



# BWR Owners' Group Overview



# BWROG Mission

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Provide a forum, in the spirit of partnership with General Electric – Hitachi (GEH), that 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.

# BWROG Objectives

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- Share costs in resolution of common (generic) issues
- Foster joint discussions on operating experience
- Communicate BWROG interest to industry organizations
- Assure BWR design is accurately represented and evaluated

# BWROG Membership

## All US BWR Owners:

<i>Constellation – Nine Mile Point</i>	<i>NPPD – Cooper</i>
<i>DTE Energy – Fermi</i>	<i>PPL – Susquehanna</i>
<i>Energy Northwest – Columbia</i>	<i>PSEG – Hope Creek</i>
<i>Entergy – FitzPatrick; Pilgrim; Vermont Yankee; River Bend/Grand Gulf</i>	<i>Progress Energy – Brunswick</i>
<i>Exelon – Clinton; Oyster Creek; Dresden/Quad Cities/LaSalle; Peach Bottom/Limerick</i>	<i>SNC – Hatch</i>
<i>NextEra – Duane Arnold</i>	<i>TVA – Browns Ferry</i>
<i>First Energy – Perry</i>	<i>Xcel Energy – Monticello</i>

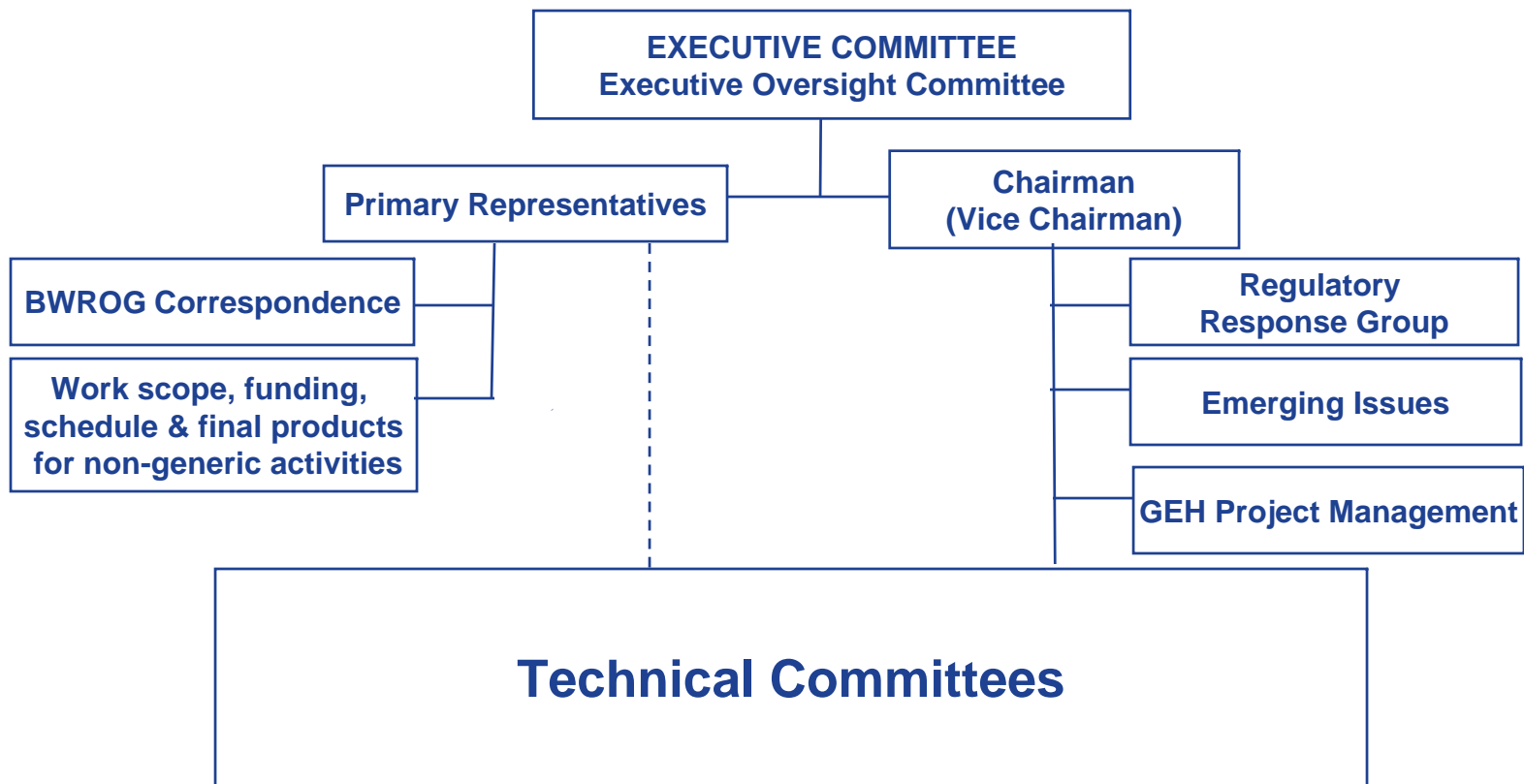
# BWROG

## Associate Membership

### International Members:

<i>BKW (Switzerland)</i>	<i>KKL(Switzerland)</i>
<i>Chubu EPC (Japan)</i>	<i>KKP (Germany)</i>
<i>Chugoku EPC (Japan)</i>	<i>OKG (Sweden)</i>
<i>CFE (Mexico)</i>	<i>TPC (Taiwan)</i>
<i>FKA (Sweden)</i>	<i>TEPCO (Japan)</i>
<i>Iberdrola (Spain)</i>	<i>Tohoku (Japan)</i>
<i>JAPC (Japan)</i>	<i>TVO (Finland)</i>
<i>KGG (Germany)</i>	<i>Vattenfall (Germany)</i>

# BWROG Organization



# BWROG

## Utility Leadership

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### Executive Committee

- One executive from each utility
- Reviews annual budget and approves generic activities
- Meets annually
- Elects Executive Oversight Committee
- Elects BWROG Officers

### Primary Representatives

- One representative from each utility
- Represents utility interest to BWROG
- Approves work scope, funding, schedule & final products for non-generic activities
- Coordinates utility participation
- Approves BWROG correspondence

### General Committee Chairman & Vice Chairman

- Chairman dedicated to BWROG during term, salary & travel reimbursed by BWROG
- Monitor committee activities and provide strategic guidance toward fulfillment of BWROG objectives
- Represent BWROG with other industry organizations
- Monitor health & spending of BWROG

# BWROG

## Leadership

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### Executive Oversight Committee

- Rich Anderson, FPL Energy, BWROG Exec Chairman
- Oscar Limpias, Entergy, BWROG Exec Vice Chairman
- Rick Libra, Exelon
- Dennis Madison, Southern Company
- Paul Davison, PSEG Nuclear
- Joe Donahue, Progress Energy

### BWROG General Committee

- Doug Coleman, Energy Northwest, Chairman
- Ted Schiffley, Exelon, Vice Chairman

# Generic vs. Non-Generic Activities

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## Generic Activities

- Must apply to BWR fleet
- Mandatory sharing of costs for all US BWR members
- Controlled by Executives

## Non-Generic Activities

- Must apply to two or more members
- Voluntary participation
- Sharing of costs among participants
- Controlled by Primary Representatives

BWROG

## New & Emerging Issues

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- New issues can be brought forward by Primary Representatives, Industry Groups, Regulators, Committee Members, or GEH
- Some issues are identified through international contacts
- Emerging issues reviewed by Potential Issues Review Team (PIRT) every 4-6 weeks or more frequently, if required.

# BWROG

## Potential Issues Review Team

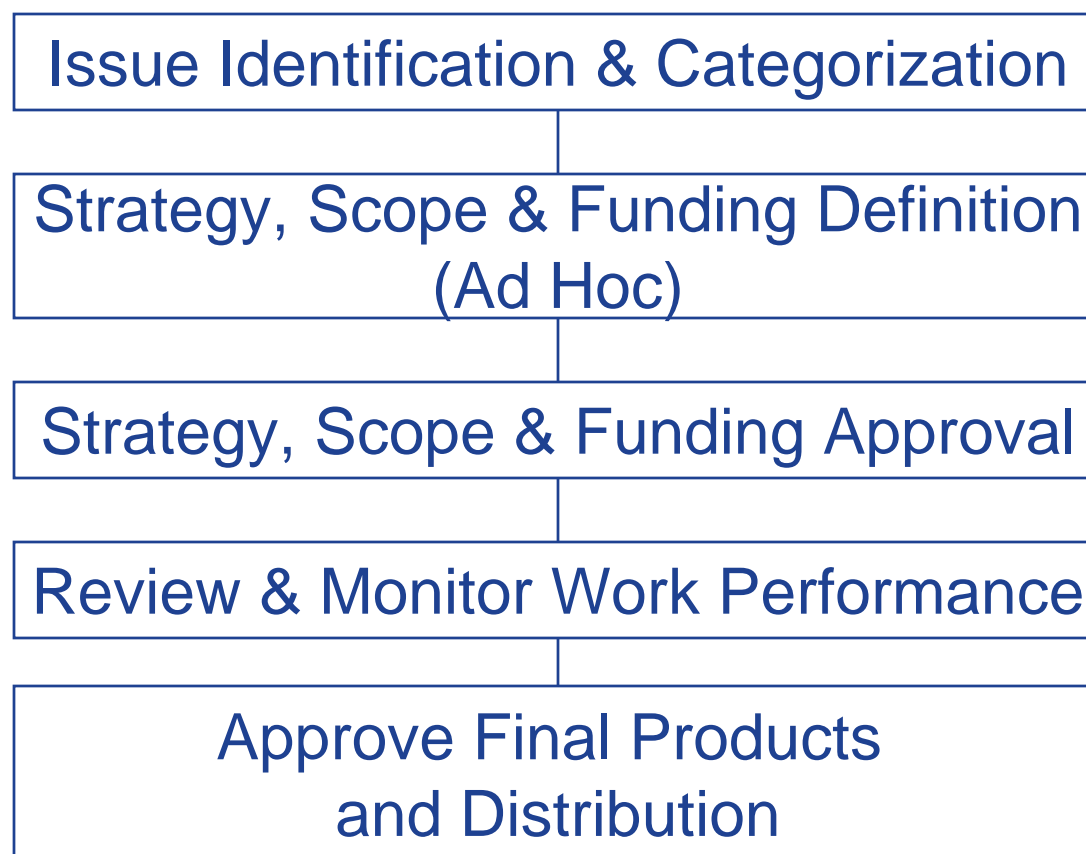
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- Addresses and understands Emerging Issues
- Provides initial assessment (screening) of issues for:
  - BWR applicability
  - Utility licensing, safety, design & plant operations impact
- Adds speed to normal BWROG response without circumventing process
- Does not represent official BWROG positions; makes recommendations to Primary Representatives or Executives
- Has limited funding to allow early investigative work

BWROG

# Process for Issue Resolution

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BWROG

# Technical Committees

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## Regulatory/Risk Committees

- Interact with regulators for the best interest of the BWR fleet
- Develop products on the leading edge of implementation of regulatory guidance

## Operational Committees

- Review operating history of plants to develop recommendations to reduce scrams and unplanned capacity losses and improve emergency procedures

BWROG

# Technical Committees

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## System Improvement Committees

- Use email distribution list to solicit emergent issue support
- Gather unique lessons learned
- Develop best practice guidelines

## Other Technical Committees

- Address fleet-wide issues
  - For example, the Reactor Recirc Pump Seal Committee addressing online failures

# BWROG

## Generic Technical Committees

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BWR Water Chemistry

Containment Over-Pressure Credit

Detect and Suppress

ECCS Gas Intrusion

ECCS Suction Strainers

Emergency Procedures

GI-193 BWR ECCS Suction Concerns

Integrated Risk Informed Regulation

(PRA, Fire Protection, RG 1.200  
Peer Reviews)

Post Accident Instruments  
Relaxation (RG 1.97)

Radiolytic Combustible Gas  
Handbook

Reactivity Controls Review

Reload Analysis and Core  
Management

Technical Specification Issues  
Coordination

# BWROG

## Non-Generic Technical Committees

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CRD System Performance

EPG/SAG Trn

Feedwater System Improvement

HPCI-RCIC System Improvement

I&C Maintenance

Offgas System Improvement

Outage Management

Pressure-Temperature Curve  
Methodology

Radiation Protection/ALARA

Reactor Recirculation System  
Reliability Improvement

Reactor Recirculation System Trn

Refueling Performance

RHR System Improvement

RWCU System Improvement

Safety Relief Valve

Scram Frequency Reduction

Torus Chamber Coating

Turbine Generator and Auxiliaries  
Improvement

Turbine Valve Testing Frequency  
Relaxation

Valve Technical Resolution Group

# BWROG

## Executive Oversight Committee Role

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- Chairman & Vice Chairman
- 3 or more additional elected members from Executive Committee
- No alternates
- Categorizes issues as Generic or Non-generic
- Oversight of all Generic activities
- Controls BWROG priorities
- Recommends issues for full Executive Committee vote
- Directs Officers on BWROG policy issues
- Controls and interprets Charter

# BWROG

## Executive Committee Role

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- One representative from each utility
- Meets annually
- Elects EOC
- Elects BWROG Officers
- Sets policy & controls Charter
- Reviews overall BWROG progress and direction
- Reviews annual budget and approves generic funding

# BWROG

## Officer Role

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### Officers:

- Chairman and Vice Chairman

### Chairman:

- Full time utility employee dedicated to BWROG
- Cannot concurrently serve as Primary Representative
- Salary & expenses shared by membership
- Interface with Executives & carry out Executive directives
- Facilitate Primary Representatives' role
- Monitor health & spending of BWROG
- Appoints Advisory Committee

# BWROG

## Primary Representatives Role

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- One representative from each utility
- Represents primary interest of utility
- Assures utility financial obligations are met
- Assures adequate Committee representation
- Approves work-scope, funding, schedule & final products for non-generic activities
- Controls & interprets Operating Principles
- Elects Regulatory Response Group (RRG)
- Approves BWROG correspondence

# BWROG

# Project Management

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GE-Hitachi (GEH) is the preferred Project Manager for BWROG Activities

- Provides PM and administrative support to BWROG
- Directed by BWROG Officers
- Assures activities adhere to approved work-scope, funding, and schedule
- Assures products are technically sound
- Provides periodic financial reviews
- Documents all BWROG activities
- Maintains BWROG Website

# BWROG

# Work Performance

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- A BWROG - GEH Partnership
- GEH is preferred performer of BWROG work
- Other Contractors may be used to perform BWROG work with joint BWROG-GEH agreement

BWROG

# Typical Meeting Schedules

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- Executive meeting: Annually
- EOC meetings: 2-4 times per year
- NRC Management meetings:
  - Linked to EOC Meetings
- NEI JOG meetings: Quarterly
- General meetings: Quarterly
- Committee meetings: As required
- PIRT: 4-6 weeks (or as required)

# BWROG

## Relationships

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### NRC

- Quarterly meetings to review current BWROG submittals, activities, and regulatory issues
- NRC holds positive view of BWROG
- Has a designated BWROG Project Manager

### NEI

- Quarterly meetings to review current Joint Owners Group (JOG) and regulatory issues
- Partner when industry and regulatory issues are broader than BWR design
- Has a designated BWROG POC

# BWROG

## Relationships (continued)

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### PWR Owners Group (PWROG)

- Quarterly meetings to review current Joint Owners Group (JOG) and regulatory issues
- Partner when industry and regulatory issues are broader than BWR design

### EPRI

- Periodic meetings to review current BWROG and industry issues
- Coordinates activities to ensure alignment and avoid duplication
- Has a designated BWROG POC

# BWROG

## Relationships (continued)

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### INPO

- Monitors some BWROG activities
- Evaluates implementation of some BWROG products at BWR plants
- Has a designated BWROG POC

# BWROG

# Strategic Plan

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Focused on four major areas:

- BWR Fleet Performance
- BWROG Performance
- Committee Performance
- Regulatory Interaction

# BWROG

# Strategic Plan

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## BWR Fleet Performance

- Employ BWROG efforts where BWR fleet performance can be improved

# BWROG

# Strategic Plan

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## BWROG Performance

- Develop a systematic approach for monitoring and tracking utility implementation of BWROG Technical Products
- Increase Associate Member involvement in BWROG committee activities

# BWROG

# Strategic Plan

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## BWROG Committee Performance

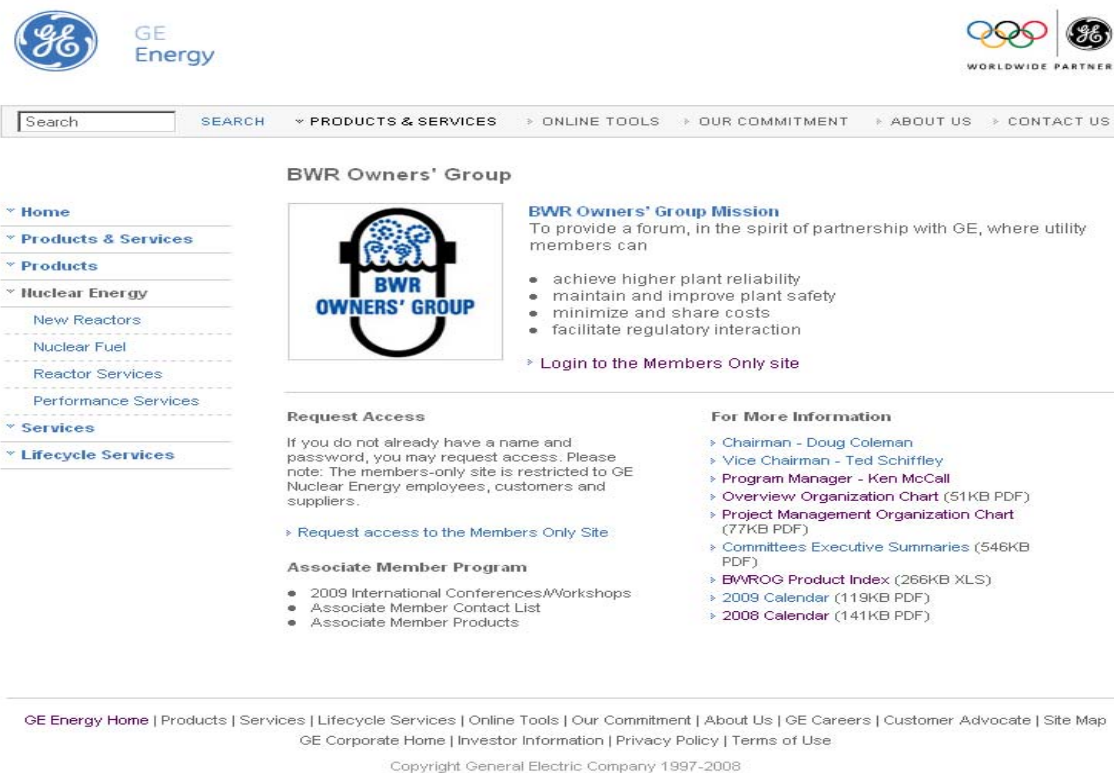
- Improve committee performance by focusing on mission related work
- Develop a higher level of “product focus” within BWROG activities to improve BWR performance

## BWROG Regulatory Interaction

- Improve relationship and interaction with NRC

# BWROG

## External Website (www.bwrog.org)



The screenshot shows the homepage of the BWROG website. At the top left is the GE Energy logo. At the top right are the Olympic rings and the GE logo with the text 'WORLDWIDE PARTNER'. Below the logos is a search bar and a navigation menu with links: SEARCH, PRODUCTS & SERVICES, ONLINE TOOLS, OUR COMMITMENT, ABOUT US, and CONTACT US. On the left side, there is a vertical navigation menu with the following items: Home, Products & Services, Products, Nuclear Energy (with sub-links: New Reactors, Nuclear Fuel, Reactor Services, Performance Services), Services, and Lifecycle Services. The main content area is titled 'BWR Owners' Group' and features a logo of a blue and white globe with the text 'BWR OWNERS' GROUP'. To the right of the logo is the 'BWR Owners' Group Mission' statement: 'To provide a forum, in the spirit of partnership with GE, where utility members can' followed by a bulleted list: 'achieve higher plant reliability', 'maintain and improve plant safety', 'minimize and share costs', and 'facilitate regulatory interaction'. Below the mission statement is a link: 'Login to the Members Only site'. Underneath, there are two columns of information. The left column is titled 'Request Access' and contains a paragraph: 'If you do not already have a name and password, you may request access. Please note: The members-only site is restricted to GE Nuclear Energy employees, customers and suppliers.' followed by a link: 'Request access to the Members Only Site'. Below this is the 'Associate Member Program' section with a bulleted list: '2009 International Conferences/Workshops', 'Associate Member Contact List', and 'Associate Member Products'. The right column is titled 'For More Information' and contains a list of links: 'Chairman - Doug Coleman', 'Vice Chairman - Ted Schiffley', 'Program Manager - Ken McCall', 'Overview Organization Chart (51KB PDF)', 'Project Management Organization Chart (77KB PDF)', 'Committees Executive Summaries (546KB PDF)', 'BWROG Product Index (266KB XLS)', '2009 Calendar (119KB PDF)', and '2008 Calendar (141KB PDF)'. At the bottom of the page, there is a footer with the following text: 'GE Energy Home | Products | Services | Lifecycle Services | Online Tools | Our Commitment | About Us | GE Careers | Customer Advocate | Site Map | GE Corporate Home | Investor Information | Privacy Policy | Terms of Use. Copyright General Electric Company 1997-2008.'