



BWR Owners' Group Introduction & Overview

Ho Nieh (Southern Nuclear)

BWROG Executive Oversight Committee & NRC Meeting
October 26, 2023



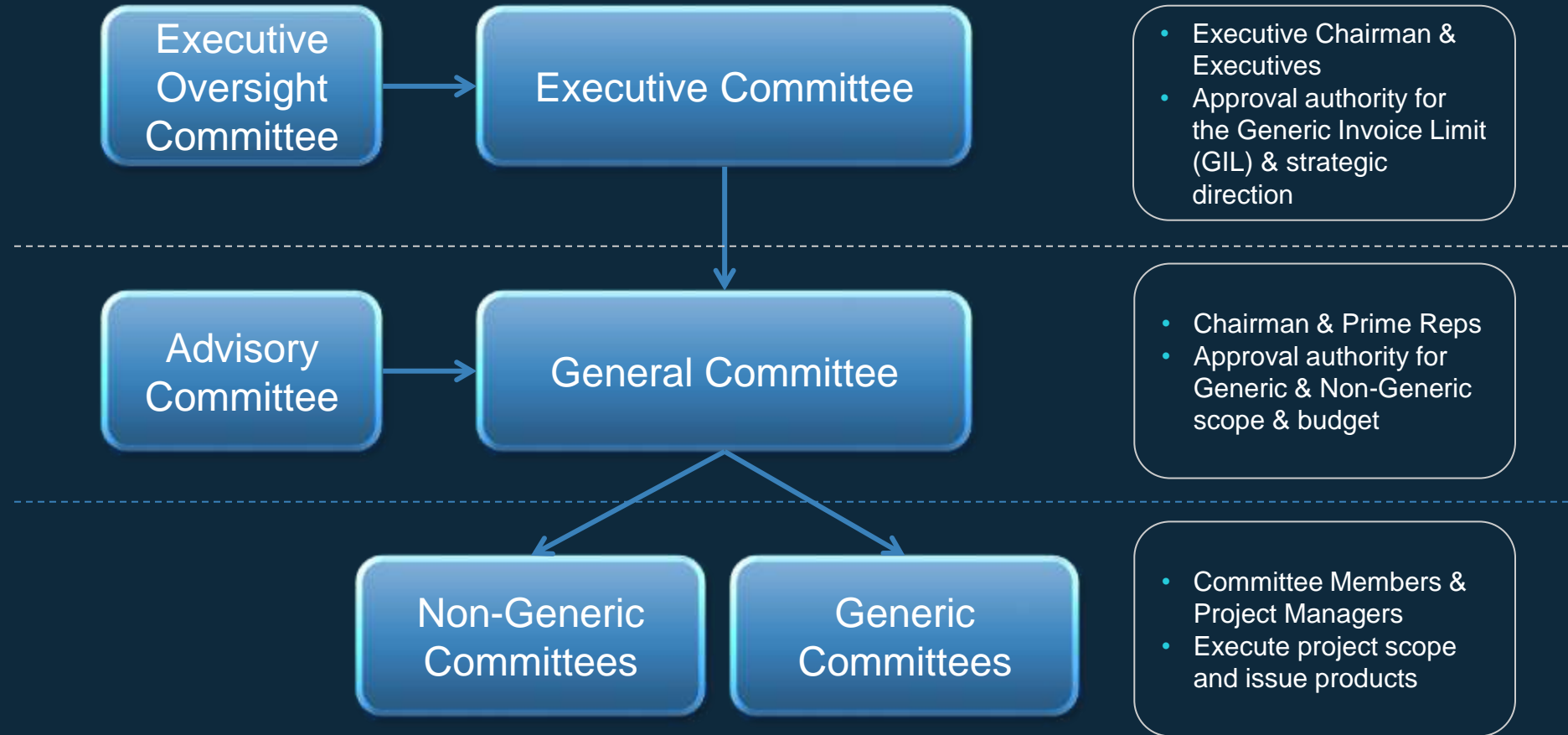
BWROG Mission

- ◇ The mission of the Boiling Water Reactor Owners' Group (BWROG) is to provide a forum, in the spirit of partnership with GE-Hitachi Nuclear Energy, which allows its member utilities to maintain and improve plant safety, achieve higher plant reliability, minimize and share costs, facilitate regulatory interaction, and effectively apply limited technical resources for mutual resolution of issues applicable to two or more members. (Ref. BWROG Charter Sec. II)
 - The BWROG is a utility lead organization designed to benefit the utility members. The member utilities decide what activities get worked and the timeline for those activities.





BWROG Org Structure





BWROG Leadership

Steve Douglas



Executive Chair

Shawn Gibby



Executive Vice Chair

Denver Atwood



Southern Nuclear

General Chair

Mitch Dior



General Vice Chair

Lucas Martins



Director





BWROG Executive Oversight Committee

- ◇ Steve Douglas (TVA - Executive Chair)
- ◇ Shawn Gibby (Duke Energy - Executive Vice Chair)
- ◇ Peter Gardner (Xcel Energy – BWROG CNO Sponsor)
- ◇ Ken Knaide (PSEG – EOC At-Large Member)
- ◇ Ho Nieh (Southern Nuclear – EOC At-Large Member)
- ◇ Marty Bonifanti (Constellation – EOC At-Large Member)
- ◇ Sean Miers (GEH – EOC At-Large Member)





BWROG Membership

Domestic (Members)	
Constellation	NPPD
DTE Energy	PSEG
Duke Energy	Southern Nuclear
Energy Harbor	Talen Energy
Energy Northwest	TVA
Entergy	Xcel Energy
International (Members)	
CFE	JAPC
Chubu	KKL
Chugoku	Tohoku
Hokuriku	TEPCO
Iberdrola	
Conditional (Members)	
J-Power	OPG



BWROG Priorities



Assessment Criteria

Safety

Economic
Viability

Plant/Equipment
Reliability

Reduced
Regulatory
Burden

Focus Areas

Knowledge Transfer

Handbooks
Workshops/Training
Workforce Proficiency
Troubleshooting Guides

Systems and Equipment

Obsolescence
PM Optimization
Surveillance Test Intervals
Best Practices

Risk

Risk Informed Completion
Time
Outage Safety Assessment
Peer Reviews
Optimizing PRA Models
50.69 Implementation

International

Japan Fleet Restart
Workshops/Assist Visits
Hybrid Meetings
New Members



BWROG Committees - 2023

** Non-Generic Committees*

Core Committee	<ul style="list-style-type: none">Emergency ProceduresIntegrated Risk-Informed RegulationLicensingReactivity Controls Review	<ul style="list-style-type: none">Reload Analysis & Core Management
Plant Performance	<ul style="list-style-type: none">BWR Water ChemistryI&C MaintenanceOperations Significant Event ReviewOutage Management	<ul style="list-style-type: none">Rad Pro / ALARARefueling PerformanceValve Technical Resolution GroupReactor Recirc ASD/VFD Performance*
System Improvement	<ul style="list-style-type: none">Condenser PerformanceControl Rod DriveECCSFeedwater	<ul style="list-style-type: none">OffgasReactor RecircReactor Water Clean UpTurbine Generator & Aux
Special Topic	<ul style="list-style-type: none">50.69BWR6 Rod Control & Info System*BWR Parts Obsolescence	<ul style="list-style-type: none">Stator Cooling Water WorkshopR.G. 1.183 Rev1 – ASTTarget Rock SRV Performance*





BWROG PMO Org Chart

BWROG Project Managers

Brad Tyers

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- 50.69 Committee
- BWR Water Chemistry
- Condenser Performance
- Ion Exchange Workshop
- *Reload Analysis & Core Management*
- Target Rock SRV Performance Improvement

Dustin Zavada (NEW PM)

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- Feedwater System Improvement
- ECCS System Improvement
- *Additional committees by end of year*

Garold Carlisle

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- PM Support

Bill Berg

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- EPC Support

Lucas Martins

Senior Services Director, BWROG

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Robert Hartwick

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- Executive Committee
- General Committee
- International / Conditional Member Program
- Potential Issue Review Team (PIRT)

James Konrad

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- ASD/VFD Performance
- Emergency Procedures
- Integrated Risk-Informed Regulation
- Reactor Recirc System Improvement
- *Refueling Performance*
- RG. 1.183 Revision AST

Richard Rusin

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- BWR/6 Rod Control & Information System
- BWR I & C Maintenance
- Licensing
- *Operations Significant Event Review*
- Radiation Protection/ALARA
- Turbine Generator & Auxiliaries System Improvement
- Valve Technical Resolution Group

Terri Farthing

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- CRD Performance Improvement
- Outage Management
- *Reactivity Controls Review*
- RWCU System Improvement
- BWR Parts Obsolescence
- Offgas System Improvement

Project Administrators

Corina Bystry (International Program)

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Meeting Objectives

- ◇ Enhancing our collaboration and cooperation
- ◇ Transparency while working to solutions
- ◇ Open communication
- ◇ Focusing our resources on safety significant issues through better alignment on “Demonstrating Principles of Good Regulation” with a risk informed approach





Licensing Topics

Phil Lashley (Energy Harbor)

BWROG Executive Oversight Committee & NRC Meeting
October 26, 2023



Topics to be Discussed

- ◇ Active TSTFs
- ◇ Strategic Initiatives





Major Activities

- ◇ **TSTF-576, Rev. 2, “Revise Safety/Relief Valve Requirements”**
 - Following BWROG management/NRC meeting in February, NRC sent a letter describing their remaining issues.
 - A revised traveler addressing the issues was submitted on April 6.
 - The NRC provided additional questions on July 26.
 - An RAI response and revised traveler was submitted on September 13.
 - NRC scheduled to approve the traveler in March 2024.
- ◇ **TSTF-585, Rev. 2, “Provide an Alternative to the LCO 3.0.3 One-Hour Preparation Time”**
 - Working with PWROG
 - Provides an alternative 24-hour Completion Time to initiate a shutdown on entering LCO 3.0.3.
 - NRC suggested a further revision in August.
 - Revised traveler and justification being developed.





Major Activities

- ◇ **TSTF-592, Rev. 0, “Revise Automatic Depressurization System (ADS) Instrumentation Requirements”**
 - Submitted July 2022.
 - RAI response and revision submitted in July 2023.
 - Second RAI received
 - An RAI response and revised traveler was submitted on September 13.
- ◇ **TSTF-597, Rev. 0, "Eliminate LCO 3.0.3 Mode 2 Requirement“**
 - Traveler eliminates the LCO 3.0.3 requirement to be in Mode 2 within 7 hours.
 - Approved by the BWROG and TSTF.
 - Holding until NRC takes affirmative action on TSTF-585, “Provide an Alternative to the LCO 3.0.3 One-Hour Preparation Time,” later this year.
- ◇ **TSTF-596, Rev. 0, “Expand the Applicability of the Surveillance Frequency Control Program (SFCP)”**
 - Working with PWROG.
 - Expands the SFCP to TS Admin Controls programs (diesel fuel oil testing, ventilation filter testing, etc.)
 - Also resolves NRC concern regarding 50.69 changes that could affect TS.
 - Traveler submitted May 2023.





Strategic Initiatives

- ◇ **10 CFR 50.36 Rulemaking**
 - Developing a Petition for Rulemaking to revise the regulation related to Technical Specifications to allow systems that are not risk significant to be relocated to licensee control.
- ◇ **Treat TS as Data Rather Than As a Document**
 - Discussing with NRC to develop guidance that would permit licensees to make formatting and administrative changes to the TS without NRC prior approval.
- ◇ **Improvements to the License Amendment Request Review Process**
 - Working with NEI to streamline the LAR review process.
 - First accomplishment: NRC adopting a resource-based schedule rather than a fixed 12-month schedule for LAR review.
- ◇ **Revise the RICT Program to Extend the 30-Day Backstop to 90 Days**
 - Project started in July 2023.





Thank You





Risk Topics

Robert Rishel (Duke Energy)

BWROG Executive Oversight Committee & NRC Meeting
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Topics

- ◇ CCF Treatment in Digital Systems
- ◇ PRA Configuration Control Inspections
- ◇ Discussions of Issues with Code Case N-752





CCF Treatment in Digital Systems

- ◇ Replacement of safety-related systems with digital equipment are being proposed throughout the industry
- ◇ Modernization in industry is outpacing the updates of NRC policy and guidance
 - Efforts are being made to update outdated policy
 - Only high-level policy has been updated (SECYs) so far
 - Path-forward is not clear
- ◇ Industry groups are also pursuing guidance, but differences in views on modeling digital CCF exist





CCF Treatment in Digital Systems (cont'd)

- ◇ Existing risk-informed programs rely on modeling of the as-built, as-operated plant
 - Modeling of digital systems for safety-related systems will be necessary to maintain those programs.
- ◇ TS change LARs will be submitted along with associated changes to the impacted RICT TSs for the digital systems
 - Will NRC reviewers have adequate guidance to review these LARs?
 - Will review schedules be impacted by the current state of the regulatory guidance?
- ◇ What is the plan to ensure you have internal alignment on issues regarding digital CCFs and PRA modeling?





PRA Configuration Control Inspections

- ◇ BWROG does have efforts in flight for self assessments and a “Self-Assessment Checklist” as part of the PRA Configuration Control process.
- ◇ When available request the PRA Inspection procedure/guidance be made available to licensees
- ◇ Expected dates of PRA Configuration Control Inspection Guidance publication?
- ◇ Request to have a discussion of the approach for enforcement actions for any issues found during the inspections.
- ◇ What are there types of issues/questions found that would under the NRC Smart process trigger a PRA Configuration Control Inspection?





Discussion of Issues with Code Case N-752

◇ Background

- N-752 basis is the 40 years precedence (RI-ISI) and more recently 10 CFR 50.69
- N-752 Code Case was piloted by Entergy for ANO
 - SE issued for ANO
- NRC staff reviewers of new submittals do not appear to be aligned with previous efforts
- Consider holding internal-only pre-job briefs with reviewers for alignment or impact of new information





Thank You



BWR Power Uprate Considerations



Denver Atwood (Southern Nuclear) – BWROG Chairman

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Topics to be Discussed

- ◇ Candidates
- ◇ Industry Strategic Direction





Candidates

- ◇ LWRS Program – INL Draft Report – Assessing the Impact of the Inflation Reduction Act on Nuclear Plant Power Uprate and Hydrogen Cogeneration
- ◇ Average BWR uprate ~114%
- ◇ GEH Topical Report(s) Provide Path to 120%
- ◇ Additional Precedence (Peach Bottom) Upgraded to 121.5%
- ◇ Review INL Draft Report to Identify Stations Which Have Potential (Figure 3-5)
- ◇ Additional Consideration for Plants in Merchant Markets vs. Regulated Markets





Industry Strategic Direction

- ◇ IRA Credits Available for Electricity Produced and Sold Between 12/31/2023 and 12/31/2032
- ◇ Individual Business Cases will Determine NSSS and BOP Total Scope for Power Uprate
- ◇ Market Outlook, Carbon Reduction, IRA Credits Have Positive Impact on Business Case
- ◇ NEI, EPRI, and INL Have Provided Sample Business Cases
- ◇ Supplemental License Renewal Submittal and Power Uprate Submittal Development will be Challenging for Plants
- ◇ MELLLA+ and EPU Possible Combined Submittals





Thank You

