

# Life In a Risk-Informed Environment



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Risk Informed

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# Introduction

- Many changes have occurred in the past 15-20 years with respect to use of PRA
- Some in the industry would say that the biggest changes are yet to come
- It's undeniable: Industry and NRC are moving forward in increasing the use of risk information and improving the quality of PRAs
- To understand the potential impacts of these efforts, it is important to know how we got here to anticipate where we're going



# Historical Perspective on PRA Use

- **WASH-1400, IPE, IPEEE, Safety/Risk Monitor Development**
- **Risk insights gained although PRA Scope limited and PRA Quality not rigorously assessed**
- **PRA applications**
  - **Proof-of-Concept efforts to risk-inform regulation, Owner's Group Joint Applications (e.g., TS AOTs)**
  - **Individual Utility Applications**
  - **Industry/NRC initiatives**
- **PRA Quality improvements, scope expansion, participation in risk-informed applications were at discretion of the utility**



# The Rising Bar: Peer Reviews, Standards

- Industry Sponsored Peer Reviews initiated
- Regulatory review of PRA applications require information on Peer Review Findings
- Risk information necessary for Maintenance Rule (a)(4) and Significance Determination Process
- ASME and ANS Standards Developed
  - Higher requirements, broader scope than prior industry check lists
  - Costs/Resources needed to meet Capability Category II being evaluated
- NRC/Industry working to determine PRA Quality Requirements for participation in voluntary and regulator-initiated applications



# Where We Go From Here

- **To ensure continued success of risk-informed application participation, more work is required**
  - Regulatory Guide 1.200 and other PRA Quality Standard pilots/trial usage
  - PRA Quality and Scope Requirements Determination recognizing the variation in quality and capabilities of existing utility and NRC PRAs
  - Implementation of Phased Approach
  - Investment/Resources to improve PRAs to meet quality requirements will have to committed



# Conclusion

- It is recognized that the more PRAs are relied upon to make decisions, the higher quality they should be
- PRA Quality and Scope will have to improve across the board – but with time
- Investment costs to upgrade PRAs to meet higher requirements may be perceived as prohibitive – benefits of making the investment must be effectively communicated and ultimately realized