



WESTINGHOUSE NON-PROPRIETARY CLASS 3

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Global Expertise • One Voice

PWROG Proposed RIPE-G Process & GAET Introduction

April 21st, 2022



PWROG Attendees & Introduction

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Key PWROG Participants

- Brad Dolan – RMC Chairman (TVA)
- Andrea Maioli – Technical Lead (WEC)
- Reed Labarge – Technical Lead (WEC)
- Melinda Higby – Project Manager (WEC)
- James Boatwright – Technical Advisor (WEC / Luminant)
- Nathan Hall – Technical Advisor (STP)
- Damian Mirizio – PWROG Risk Program Director
- Andrew Howe – Licensing Lead (WEC)
- Jim Andrachek – PWROG Global Director of Engineering Services
- Chad Holderbaum – PWROG Licensing Program Director



NRC Attendees & Introduction

NRC team please introduce yourself and position.



Meeting Objectives

- Overview of the RIPE-G Conceptual Process
- GAET Introduction
- GAET Logistics for NRC Observation

Overview of the RIPE-G Conceptual Process



RIPE-G Program Overview

- Objective of PWROG Efforts:
 - **Revising the current NRC plant-specific RIPE process to allow resolution of generic issues (RIPE-Generic)**
 - **Apply the RIPE-G process through an example application**



RIPE-G Big Picture

- . PWROG proposes NRC to revise the RIPE process (TSG-DOEL-2021-01) to support resolution of generic issues
 - **Presented RIPE-G Concept in Past Meetings held with NRC staff in June & September 2021**
 - **RIPE-G would use a Generic Assessment Evaluation Team (GAET) in place of a plant-specific Independent Decision-making Panel (IDP) to review the generic evaluation**
 - **PWROG is requesting a fee waiver for interactions and the pilot Topical Report**
- . PWROG Pilot for the Proposed RIPE-G Process
 - **Asymmetric Natural Circulation (ANC) cooldown dose consequences for Ch. 15 analyses**
 - **PWROG would like to conduct a GAET for this pilot in April-May 2022 (NRC invited to observe)**



RIPE-G Big Picture

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. Next Steps

- **Execute GAET - PWROG Asymmetric Natural Cooldown Pilot (2nd Quarter 2022)**
 - . GAET with NRC observing
 - . Meeting with the NRC following the pilot GAET to discuss NRC observations
- **RIPE-G Documented Proposal (3rd Quarter 2022)**
 - . PWROG provides markup to TSG-DOEL-2021-01 that would include RIPE-G concept for NRC consideration
 - . Meeting with the NRC to discuss RIPE-G process proposal
- **Following NRC acceptance of RIPE-G Proposal**
 - . PWROG to submit Asymmetric Natural Cooldown Pilot via RIPE-G



Long Term Schedule

GAET Activity	4-Apr Week 3	11-Apr Week 4	18-Apr Week 5	25-Apr Week 6	2-May Week 7	9-May Week 8	16-May Week 9	Summer '22	Summer '22	Summer '22	2023	2023
GAET Kickoff and Training (PWROG & NRC)												
Remote Review Period												
"Consensus" Week (PWROG & NRC)												
GAET Report Issued to NRC												
NRC Public Meeting for NRC Feedback on the GAET								TBD				
PWROG Updates TR for GAET NRC Comments									TBD			
NRC Public Meeting for Discussion of PWROG Mark-Ups for RIPE										TBD		
NRC Issuance of RIPE-G Guidance											TBD	
PWROG Submit Pilot 1 RIPE-G TR consistent with revised TSG												TBD



Proposed RIPE-G vs RIPE Differences - Summary

Generic Risk Assessment Studies vs. Plant Specific PRA

Applicability

- Added applicability to TS changes

Risk Thresholds

- Added frequency of occurrence $1E-7$ for non-CDF scenarios
- A number of expected RIPE-G items will not be CDF/LERF issues

Risk Analyses Technical Adequacy

- Generic risk assessment approved by NRC via TR review added as technically adequate risk assessment

GAET vs. IDP

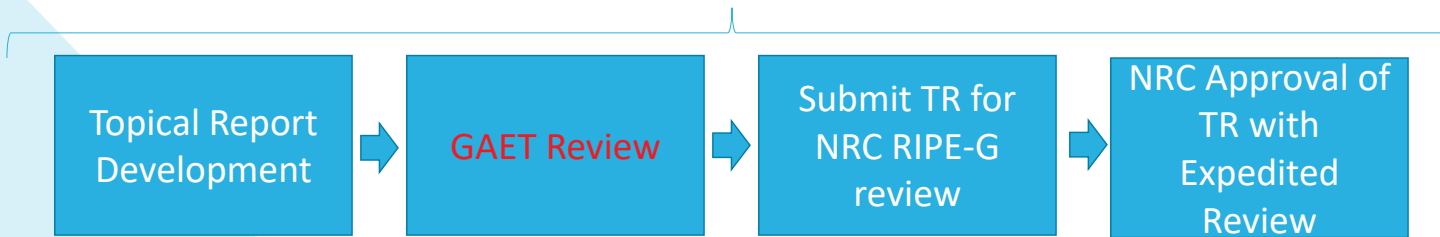
Plant-Specific Confirmation of the Generic Results

Proposed RIPE-G TR Content

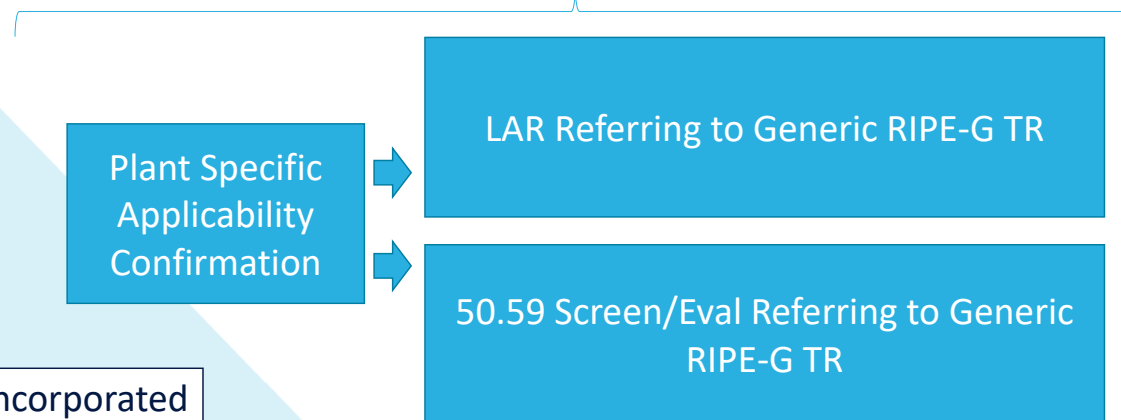
- RIDM framework
- Issue Definition
 - **Applicability**
 - **Issue Statement**
 - **Applicable regulation**
 - **Preliminary safety impact**
 - **Request for evaluation**
- Quantitative risk assessment
 - **Frequency evaluation**
 - Key assumptions and uncertainties
 - **Consequence evaluation**
 - Key assumptions and uncertainties
 - **Overall Risk Estimates**
- RG 1.174 elements
 - **Consistency with regulations**
 - **Defense in Depth**
 - **Safety margin**
 - **Performance Monitoring**
- Final Safety Impact Assessment
 - **Intermediate safety impact**
 - **Final Safety Impact**
 - **Conclusion**
- GAET Conclusions
- Plant-Specific Implementation
 - **50.59**
 - **LAR**
 - **Limitations and Conditions**
- Applications specific appendices
 - **E.g., Data from plants (proprietary)**
 - **Seismic worksheet**
 - **Etc...**

RIPE-G Process* to Resolve Issues

Phase 1 – Generic NRC Approval Phase



Phase 2 – Plant-Specific Implementation Phase



*Assumes RIPE-G Process Incorporated into NRC Guidance

GAET Introduction

Purpose of GAET for RIPE-G

- **Panel of industry participants and experts review a generic Topical Report (TR)**
 - Confirm evaluation of the RIPE-G final safety impact assessment
 - Recommend path forward with NRC submittal via RIPE-G
- **Intended to fulfill similar functions as a plant-specific Integrated Decision-Making Panel (IDP)**
- **GAET team for pilot will need to assume RIPE-G process is approved without major deviations from current concept**

GAET Review Cycle

- The NRC is invited to the GAET as observers



GAET: Pre-Review Activities

- **GAET Kickoff**
 - Alignment of team & training material
 - Review of RIPE-G & GAET process
 - Roles and responsibilities
 - Scope of the review
 - Regulatory application
 - Establish Schedule / Logistics

GAET: Initial & Closeout GAET Meetings

- **Initial GAET meeting**
 - Coordination / check-in meetings will be held with the team as necessary
 - Q&A meetings with the industry group should be held as necessary to ensure information is understood before documenting comments / questions
- **Closeout GAET meeting**
 - Review and disposition / address GAET comments
 - Review GAET conclusions (see next slide)



GAET Review: Conclusions

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- **Confirm GAET Evaluation of the RIPE-G Final Safety Impact Assessment**
- **Recommend Path-Forward for RIPE-G TR**
 - **Recommendation to proceed with pursuing NRC approval of the topical report per the RIPE-G process:**
 - No GAET comments on the TR need to be resolved or dispositioned prior to submittal to the NRC
 - **Conditional recommendation to proceed with pursuing NRC approval of the topical report per the RIPE-G process:**
 - Minor GAET comments on the TR should be resolved or dispositioned prior to submittal to the NRC
 - No follow up GAET review is necessary
 - **Recommendation against pursuing NRC approval of the topical report:**
 - GAET comments on the TR should be resolved or dispositioned prior to submittal to the NRC
 - TR would be resubmitted to the GAET for additional review prior to submittal to the NRC

GAET Logistics for NRC Observation

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GAET In-person Meeting

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- May 3rd and 4th (Tuesday/Wednesday)
- Westinghouse Rockville office
- Attendance: All GAET team in person. PWROG technical team, PWROG Observers, NRC observers, other support remotely.

NRC is requested to observe & to inform the PWROG of planned attendees

In-Person Meeting - Schedule

- May 3rd (Tuesday)
 - Introduction
 - Overview of pilot
 - Finalization of questions/answers with team
 - GAET issue(s) consensus session
 - Communication of feedback to defense team
- May 4th (Wednesday)
 - Overview of expected GAET draft report
 - GAET team feedback on the GAET process
 - Discussion/feedback session

GAET Report

- **Report will be added to the TR**
 - Summary of observations
 - Document the Q&As between GAET and technical team
 - Document significant issues
 - Consensus of the GAET recommendation
 - Consensus of the GAET safety assessment checklist

Desired NRC Feedback

- Attendance / Observation of GAET Activities
- Formulation of NRC feedback on the GAET in a future public meeting
- Continued interaction with the PWROG on RIPE-G proposed process changes

Questions?