Consistent with the PRA Policy Statement
 - “Use of the PRA technology should be increased in all regulatory matters to the extent supported by the state of the art ...”
- Committed to supporting a risk-informed, performance based approach to fire protection
 - Realistic methods
 - Realistic input
 - Monitoring and feedback process

Fire PRA Methodology Development

- NUREG/CR-6850 is guidance for developing a Fire PRA
 - NRC–RES / EPRI collaboration (EPRI 1011989)
 - Only pieces piloted (initially)
- Two Fire PRA Pilots
 - Initial results are conservative
 - Not unexpected
 - Result of individual minor to moderate conservatisms

Fire PRA Methodology Issues

- Fire Ignition Frequencies
- Credit for Incipient Detection
- Treatment of Large Oil Fires
- Fire Growth and Propagation Models
- Credit for Fire Suppression
- Hot Short Susceptibility, Probability and Duration
- High Energy Arching Faults
- Cable Tray Fire Modeling

Other Issues, Progress and Challenges

- Other Issues
 - Shortage of Trained Risk Personnel
 - Practical modeling limitations
- Progress
 - Education of Risk Professionals and Fire PRA Methods Training
 - EPRI / NRC–RES working to refine Fire PRA methods
- Challenges
 - Available resources
 - Time constraints