



# ANS Meetings

## Utility Working Conference and Vendor Technology Expo

25TH CONFERENCE – NUCLEAR RISING TO THE CHALLENGE

# 2018

## Official Program

August 5-8, 2018  
Omni Amelia Island Plantation  
Amelia Island, FL





# ANS Meetings

## 2018 Utility Working Conference and Vendor Technology Expo

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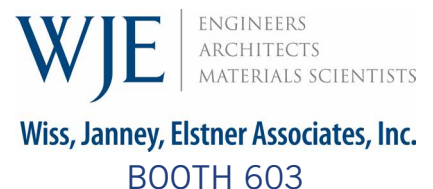
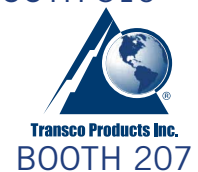
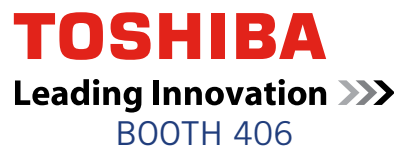
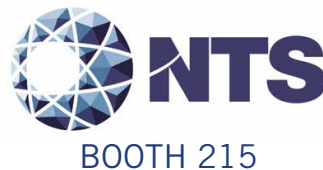
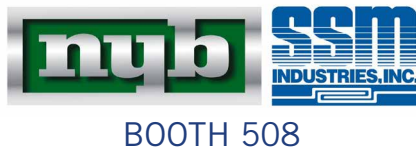
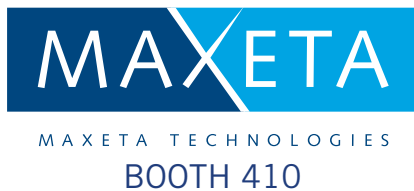
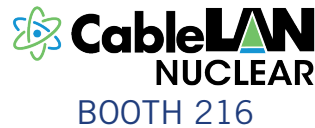
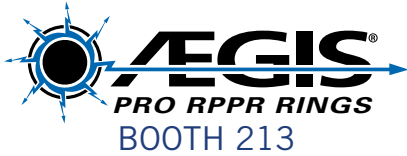
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# Exhibit Hall Passbook

## PASSPORT TO PRIZES

All attendees will receive a passport game card with participating sponsor logos and exhibit booth numbers. During exhibit hall hours, attendees must visit each booth to get their passbook stamped. Completed passbooks will be entered into a drawing during Tuesday's Vendor Reception for a chance at the grand prize! Passbooks must be completed and submitted by Tuesday at 7:00 pm at the Nuclear News booth. **Winners will be announced at 7:30 pm. See page 12 for prizes.**



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# Program Committee

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## Meeting Organizers

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### GENERAL COCHAIR

Peter P. Sena (*PSEG Nuclear*)

### GENERAL COCHAIR

Donald Hoffman (*EXCEL Services Corporation*)

### TECHNICAL PROGRAM COCHAIRS

Dan Doran (*Exelon Corporation*)

Dan Churchman (*Southern Nuclear*)

### ASSISTANT TECHNICAL PROGRAM CHAIR

Vince Gilbert (*EXCEL Services Corporation*)

### INTERN & KNOWLEDGE MANAGER COORDINATOR

Vince Gilbert (*EXCEL Services Corporation*)

### GOLF CHAIR

Jeff Mosses (*American Nuclear Society*)

### ASSISTANT GOLF CHAIR

Vince Gilbert (*EXCEL Services Corporation*)

## Track Leaders and Organizers

---

### BUSINESS/ECONOMIC PERFORMANCE

Tim Schlimpert (*MCR Performance Solutions*)

Adam Dow (*MCR Performance Solutions*)

Maria Hernandez (*Duke Energy*)

### EXECUTIVE/LEADERSHIP

Sean Clark (*AMMI Risk Solutions*)

Bob Coward (*MPR*)

### ENGINEERING AND EQUIPMENT RELIABILITY

Ted Quinn (*Technology Resources*)

Ray Herb (*Southern Nuclear*)

### SUPPLY CHAIN

William Fry (*Duke Energy*)

Jim Ripple (*Southern Nuclear*)

Greg Keller (*Rolls-Royce*)

### MAINTENANCE

Pete Arthur (*INPO*)

Bryant Hearne (*INPO*)

Jon Anderson (*ACA Incorporated*)

Gwen Bookheimer (*TVA*)

### OPERATIONS/OPS TRAINING

Gary Dudek (*Southern Nuclear*)

### PERFORMANCE IMPROVEMENT

Reiko Perleberg (*Southern Nuclear*)

Fred Lake (*WD Associates*)

### REGULATORY RELATIONS

Jack Grobe (*Exelon Corporation*)

Trent Wertz (*US NRC*)

### RISK MANAGEMENT

Gene Kelly (*Exelon Corporation*)

### TECHNOLOGY AND INNOVATION

Chris Comfort (*Southern Nuclear*)

Vincent Williams (*Southern Nuclear*)

### WORK MANAGEMENT

Pete Arthur (*INPO*)

Bryant Hearne (*INPO*)

Jon Anderson (*ACA Incorporated*)

Gwen Bookheimer (*TVA*)

# Daily Schedule

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## Saturday, August 4

4:00-6:00 pm	Exhibitor Move-In	Expo Hall
4:00-6:00 pm	Exhibitor Registration ONLY	Amelia Foyer

## Sunday, August 5

6:30-7:45 am	Golf Tournament "Grab & Go" Breakfast Sponsored by 	Marsh View Terrace
8:00 am-1:30 pm	UWC Golf Tournament	Oak Marsh Golf Course
8:00 am-5:00 pm	Exhibitor Move-In	Expo Hall
1:30-3:00 pm	UWC Golf Tournament Awards Luncheon Sponsored by 	Cumberland B/C
2:00-7:00 pm	Registration	Amelia Foyer
6:00-8:00 pm	Opening Reception in the Vendor Technology Expo Sponsored by 	Expo Hall
6:00-8:00 pm	Vendor Technology Expo	Expo Hall

# Daily Schedule

## Monday, August 6

7:00 am-4:00 pm	Registration	Amelia Foyer
7:00-8:00 am	Continental Breakfast in the Vendor Technology Expo	Expo Hall
7:00 am-4:30 pm	Vendor Technology Expo	Expo Hall
8:00-10:00 am	Industry Awards Presentation & Opening Plenary Sponsored by 	Amelia Ballroom 1-4
10:00-10:30 am	Refreshment Break in the Vendor Technology Expo	Expo Hall
10:30 am-12:00 pm	Educational Sessions 1 <ul style="list-style-type: none"> <li>• How to Save a Nuclear Plant: A Case Study</li> <li>• Challenging Traditional Paradigms of Reload Analysis Methodology</li> <li>• Digital I&amp;C Upgrade Benefits and Licensing Challenges</li> <li>• Total Cost of Ownership: How Supply Chain Can Move from Provider to Partner to the Business Unit</li> <li>• INPO Review of 2017 and 2018 Trends in Work Management and Maintenance</li> <li>• Reactivity Management Improvements</li> <li>• Improving and Sustaining High Levels of Performance Through Organizational Effectiveness</li> <li>• PRA Model Maintenance, Complexity, Speed, and New Methods.....Keeping Models Useful</li> <li>• Introduction to Innovation and the Innovative Culture</li> </ul>	Cumberland B Cumberland A Amelia Ballroom 2/3 Ossabaw A/B  Amelia Ballroom 1 Cumberland C Conference Room 2/3 Talbot A/B Amelia Ballroom 4
12:00-1:30 pm	Walk-Around Lunch in the Vendor Technology Expo	Expo Hall
1:30-3:00 pm	Educational Sessions 2 <ul style="list-style-type: none"> <li>• Defending Equipment Reliability Spending in a Cost Cutting Environment</li> <li>• Passing the Torch - Bridging the "Baby Boomer/Millennial" Communications Gap</li> <li>• Advanced Reactor Designs, Accident Tolerant Fuels, and Licensing Challenges</li> <li>• Right Contract; Right Project; Right Time</li> <li>• How Are We Transforming Our Maintenance Organizations</li> <li>• Operator Self Criticality and 4.0 Critiques</li> <li>• Enhancement of Workers Through 3-D Modeling, Virtual Reality, and Augmented Reality</li> <li>• New Standard: Methodology, Upgrade versus Update, Impact on Models and Licensees</li> </ul>	Cumberland B Cumberland A Amelia Ballroom 2/3 Ossabaw A/B Amelia Ballroom 1 Cumberland C Amelia Ballroom 4 Talbot A/B
3:00-3:30 pm	Refreshment Break in the Vendor Technology Expo	Expo Hall
3:30-5:00 pm	Educational Sessions 3 <ul style="list-style-type: none"> <li>• Is the Nuclear Promise Delivering on Value Based Maintenance?</li> <li>• DNP Initiative Status for the Industry and CAP-002 Lessons Learned</li> <li>• Craft Labor - How to Reduce Costs Without Impacting Operations &amp; Outage Schedules</li> <li>• New Generation Operators</li> <li>• NRC's Transformation Initiative and Risk Informed Metamorphosis Update</li> <li>• Using PRA Approaches (Without Models) to Resolve Regulatory and Design Issues</li> <li>• Digital Mobile Workers</li> </ul>	Amelia Ballroom 1 Amelia Ballroom 2/3 Ossabaw A/B Cumberland C Cumberland A Talbot A/B Amelia Ballroom 4

# Daily Schedule

## Tuesday, August 7

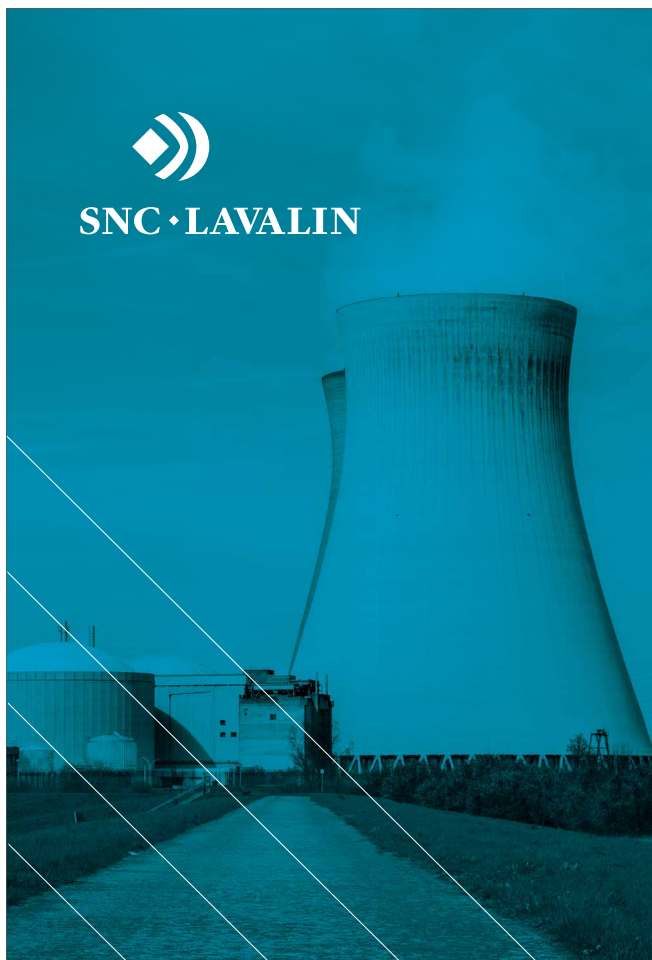
<p>7:30 am-5:30 pm 7:30-8:30 am</p>	<p>Registration Sunrise Breakfast Sponsored by </p>	<p>Amelia Foyer Expo Hall</p>
<p>7:30 am-7:30 pm 8:30-10:00 am 10:00-10:30 am 10:30 am-12:00 pm</p>	<p>Vendor Technology Expo Tuesday Plenary Refreshment Break in the Vendor Technology Expo Educational Sessions 4</p>	<p>Expo Hall Amelia Ballroom 1-4 Expo Hall</p>
	<ul style="list-style-type: none"> <li>• The Nuclear Framework and Project Life Cycle</li> <li>• Second License Renewal: Delivering the Nuclear Promise from 60 to 80 Years</li> <li>• Realizing the Promise of 50.69 Risk Informed Component Categorization</li> <li>• One Site's Trash is Another Site's Treasure</li> <li>• INPO Event Report (IER L2-17-09), Maintenance Technical Fundamentals</li> <li>• Streamlined Work Management (Status of Implementation)</li> <li>• Crew Performance Evaluation</li> <li>• Aggregate Assessment Working Group Update</li> <li>• Innovative Strategies to Address Intentional Non Compliance</li> <li>• Drones and Robotics</li> </ul>	<p>Cumberland B Cumberland A Amelia Ballroom 2/3 Ossabaw A Talbot A/B Amelia Ballroom 1 Cumberland C Conference Room 2/3 Ossabaw B Amelia Ballroom 4</p>
<p>12:00-1:30 pm</p>	<p>Walk-Around Lunch in the Vendor Technology Expo Sponsored by </p>	<p>Expo Hall</p>
<p>1:30-3:00 pm</p>	<p>Educational Sessions 5</p> <ul style="list-style-type: none"> <li>• Blockchain and Energy - Let's Learn Together</li> <li>• Risk Informed Decision Making</li> <li>• Sustaining High Equipment Reliability</li> <li>• Inventory Reduction: Best Practices &amp; Lessons Learned</li> <li>• What is Behind the INPO, Performance Based Evaluations and How Are They Going to Affect Us?</li> <li>• INPO IER 17-005 Line of Sight to the Core and Improved Operator Performance</li> <li>• Industrial Culture and Human Factors</li> <li>• The Committee to Review Generic Requirements and Backfit Experiences</li> </ul>	<p>Amelia Ballroom 4 Cumberland A Amelia Ballroom 2/3 Ossabaw A/B Amelia Ballroom 1 Cumberland C Conference Room 2/3 Talbot A/B</p>
<p>3:00-3:30 pm 3:30-5:00 pm</p>	<p>Refreshment Break in the Vendor Technology Expo Educational Sessions 6</p> <ul style="list-style-type: none"> <li>• Let's Get Down to Business</li> <li>• Extracting and Applying the Insights from Fire PRA Models</li> <li>• Keeping the Lines Alive</li> <li>• Mis-Position Events and Electrical Safety</li> <li>• Innovative Use of Simulator Training</li> <li>• Industry Benchmarking Session</li> <li>• Incorporating Risk and Safety Insights into the Reactor Oversight Process</li> <li>• Data Analytics – DIANA</li> </ul>	<p>Expo Hall</p> <p>Cumberland A Amelia Ballroom 2/3 Ossabaw A/B Amelia Ballroom 1 Cumberland C Conference Room 2/3 Talbot A/B Amelia Ballroom 4</p>
<p>5:00-7:30 pm 7:30-10:00 pm</p>	<p>Cocktail Reception &amp; Vendor Raffle in the Vendor Technology Expo Tuesday Evening Event: The 12th Track Arcade Sponsored by </p>	<p>Expo Hall Amelia Ballroom 1-4</p>



# Daily Schedule

## Wednesday, August 8

7:30-11:00 am	Registration	Amelia Foyer
7:30-8:30 am	Continental Breakfast in the Vendor Technology Expo	Expo Hall
7:30-9:00 am	Vendor Technology Expo	Expo Hall
8:30-10:00 am	Wednesday Plenary	Amelia Ballroom 1-4
10:00-10:30 am	Refreshment Break	Amelia Foyer
10:30 am-12:00 pm	Educational Sessions 7 <ul style="list-style-type: none"> <li>• What Others are Doing to Improve Work Management and Maintenance That Are Out of the Box for Us</li> <li>• Improving Shift Manager and STA Oversight</li> <li>• An Innovative Model that Pushes Efficiency While Improving the Results</li> <li>• Solutions for Licensing Risk-Informed Initiatives and Incorporating Flex into Regulatory Activities</li> <li>• DOE Research Reports - Common Cause Failures and Embedded Digital Devices</li> </ul>	Amelia Ballroom 1  Cumberland C Conference Room 2/3 Cumberland A  Amelia Ballroom 4
12:30-2:00 pm	UWC 2018 Wrap-up/2019 Planning Meeting	Talbot A/B



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# General Information

## MEETING INFORMATION

The Utility Working Conference and Technology Expo (UWC) is an annual meeting of the minds that consistently generates strong, practical recommendations designed to address the industry's most pressing needs. The focus of the 2018 UWC is to analyze cost drivers common to all nuclear power plants and recommend programs and processes to improve their efficiency and effectiveness and to provide innovative solutions that enable a significant reduction in operating expenses.

## ABOUT UWC

For more information about the UWC, make sure to visit [uwc.ans.org](http://uwc.ans.org).

## REGISTRATION

*Location: Amelia Foyer*

Name badges must be worn during all sessions, in the expo and events. Certain events require a ticket, and may entail an additional cost.

## REGISTRATION HOURS

Sunday, August 5	2:00-7:00 pm
Monday, August 6	7:00 am-4:00 pm
Tuesday, August 7	7:30 am-5:30 pm
Wednesday, August 8	7:30-11:00 am

### *Notice to Speakers:*

All speakers providing a presentation MUST upload their presentation via the link below no later than Friday, July 27th. To submit presentations, go to [uwckb.ans.org/upload/](http://uwckb.ans.org/upload/).

## 2018 WRAP UP/2019 PLANNING MEETING

Anyone interested in organizing and planning the 2019 UWC is welcome to attend. Wednesday, August 8, 12:30-2:00 pm, Talbot A/B.

## UWC VENDOR TECHNOLOGY EXPO

Build your network: make sure to stop by and visit UWC's 90+ Exhibitors!

Sunday, August 5	6:00-8:00 pm
Monday, August 6	7:00 am-4:30 pm
Tuesday, August 7	7:30 am-7:30 pm
Wednesday, August 8	7:30-9:00 am

## ATTENDEE WIFI

Wifi at the UWC is proudly sponsored by



For log-in information, visit Booth 9!

## ANS MEETINGS APP

Scan this code or type in Attendee Hub to your app store, download the app, then type in UWC and login to the ANS Meetings App to experience all of the app features!

**NOTE: All session evaluations will be done in the app only.**



### **If you still have the email invitation sent to you by ANS Meetings:**

1. Open the invitation in your inbox. Tap Verify Account.
2. Tap **Open App**. to complete the verification via the new mobile app.

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1. From the event homescreen, tap the three white lines icon on the top left.
2. Tap Log in for more features.
3. Enter your name and tap Next.
4. Tap Resend Code to have a verification code sent to your email address.

# General Information

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## ABOUT ANS

### Mission

ANS provides its members with opportunities for professional development. It also serves the nuclear community by creating a forum for sharing information and advancements in technology, and by engaging the public and policymakers through communication outreach.

### Statement on Diversity

The American Nuclear Society (ANS) is committed, in principle and in practice, to creating a diverse and welcoming environment for everyone interested in nuclear science and technology. Diversity means creating an environment – both in ANS and in the profession – in which all members are valued equitably for their skills and abilities and respected equally for their unique perspectives and experiences. Diverse backgrounds foster unique contributions and capabilities, and so creation of an inclusive Society ultimately leads to a more creative, effective, and technically respected Society.

ANS believes that everyone deserves opportunities for learning, networking, leadership, training, recognition, volunteering in Society activities, and all the other benefits that involvement in the Society brings, regardless of age, color, creed, disability, ethnicity, gender identity and expression, marital status, military service status, national origin, parental status, physical appearance, race, religion, sex, or sexual orientation. The selection of a member to serve in ANS's volunteer leadership structure shall be based solely on the member's ability, interest and commitment to serve. In particular, ANS encourages members at each level of the Society and in each Professional Division and Technical Group to make special efforts to recruit underrepresented minorities and women to ensure that they are adequately represented in the Society.

### Respectful Behavior Policy (Abbreviated)

The open exchange of ideas, freedom of thought and expression, and productive scientific debate are central to the mission of the American Nuclear Society (ANS). These require an open and diverse environment that is built on dignity and mutual respect for all participants and ANS staff members, and is free of bias and intimidation.

ANS is dedicated to providing a safe, welcoming, and productive experience for everyone participating in Society events and other Society activities regardless of age, color, creed, disability, ethnicity, gender identity and expression, marital status, military service status, national origin, parental status, physical appearance, race, religion, sex, or sexual orientation. Creation of a safe and welcoming environment is a shared responsibility held by all participants. Therefore, ANS will not tolerate harassment of or by participants (including ANS volunteer leaders and staff members) in any form. Disciplinary action for participants found to have violated this principle may include reprimand, expulsion from an event or activity with or without a refund, temporary or permanent exclusion from all ANS events and activities, suspension or expulsion from volunteer leadership positions or groups, and/or suspension or expulsion from Society membership, as appropriate.

***If you or someone else experiences harassment, regardless of how you otherwise choose to initially handle the situation,*** you are encouraged to report the situation to ANS. It is possible that the behavior you experienced is part of a larger pattern of repeated harassment. Please alert ANS to behavior you feel to be harassment regardless of the offender's identity or standing in the Society.

The designated contacts for reports at the 2018 UWC are Technical Program Cochair Dan Churchman, Technical Program Cochair Dan Doran or Executive Director Bob Fine. Dan Churchman can be reached at [DCHURCHM@southernco.com](mailto:DCHURCHM@southernco.com). Dan Doran can be reached at [daniel.doran@exeloncorp.com](mailto:daniel.doran@exeloncorp.com). Bob Fine can be reached at [rfine@ans.org](mailto:rfine@ans.org), or you can leave a message at the ANS Registration Desk for one of them to contact you directly.

The complete Respectful Behavior Policy can be found at [ans.org/about/rbp](http://ans.org/about/rbp). If you have questions about the policy, please contact ANS Executive Director Robert C. Fine at 708-579-8200 or [rfine@ans.org](mailto:rfine@ans.org).

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# General Information

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## ANS CODE OF ETHICS

### Preamble

Recognizing the profound importance of nuclear science and technology in affecting the quality of life throughout the world, members of the American Nuclear Society (ANS) are committed to the highest ethical and professional conduct.

### Fundamental Principle

ANS members as professionals are dedicated to improving the understanding of nuclear science and technology, appropriate applications, and potential consequences of their use.

To that end, ANS members uphold and advance the integrity and honor of their professions by using their knowledge and skill for the enhancement of human welfare and the environment; being honest and impartial; serving with fidelity the public, their employers, and their clients; and striving to continuously improve the competence and prestige of their various professions.

ANS members shall subscribe to the following practices of professional conduct:

### Principles of Professional Conduct

1. We hold paramount the safety, health, and welfare of the public and fellow workers, work to protect the environment, and strive to comply with the principles of sustainable development in the performance of our professional duties.
2. We will formally advise our employers, clients, or any appropriate authority and, if warranted, consider further disclosure, if and when we perceive that pursuit of our professional duties might have adverse consequences for the present or future public and fellow worker health and safety or the environment.
3. We act in accordance with all applicable laws and these Practices, lend support to others who strive to do likewise, and report violations to appropriate authorities.
4. We perform only those services that we are qualified by training or experience to perform, and provide full disclosure of our qualifications.
5. We present all data and claims, with their bases, truthfully, and are honest and truthful in all aspects of our professional activities. We issue public statements and make presentations on professional matters in an objective and truthful manner.
6. We continue our professional development and maintain an ethical commitment throughout our careers, encourage similar actions by our colleagues, and provide opportunities for the professional and ethical training of those persons under our supervision.
7. We act in a professional and ethical manner towards each employer or client and act as faithful agents or trustees, disclosing nothing of a proprietary nature concerning the business affairs or technical processes of any present or former client or employer without specific consent, unless necessary to abide by other provisions of this Code or applicable laws.
8. We disclose to affected parties, known or potential conflicts of interest or other circumstances, which might influence, or appear to influence, our judgment or impair the fairness or quality of our performance.
9. We treat all persons fairly.
10. We build our professional reputation on the merit of our services, do not compete unfairly with others, and avoid injuring others, their property, reputation, or employment.
11. We reject bribery and coercion in all their forms.
12. We accept responsibility for our actions; are open to and acknowledge criticism of our work; offer honest criticism of the work of others; properly credit the contributions of others; and do not accept credit for work not our own.

## SUNDAY, AUGUST 5

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### GOLF TOURNAMENT “GRAB & GO” BREAKFAST

**Location:** Marsh View Bar & Terrace

6:30-7:45 am

The shuttle will pick up from the main hotel lobby between 6:30-7:15 a.m. dropping off for breakfast from 6:30-7:30 a.m. at the Marsh View Bar and Terrace. Check in at the UWC Golf Registration desk to receive your foursome assignment and other materials. Grab & Go Breakfast is proudly sponsored by



### UWC GOLF TOURNAMENT

**Location:** Oak Marsh Golf Course

8:00 am-1:30 pm

The 2018 ANS Utility Working Conference (UWC) Golf Tournament will be held at the Oak Marsh Golf Course starting at 8 a.m. This tournament is open to all conference attendees and guests. However, attendees must pay the appropriate fee to participate.

### UWC GOLF TOURNAMENT AWARDS LUNCHEON

**Location:** Cumberland B/C

1:30-3:00 pm

The shuttle will pick-up from the golf course and return to the hotel from 1:00-2:00 p.m. The Awards Luncheon will take place at the hotel in Cumberland BC.

The Awards Luncheon is proudly sponsored by



### OPENING RECEPTION IN THE VENDOR TECHNOLOGY EXPO

**Location:** Expo Hall

6:00-8:00 pm

Join UWC attendees and vendors for a reception to celebrate the opening of the Vendor Technology Expo and to kick off yet another great Utility Working Conference! Heavy hors d'oeuvres, desserts and beverages will be provided. We look forward to seeing you there!

This event is included in a full registration or an Adult or Child Meal Pass. Additional tickets are available for purchase on-site. All attendees will need a badge to enter the Expo Hall.

The Opening Reception is proudly sponsored by



## MONDAY, AUGUST 6

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### INDUSTRY AWARDS PRESENTATION & OPENING PLENARY: CONTINUING THE PURSUIT OF EXCELLENCE

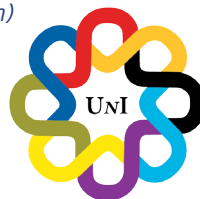
**Location:** Amelia Ballroom

8:00-10:00 am

This plenary will focus on the main driver for our industry's success, the continuous pursuit of excellence. What can we learn from others outside our industry that can help us on our journey?

**Speakers:** Adm. Kirk Donald (*Former Director, Navy Nuclear Propulsion Program*)  
General Manager (*Programs & Predictive Maintenance Engineering, Delta Airlines*)  
Scot Greenlee (*Senior Vice President Engineering and Technical Support, Exelon*)

The Opening Plenary is proudly sponsored by



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## TUESDAY, AUGUST 7

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### TUESDAY PLENARY: PROCEEDING IN THE FACE OF UNCERTAINTY

**Location:** Amelia Ballroom

8:30-10:00 am

This plenary will focus on the areas of uncertainty facing our industry. Specifically, regulatory, policy, economic, and available work for vendors/suppliers.

**Speakers:** Bill Pitesa (*CNO Nuclear Energy Institute*)

Anthony Pugliese (*Chief of Staff, FERC*)

Bob Coward (*Principal Officer, MPR Associates*)

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### VENDOR RECEPTION & BOOTH RAFFLE/PASSPORT TO PRIZES

**Location:** Expo Hall

5:00-7:30 pm

#### Vendor Technology Expo Raffle

Don't miss out on an exciting opportunity to network with exhibitors and win fantastic prizes by attending the Vendor Raffle and Reception! To participate in the raffle, drop off your business card or have your badge scanned at the participating booths before 3:30 pm on Tuesday. Winners will be posted on large screens located in the exhibit hall foyer and at registration. Prizes must be claimed from the exhibitors' booths before 7:00 pm. There will be an area set up for photographs of the winners and exhibitor reps in the exhibit hall foyer. A follow-up drawing is scheduled for 7:00 pm for any unclaimed vendor prizes. All registered attendees are invited.

#### Passport to Prizes

All attendees will receive a passport game card with participating sponsor logos and exhibit booth numbers. During exhibit hall hours, attendees must visit each booth to get their passbook stamped. Completed passbooks will be entered into a drawing during Tuesday's Vendor Reception for a chance at the grand prize! Passbooks must be completed and submitted by Tuesday at 7:00 pm at the ANS/Nuclear News booth 105 & 107. Winners will be announced at 7:30 pm. You must be present to win.

#### Prizes Include:

- **Grand Prize:** Complimentary Full 2019 UWC Conference Registration, and three complimentary nights in the Omni Main Hotel
  - **Second Prize:** Apple iPad Pro 12.9inch
  - **Third Prize:** GoPro Hero HD Waterproof Action Camera with battery and Head Strap
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### TUESDAY EVENING EVENT: THE 12TH TRACK ARCADE

**Location:** Amelia Ballroom

7:30-10:00 pm

Immediately following the reception, join us to celebrate another successful conference! Event is complimentary to all full meeting registrants and Adult or Child Meal Passes. All attendees will need a ticket to enter the event. Additional tickets are available for purchase on-site.

\*Ticket is required for entry\*

The Tuesday Evening Event: The 12th Track Arcade is proudly sponsored by



## WEDNESDAY, AUGUST 8

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### WEDNESDAY PLENARY: CONTROLLING OUR DESTINY AND DELIVERING FOR SOCIETY

**Location:** Amelia Ballroom

8:30-10:00 am

This plenary will feature a panel discussion on the path forward for our industry.

**Speakers:** Jay Wileman (*President & CEO, GE Hitachi Energy*)

Marty Parece (*Vice President Design Authority & Licensing, Framatome*)

Brad Adams (*Vice President Engineering, Southern Nuclear*)

Donald Hoffman (*President & CEO, EXCEL Services Corporation*)

## MONDAY AUGUST 6

EDUCATIONAL SESSIONS 1: 10:30 AM-12:00 PM

### BUSINESS/ECONOMIC PERFORMANCE

#### How to Save a Nuclear Plant: A Case Study

**Session Organizer:** Tim Schlimpert (*MCR*)

**Participants:** Tim Hanley (*Exelon Corporation*), Tim Schlimpert (*MCR*), Sean Lawrie (*ScottMadden*)

**Room:** Cumberland B

The focus of the 2018 UWC is around the analysis of cost drivers in an effort to drive program and process efficiency and effectiveness to reduce operating expenses. The goal here is to ultimately make the current operating fleet more economically competitive and by extension, “save” those plants which are in danger of premature retirement. This session focuses on our industry’s success stories in this area from more targeted budgeting, project management and process improvement initiatives to the ultimate ownership transfer of the Fitzpatrick nuclear plant avoiding early closure. Participants will hear from top industry leaders providing applied insights and their critical factors for success.

### EXECUTIVE/LEADERSHIP

#### Challenging Traditional Paradigms of Reload Analysis Methodology

**Session Organizer:** Steven Freel (*Studsvik Scandpower*)

**Participants:** Steven Freel (*Studsvik Scandpower*), Cesare Frepoli (*Fpoli Solutions*), Keith Drudy (*Southern Nuclear*), Joshua Kaizer (*US NRC*), Jim Tusar (*Exelon Corporation*)

**Room:** Cumberland A

As the US industry has worked to reduce cost in plant operations through Delivering the Nuclear Promise, one area in fuel management has remained generally untouched. Reload methodologies used today were created 50 years ago and depended greatly on bounding analyses. Due to the large cost and effort, licensed reload methodologies have not changed in recent decades. With modern computing power, databases, and automation, the traditional paradigm of reload methodology can be challenged to provide cycle-specific safety analyses. This panel will combine utility and independent consulting expertise to describe the integration of safety analyses, neutronics, and PRA into one process to support financial, cost, and risk savings on fuel cycle reloads. With the combination of new Accident Tolerant Fuels and changes in the US nuclear fuel supply market, speed and flexibility will ensure utilities are ready for tomorrow’s fuel market.

### ENGINEERING AND EQUIPMENT RELIABILITY & REGULATORY RELATIONS

#### Digital I&C Upgrade Benefits and Licensing Challenges

**Session Organizer:** Ray Herb (*Southern Nuclear*)

**Participants:** Eric Benner (*US NRC*), Christopher Earls (*NEI*), John Connelly (*Exelon Corporation*)

**Room:** Amelia Ballroom 2/3

The utilization of digital instrumentation and control (DI&C) technology is critically important to the sustainability of the current operating fleet and the next generation of reactors. Digital technology can increase safety, reliability, and efficiency while addressing analog component obsolescence. Come hear our panel discuss the latest developments in DI&C and recent efforts by NRC to address licensing challenges. See how your plant can use the latest in DI&C guidance and improved regulatory processes to upgrade your plant and reap the benefits of DI&C technology.

### SUPPLY CHAIN

#### Total Cost of Ownership: How Supply Chain Can Move from Provider to Partner to the Business Unit

**Session Organizer:** Bill Fry (*Duke Energy*)

**Participants:** Mark Teague (*Duke Energy*)

**Room:** Ossabaw A/B

“To provide for”, that is how Webster’s defines “supply”. Traditionally, that is exactly what Supply Chain has been, a provider. In this session we will be challenging that notion and focusing on moving from “provider” to “partner” with the business unit. In a provider mentality, the customer is always right. In a partner mentality, partners are champions for the business unit on some days, and challengers other days. But in the end, as a partner, the overall value to the business enterprise is in mind. Specific discussion will include how this partner model and decrease the overall Total Cost of Ownership (TCO) for the enterprise.

### MAINTENANCE & WORK MANAGEMENT

#### INPO Review of 2017 & 2018 Trends in Work Management and Maintenance

**Session Organizers:** Jon Anderson (*ACA*), Pete Arthur (*INPO*)

**Participants:** Pete Arthur (*INPO*), Bryant Hearne (*INPO*)

**Room:** Amelia Ballroom 1

This session starts with a presentation by INPO on the current trends in performance. The session then opens to a discussion of what is working and not working by plant personnel in the areas discussed by INPO. Participants will take away from this session a deep understanding of industry performance in general and specific information and contact personnel they can talk to about what is working and what is not working in the areas discussed by INPO.

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## MONDAY AUGUST 6

EDUCATIONAL SESSIONS 1: 10:30 AM-12:00 PM

### WORK MANAGEMENT

See Maintenance

### OPERATIONS/OPS TRAINING

#### Reactivity Management Improvements

**Session Organizer:** Alex McGalliard (*STP*)

**Participants:** Jesse Key (*Southern Nuclear*), Joy Ramsaywack (*Exelon Corporation*)

**Room:** Cumberland C

Several utilities will provide insights into philosophy and process controls, including changes implemented following assessments and benchmarking aimed at improving industry lagging performance, that have been effective in improving Reactivity Management performance at their sites.

### PERFORMANCE IMPROVEMENT

#### Improving and Sustaining High Levels of Performance Through Organizational Effectiveness

**Session Organizer:** Fred Lake (*WD Associates*)

**Participants:** Maria Lacal (*APS*), Chuck Kharri (*APS*)

**Room:** Conference Room 2/3

Learn about cultivating a deliberate and strategic focus on leader and team behaviors and actions that inspire the environment of uncompromising high standards needed to rise to the challenges that face our industry today. You will have the opportunity to gain insights from an industry leader about what they learned during development of current industry guidance on organizational effectiveness (OR), how the OR Model can be used to promote leader and team behaviors to achieve and sustain excellence, and how PI tools can be used to enable leaders to make sound decisions to improve and sustain organizational performance.

### REGULATORY RELATIONS

See Engineering and Equipment Reliability

### RISK MANAGEMENT

#### PRA Model Maintenance, Complexity, Speed, and New Methods.....Keeping Models Useful

**Session Organizer:** Owen Scott (*Southern Nuclear*)

**Participants:** Michael Corbett (*Southern Nuclear*), Gerry Kindred (*TVA*), Glen Lawson (*Duke Energy*), Gene Kelly (*Exelon*)

**Room:** Talbot A/B

As new PRA Standards have been developed and endorsed by NRC, the number (and type) of PRA models for plants have increased. Maintaining those models up to date to reflect the as-built as-operated plant, in support of risk-informed applications, has increased accordingly. Improvements in current processes, planning, and infrastructure are key to managing and maintaining the pedigree of models as well as a robust PRA support organization. As more complete data sources and improved methods become available, decisions on upgrade of the models (along with independent reviews) must be made. Model speed becomes an issue, along with computing power. This session will examine current requirements and drivers for PRA model maintenance, the challenges in keeping those models up to date and useful, and some best practices to meet those challenges with limited resources.

### TECHNOLOGY AND INNOVATION

#### Intro to Innovation and the Innovative Culture

**Session Organizer:** Vincent Williams (*Southern Nuclear*)

**Participants:** Mike Duke (*Wells Fargo*), Jason Pastras (*Southern Company*)

**Room:** Amelia Ballroom 4

This 1st session focuses on how we approach innovation itself, what it means, and why it is so important within not just the nuclear industry but the power production business overall. How is the culture being grown within your company? What is 'innovation style'? How can we ensure we stay aligned within the US and the world with this endeavor? These questions and more will be considered and answered within this cutting-edge session!



## MONDAY AUGUST 6

EDUCATIONAL SESSIONS 2: 1:30-3:00 PM

### BUSINESS/ECONOMIC PERFORMANCE

#### Defending Equipment Reliability Spending in a Cost Cutting Environment

**Session Organizer:** Maria Hernandez (*Duke Energy*)

**Participants:** Joe Donahue (*Duke Energy*), Adam Dow (*MCR*)

**Room:** Cumberland B

The current climate of economic pressures in nuclear has resulted in a culture of relentless focus on cost cutting - some targeted and data-driven, others widespread and blunt. Regardless of the driving factors this paradigm often results in competing demands from plant engineering, operations, IT, and business operations leaders. Project sponsors focused on preserving plant reliability find themselves in situations with constantly changing budgets and difficult decisions around which key reliability project can be delayed. This session examines how to adequately defend equipment reliability spending in an environment where O&M budgets are strangled and capital is closely guarded, consuming plant assets to the brink. Participants will see real-world examples and learn the tools and techniques to effectively justify spending with limited resources within the context of a broader project portfolio.

### EXECUTIVE/LEADERSHIP

#### Passing the Torch - Bridging the "Baby Boomer/Millennial" Communications Gap

**Session Organizers:** Tom Vehec, Rich Werdann (*ReNuke Services*)

**Participants:** Jane Gentry

**Room:** Cumberland A

One of the greatest challenges facing the nuclear industry is aging; specifically the aging of facilities and infrastructure and the aging of a highly experienced workforce.

The loss from retirement and attrition of talent and expertise developed over the last thirty years poses a difficult problem, one never before encountered by the nuclear industry. This is even more daunting considering the need to attract, accelerate the technical and professional development of, and retain a new generation of workers consisting of millennials who have a set of values and work cultures vastly different from the current workforce predominantly made up of "Baby Boomers."

Key objectives for success are two fold:

1. How to attract and retain a new generation workforce into an industry whose very commercial viability is being questioned.
2. How to effectively communicate and transfer the knowledge and experience of an aging generation of professionals to a new generation of millennials to ensure the long-term viability of the nuclear industry.

Come interact with our panel to explore this topic from multiple perspectives; a view of the challenges that current millennials face today; insights about the millennial culture; behaviors, myths and motivation; and lastly, approaches for ensuring effective communication to bridge the gaps and meet the needs of both sides of this critical issue.

### ENGINEERING AND EQUIPMENT RELIABILITY & REGULATORY RELATIONS

#### Advanced Reactor Designs, Accident Tolerant Fuels, and Licensing Challenges

**Session Organizer:** Bob Coward (*MPR*)

**Participants:** Brian Hollian (*US NRC*), Jack Grobe (*Exelon Corporation*), John Williams (*Southern Nuclear*), Tom Bergman (*NuScale*), Greg Krueger (*NEI*)

**Room:** Amelia Ballroom 2/3

In the near term, Accident Tolerant Fuels will transform our current fleet improving safety, efficiency and cost effectiveness of our operating reactors. In the longer term, the next generation of reactors are being developed today. Come hear the panel discuss new reactor technology such as advanced reactor designs and accident tolerant fuels. You will hear about their benefits and unique licensing challenges. Hear how the industry and the NRC are working together to streamline the regulatory processes for timely licensing of these new and safer technologies. This is the future of nuclear power, these technologies will change the face of nuclear power as we know it making safe and carbon zero nuclear power a viable and necessary component of a carbon neutral society.

### SUPPLY CHAIN

#### Right Contract; Right Project; Right Time

**Session Organizer:** Bill Fry (*Duke Energy*)

**Participants:** Sam Campisi (*Southern Nuclear*), Markley Ward (*AMS-PAR*), Brandon Zimmerman (*Southern Nuclear*)

**Room:** Ossabaw A/B

What exposure are you opening yourself up to by using a T&M model instead of a cost plus model? Are you leaving resources on the table by going fixed price instead of target price? This session will dive deep into the weeds on the various commercial arrangement types, the pros and cons for each and which ones are right for which project type. The discussion will include real-life examples where the wrong commercial arrangement was used and how things could have been different. It will be beneficial for contract owners and CPO's alike.

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## MONDAY AUGUST 6

EDUCATIONAL SESSIONS 2: 1:30-3:00 PM

### MAINTENANCE & WORK MANAGEMENT

#### How We Are Transforming our Maintenance Organizations

**Session Organizers:** Jon Anderson (*ACA*), Bryant Hearne (*INPO*)

**Participants:** John Boesch (*Xcel Energy*)

**Room:** Amelia Ballroom 1

One of the more significant initiatives being taken on by the nuclear industry is the transformation of Maintenance organizations. The objective of this initiative is to improve efficiency and effectiveness and reduce the cost of maintaining the plants. In this session we will hear from plants that are piloting this transformation. Participants will take away actions that have been taken, their results and lessons that they can implement in their organization.

### WORK MANAGEMENT

See Maintenance

### OPERATIONS/OPS TRAINING

#### Operator Self Criticality and 4.0 Critiques

**Session Organizer:** Stephen Harris (*Southern Nuclear*)

**Participants:** Dan Randolph (*Exelon Corporation*), Wayne Jarman (*Duke Energy*), Ron Gibbs (*STP*)

**Room:** Cumberland C

Operating Crew continuous learning is a key component of sustained operator performance. The panel will discuss methods for identifying low level performance gaps, improving the self-awareness of Shift Managers and use of 4.0 critiques to drive this behavior.

### PERFORMANCE IMPROVEMENT & TECHNOLOGY AND INNOVATION

#### Enhancement of Workers Through 3-D Modeling, Virtual Reality, and Augmented Reality

**Session Organizers:** Fred Lake (*WD Associates*), Vincent Williams (*Southern Nuclear*)

**Participants:** Dan Arczynski (*Index AR Solutions*), Brian Doubinin (*3DInternet, LLC*), Carl Rytych (*Exelon Generation*)  
Carl Rytych (*Exelon Generation*)

**Room:** Amelia Ballroom 4

This session will be a joint panel discussion between Innovation and Technology and Performance Improvement. It's focus will be on how we can train and prepare our workers using VR and AR digital modules. 3D Models mimic actual plant layouts and can expose workers to varying plant locations and train them in a dynamic environment, while eliminating and/or reducing other radiological and safety hazards.

### REGULATORY RELATIONS

See Engineering and Equipment Reliability

### RISK MANAGEMENT

#### New Standard: Methodology, Upgrade versus Update, Impact on Models and Licensees

**Session Organizers:** Gerry Kindred (*TVA*), Rick Grantom (*CRG LLC*)

**Participants:** Ray Fine (*FENOC*), Rick Grantom (*CRG LLC*), Sunil Weerakkody (*US NRC*)

**Room:** Talbot A/B

This track consists of presentations focused on the upcoming new edition of the PRA Standard, which is expected to be endorsed by NRC in 2019 via RG 1.200. The scope of the Standard, major changes and the potential impacts on licensees with respect to existing PRA models, applications and future license amendment requests will be discussed. Clarification of the terms 'methodology,' 'PRA maintenance' and 'PRA upgrade' will also be discussed. A panel discussion will provide the audience the opportunity to ask industry experts questions regarding significant changes and potential and expected licensee impacts, as well as clarifications. This track is geared towards PRA practitioners and licensing staff.

### TECHNOLOGY AND INNOVATION

See Performance Improvement

## MONDAY AUGUST 6

EDUCATIONAL SESSIONS 3: 3:30-5:00 PM

### **BUSINESS/ECONOMIC PERFORMANCE, ENGINEERING AND EQUIPMENT RELIABILITY, MAINTENANCE, WORK MANAGEMENT**

#### **Is the Nuclear Promise Delivering on Value Based Maintenance?**

**Session Organizers:** Jon Anderson (*ACA*), Ted Quinn (*Technology Resources*), Ray Herb (*Southern Nuclear*)

**Participants:** Jon Anderson (*ACA*), Nally Osborne (*Duke Energy*)

**Room:** Amelia Ballroom 1

Revision 5 to INPO AP-913, Equipment Reliability Process Description, included a notable change that can reduce the number of “Critical” components. Theoretically, downgrading these components to “Important Non-Critical” should allow us to reduce the cost of the Preventive Maintenance (PM) Program (and the Total Cost of Maintenance). This session will present both sides of this initiative: (1) how much did we reduce Critical components and as importantly (2) how much did we reduce the cost of the PM Program and Total Cost of Maintenance.

### **EXECUTIVE/LEADERSHIP & PERFORMANCE IMPROVEMENT**

#### **DNP Initiative Status for the Industry and CAP-002 Lessons Learned**

**Session Organizers:** Fred Lake (*WD Associates*), Reiko Perleberg (*Southern Nuclear*)

**Participants:** Chuck Kharri (*APS*), Marcia Lesniak (*Exelon Corporation*), Jim Schleser (*Dominion*), Kevin Rackley (*TVA*), Sharon Peaveyhouse (*Duke Energy*)

**Room:** Amelia Ballroom 2/3

Learn where we are going next in the land of DNP and the lessons learned from the PI DNP initiatives. You will have an opportunity to ask the industry what they have learned and how the CAPO2 industry implementation is taking hold.

### **ENGINEERING AND EQUIPMENT RELIABILITY**

**See Business/Economic Performance**

### **SUPPLY CHAIN**

#### **Craft Labor - How to Reduce Costs Without Impacting Operations and Outage Schedules**

**Session Organizer:** Bill Fry (*Duke Energy*)

**Participants:** Mike Newell (*Duke Energy*)

**Room:** Ossabaw A/B

The nuclear industry spends billions on craft labor every year. Challenges regularly face utilities at every outage to continue to shorten the outage duration while at the same time reducing labor costs. This is contrary to intuition which would dictate that to get something done faster, we need to throw more labor at it. This session will focus on how utilities can reduce their craft labor costs and still shorten their outage duration. This can be achieved through active partnering with the craft labor providers and real-time engagement with the generation facility and site management to address things like crew mix, scope of work vs. applied resource, etc.... These and several other best practices will be discussed.

### **MAINTENANCE**

**See Business/Economic Performance**

### **WORK MANAGEMENT**

**See Business/Economic Performance**

### **OPERATIONS/OPS TRAINING**

#### **New Generation Operators**

**Session Organizer:** Meagan Neydegger (*Southern Nuclear*)

**Participants:** Dan Randolph (*Exelon Corporation*), Joy Ramsaywack (*Exelon Corporation*), Michael Spellman (*Duke Energy*)

**Room:** Cumberland C

As the industry ages the licensed operator turnover has been significant. Operations Managers are faced with challenges on how to manage this change. This discussion will focus on how to attract and retain the new age operator: What is different with their learning style and technology that makes them successful, How can organizations improve retention of younger talent, What changes need to be made to attract the new generation, How do different management styles impact the new generation compared to previous generations, and What are we as an industry doing to promote operations as a viable, versatile career path?

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## MONDAY AUGUST 6

EDUCATIONAL SESSIONS 3: 3:30-5:00 PM

### PERFORMANCE IMPROVEMENT

See Executive/Leadership

### REGULATORY RELATIONS

#### NRC's Transformation Initiative and Risk Informed Metamorphosis Update

**Session Organizer:** Jack Grobe (*Exelon Corporation*)

**Participants:** Brian Hollian (*US NRC*), Scot Greenlee (*Exelon Corporation*), Doug True (*Jensen Hughes*), Greg Halnon (*First Energy*)

**Room:** Cumberland A

The nuclear industry and the NRC are both challenged to be more effective with fewer resources. In addition, the nuclear fleet is operating at unprecedented levels of safety and reliability and new and novel technologies are being developed to meet future energy demands. The current regulatory framework needs to be refined and enhanced, and additional focus on safety and risk considerations in regulatory decision making is imperative. Transformation is critical to ensuring that the NRC's regulatory framework and organizational culture support adapting to external factors, and to facilitating safe and timely decision-making in a landscape of rapidly evolving technologies. In this session we will focus on the needs for regulatory transformation and discuss the recommendations and next steps emerging from the NRC's Transformation and Risk Informed Metamorphosis Teams.

### RISK MANAGEMENT

#### Using PRA Approaches (Without Models) to Resolve Regulatory and Design Issues

**Session Organizers:** Anil Julka (*NextEra*), Bill Webster (*Dominion Energy*)

**Participants:** Larry Naron (*Exelon Corporation*), Bill Webster (*Dominion Energy*), Anil Julka (*NextEra*), Sunil Weerakkody (*US NRC*), John Caves (*Duke Energy*)

**Room:** Talbot A/B

Risk-informed insights and decision making are being used to ensure that adequate resources are focused on those activities which are most important, thus ensuring nuclear safety is maintained. The nuclear industry has been successfully developing and applying risk-informed solutions to various issues without necessarily using PRA models as the basis. PRA techniques and case-specific risk insights from models have proved to be more cost-effective and timely solutions in certain instances. This session will share how industry is successfully implementing such solutions for questions about BWR Post-LOCA debris potential effects on reactor core cooling, seismic and fire alternative considerations for 10CFR50.69 categorization, risk-informed structural questions, and tornado missile design justifications (i.e. TMRE). A panel discussion will provide the audience the opportunity to ask industry experts questions regarding their experiences with these more efficient and nonetheless rigorous solutions.

### TECHNOLOGY AND INNOVATION

#### Digital "Mobile" Workers

**Session Organizers:** Vincent Williams (*Southern Nuclear*), Joan Knight (*Exelon Corporation*)

**Participants:** Aleksandar Vukojevic (*Duke Energy*), Vincent Williams (*Southern Nuclear*), David Harper (*General Electric*)

**Room:** Amelia Ballroom 4

This session focuses on how the workforce is becoming more digital and increasingly mobile. The importance of rugged mobile devices, reliable and continuous network connectivity, electronic documentation (including Electronic Work Packages (EWP) and the ability to digitally sign documents), and access to data for monitoring and diagnostics is at an all-time high. These digital assets and options are now streamlining the amount of accessibility workers now to complete daily tasks. We will look at how these capabilities are being leveraged presently and how we can all make plans to use them in the future.

## TUESDAY AUGUST 7

EDUCATIONAL SESSIONS 4: 10:30 AM-12:00 PM

### BUSINESS/ECONOMIC PERFORMANCE

#### The Nuclear Value Framework and Project Life Cycle

**Session Organizer:** Maria Hernandez (*Duke Energy*)

**Participants:** Kevin Dutton (*TVA*), John Alfulitis (*TVA*), Alex Payne (*Copperleaf*), John Williams (*Southern Nuclear*)

**Room:** Cumberland B

The Nuclear Value Framework can be defined as establishing a model or set of inputs in order to quantify both the clear costs of nuclear projects as well as the more abstract, less tangible costs like regulatory burden and safety among others. Establishing a robust framework allows for strong business cases with strong quantitative and qualitative justification, thoughtful alternatives and rigorously defended assumptions. Nuclear is unique and issues can arise when attempting to optimize portfolios across different businesses and fuel types. Participants will be exposed to these fundamental tools in order to direct funding and resources to projects with the most value while simultaneously understanding investment risk profiles and how these (and their financial consequences) change over time.

### EXECUTIVE/LEADERSHIP

#### Second License Renewal: Delivering the Nuclear Promise from 60 to 80 Years

**Session Organizer:** Andrew Taylor (*Sargent and Lundy*)

**Participants:** Mike Franklin (*Duke Energy*), Eric Oesterle (*US NRC*), Andrew Taylor (*Sargent and Lundy*), William Maher (*FPL*)

**Room:** Cumberland A

NRC approval of a renewed nuclear operating license under 10 CFR 54 allowed for an additional operating period of 20 years, which could require plant shutdown at the 60-year point. However, operation of a well-maintained facility with a sound design basis and a clearly-defined licensing basis for 80 years is a key element for realizing the full value of the asset. By the end of 2018, thirty-four units will have passed the 40-year mark for plant operation, with no plan for premature shutdown. Thus, one-third of the U.S. nuclear power industry will be eligible to apply for a second license renewal.

### ENGINEERING AND EQUIPMENT RELIABILITY & RISK MANAGEMENT

#### Realizing the Promise of 50.69 Risk Informed Component Categorization

**Session Organizer:** Shannon Rafferty-Czincila (*Exelon Corporation*)

**Participants:** Heather Szews (*Duke Energy*), Bryan Thiele (*APS*), Shannon Rafferty-Czincila (*Exelon Corporation*), Gerry Kindred (*TVA*), Adam Coker (*Southern Nuclear*), Dan Monahan (*Southern Nuclear*)

**Room:** Amelia Ballroom 2/3

In support of implementing the “Nuclear Promise” this track consists of sessions focused on 50.69 progress and lessons learned. This includes how the industry has been collaborating in order to gain alignment and resolve challenges, an understanding of the insights gained during the licensing process and expectations after implementation. In addition, the session will highlight real examples of how 50.69 provides a return on its investment. A panel discussion will provide the audience the opportunity to ask industry experts questions regarding their experiences with 50.69 over the past year. This session will be combined with other tracks to provide a broad based, multi-discipline understanding of the topics being discussed.

### SUPPLY CHAIN

#### One Site’s Trash is Another Site’s Treasure

**Session Organizer:** Greg Keller (*Rolls-Royce*)

**Participants:** Josh Bartlett (*Curtiss-Wright*), David Mueller (*Paragon Energy Solutions*)

**Room:** Ossabaw A

Inventory reduction is once again a popular topic, but unlike many past efforts to reduce inventory, sites do not have budgets available to write off excess inventory. The ideal solution to reduce inventory at one site is to find another site willing to pay book value for that inventory. There are several industry databases and each was created to fill a particular niche. These databases are being retooled to assist with inventory sharing across the industry. Forward looking demand data can help identify excess inventory as well as potential buyers of that inventory. This session explores several approaches to helping connect sellers and buyers of existing parts and equipment.

### MAINTENANCE

#### INPO Event Report (IER L2-17-09), Maintenance Technical Fundamentals

**Session Organizer:** Bryant Hearne (*INPO*)

**Participants:** Bryant Hearne (*INPO*)

**Room:** Talbot A/B

Since January 2015, weaknesses in maintenance technical fundamentals have contributed to 12 reactor scrams, 18 power reductions and numerous consequential events. Ten outages were affected adversely. Although INPO did not classify these events as significant, operating experience shows that the probability of a significant event remains increased until these weaknesses are corrected.

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## TUESDAY AUGUST 7

EDUCATIONAL SESSIONS 4: 10:30 AM-12:00 PM

### WORK MANAGEMENT

#### Streamlined Work Management (Status of Implementation)

**Session Organizers:** Pete Arthur (*INPO*), John McDonald (*Southern Nuclear*)

**Participants:** John McDonald (*Southern Nuclear*), Pete Arthur (*INPO*)

**Room:** Amelia Ballroom 1

Revision 5 to INPO AP-928, Work Online Work Management Process Description includes actions to streamline the Work Management Process. This session will include a discussion of concrete actions being taken by utilities to eliminate inefficiencies and dramatically increase the amount of work being performed on the plant and their results. Participants will take away real life lessons learned they can use in their organizations to streamline their Work Management processes, results of a survey to know exactly what plants have completed for each of the elements in this change and the results of their improvements.

### OPERATIONS/OPS TRAINING

#### Crew Performance Evaluation

**Session Organizer:** Bruce Hennigan (*Exelon Corporation*)

**Participants:** George Pickar (*Southern Nuclear*), Ron Gibbs (*STP*), Gregg Ludlam (*Entergy*), Dan Randolph (*Exelon Corporation*)

**Room:** Cumberland C

As the CPE process continues to evolve. Operations Managers must effectively and efficiently implement strategies for success. This discussion will center around the changes to the process and the best strategies for making the crew's successful.

### PERFORMANCE IMPROVEMENT

#### Aggregate Assessment Working Group Update

**Session Organizers:** Fred Lake (*WD Associates*), Reiko Perleberg (*Southern Nuclear*)

**Participants:** Peg Lucky (*Entergy*), Jennifer Kuklinski (*Northwest Energy*)

**Room:** Conference Room 2/3

Have you ever wondered what the industry stance is on Trending? Is there industry guidance for Trending? Well, look no further, this session will cover the work CAPOG has been doing to do just that. Hear where this initiative is at and where it is going.

### REGULATORY RELATIONS

#### Innovative Strategies to Address Intentional Noncompliance

**Session Organizer:** Jamie Coleman (*Southern Nuclear*)

**Participants:** Juan Peralta (*US NRC*), Ron Gaston (*Entergy*), Erin Henderson (*TVA*), Jamie Coleman (*Southern Nuclear*)

**Room:** Ossabaw B

The key to achieving excellence as a company and maintaining compliance with regulatory commitments is ensuring employees work at the highest levels of performance, trust and integrity every day. That means establishing a culture of personal accountability where employees uphold behavioral expectations, observe behaviors of those around them and report concerns immediately. This session will explore innovative ways to address intentional noncompliance through strategies that engage employees in personal accountability and inspire them to take ownership of their personal performance. Panelists will share how they are responding to recent events at their nuclear facilities that occurred because of willful misconduct. You'll learn about what contributed to the event, how the behaviors impacted plant performance and the innovative strategies that are being implemented to guide the right behaviors and avoid reoccurrence.

### RISK MANAGEMENT

#### See Engineering and Equipment Reliability

### TECHNOLOGY AND INNOVATION

#### Drones and Robotics

**Session Organizers:** Joan Knight (*Exelon Corporation*), Vincent Williams (*Southern Nuclear*)

**Participants:** Doug Durst (*Duke Energy*), Steve Hinkel (*Duke Energy*), Bob McNamara, Colby Ryan (*Exelon Power Labs*)

**Room:** Amelia Ballroom 4

This session focuses on how common work tasks, infrequently performed evolutions, and other types of work activities are now being performed with the use of drones (aerial, ground, and/or submersible) and other robotics. These feats of design and engineering are improving our safety cultures worldwide and allowing us to complete many tasks with higher efficiency.

## TUESDAY AUGUST 7

EDUCATIONAL SESSIONS 5: 1:30-3:30 PM

### BUSINESS/ECONOMIC PERFORMANCE & TECHNOLOGY AND INNOVATION

#### Blockchain and Energy - Let's Learn Together!

**Session Organizers:** Tim Crook (*Transatomic Power Corporation*)

**Participants:** Mark Johnson (*Clean Energy Blockchain*), Erfan Ibrahim (*The Bit Bazaar*), Adam Dow (*MCR*)

**Room:** Amelia Ballroom 4

Blockchain, the foundation for Bitcoin and cryptocurrencies, has burst into the technology and innovative process headlines! This distributed ledger technology has the potential to touch many aspects of the energy market from power generation to transmission, distribution and consumption. Typical applications involve legacy institutions with high transaction costs, market process inefficiencies, and decentralizing the ownership of assets from the tangible (power plants) to the intangible (zero emission credits). Recently, PG&E and Ameren (both nuclear utilities) have started pilot projects around blockchain technology with typical initiatives targeting cybersecurity, grid power calculations, export controls, and market transactions (e.g. Zero Emissions Credits). As blockchain development accelerates while simultaneously encountering regulatory and technology hurdles, this joint session seeks to provide an overview of applications in energy to participants in order to stay informed and push an industry reticent to change out of its comfort zone. Let's learn together!

### EXECUTIVE/LEADERSHIP & RISK MANAGEMENT

#### Risk Informed Decision Making

**Session Organizer:** Greg Krueger (*NEI*)

**Participants:** Greg Krueger (*NEI*), Mike Franovich (*US NRC*), Kelli Voelsing (*EPRI*), Joe Donahue (*Duke Energy*)

**Room:** Cumberland A

The incorporation of risk insights and concepts has been a fundamental objective of the NRC since promulgation of the PRA Policy Statement in 1995. The desire for increased use of risk insights has spurred a number of NRC and industry initiatives to better define risk informed decision making (RIDM) in the regulatory process. The goal of RIDM is to incorporate risk insights to accelerate implementation of a risk informed framework focusing activities and resources commensurate with the safety significance of an issue. Key topics will explore improved regulatory reviews of existing risk-informed licensing applications, incorporation of risk principles in traditional deterministic applications, incorporation of the improved understanding of the margin to NRC safety goals, and a focus on the use of risk insights rather than PRA models and numerical results.

### ENGINEERING AND EQUIPMENT RELIABILITY

#### Sustaining High Equipment Reliability

**Session Organizer:** Ray Newmaster (*Exelon Corporation*)

**Participants:** Sorin Marinescu (*Ontario Power*), Ray Newmaster (*Exelon Corporation*), Gary Wald (*Duke Energy*)

**Room:** Amelia Ballroom 2/3

In this session panel members will discuss what is being done in their organizations to maintain the "Right Equipment Reliability" at "The Right Cost" in support of "Delivering the Nuclear Promise" for the Long Term Asset Management for plants now operating for 60 years and some being extended to 80 years of operation. This session is meant to prompt an audience interaction of questions and discussion on the topic of Long Term Asset Management.

### SUPPLY CHAIN

#### Inventory Reduction: Best Practices and Lessons Learned

**Session Organizer:** Bill Fry (*Duke Energy*)

**Participants:** Jennifer Melvin (*Duke Energy*)

**Room:** Ossabaw A/B

Like many other industries, cost pressures continue to mount for the utility industry. This is especially true for regulated utilities like Duke Energy where regulatory oversight permeates every aspect of what the regulated utility does. Whether it's nuclear, or fossil, or renewable energy generation, every action a regulated utility takes must be prudent and contribute to keeping energy rates low for ratepayers. The managing of inventory is no exception. In fact, this is an area that for most industries can often be neglected and end up being an area with many millions of dollars in stranded assets. This session will not only focus on what a utility can do to reduce inventory, but also what governance process can be put into place to optimize those inventory levels going forward to ensure generation plant readiness while minimizing financial exposure in the warehouse.

Breakout  
Sessions:  
Tuesday  
August  
7

## TUESDAY AUGUST 7

### EDUCATIONAL SESSIONS 5: 1:30-3:30 PM

#### MAINTENANCE & WORK MANAGEMENT

##### What is Behind the INPO Performance Based Evaluations and How Are They Going to Affect Us?

**Session Organizers:** Peter Arthur (*INPO*), Bryant Hearne (*INPO*)

**Participants:** Pete Arthur (*INPO*), Bryant Hearne (*INPO*)

**Room:** Amelia Ballroom 1

INPO, as with other organizations, is taking actions to improve their effectiveness and efficiency. This session will include a discussion of what the new Performance Based Evaluations will look like, the new simplified index, value based evaluations and how these Evaluations will be conducted. Participants will hear from INPO on how this process is supposed to work and utilities that have already been through the new process.

#### WORK MANAGEMENT

See Maintenance

#### OPERATIONS/OPS TRAINING

##### INPO IER 17-005 Line of Sight to the Core and Improved Operator Performance

**Session Organizer:** Stephen Harris (*Southern Nuclear*)

**Participants:** Bill Stucker (*Wolf Creek*), Sara Lange (*Ameren*), Jon Austin (*Southern Nuclear*), Dan Randolph (*Exelon Corporation*)

**Room:** Cumberland C

Operator performance has been cyclical with downturns occurring approximately every six years. Previous improvement efforts have not achieved sustainable results. IER 17-005 addresses seven key contributors to this continuing trend. The panel will discuss implementation strategies for the following recommendations and evidence of performance improvement.

Recommendation 1 - Improve Leadership and Crew Teamwork

Recommendation 4 - Recognize and Mitigate Proficiency Shortfalls

Recommendation 5 - Improve Operator Training

Recommendation 6 – Promote understanding of Procedures Important to Protecting the Core

#### PERFORMANCE IMPROVEMENT

##### Industrial Culture and Human Factors

**Session Organizer:** Kimbel Leffew (*CNS – Consolidated Nuclear Security, LLC*)

**Participants:** Kimbel Leffew (*CNS – Consolidated Nuclear Security, LLC*), Morgan Perryman (*Pantex*), Lauren Clements (*Pantex*), Darrel Perkins

**Room:** Conference Room 2/3

A contemporary challenge of our time is the development of complex and significant technologies intended to improve our performance and ensure safe and highly reliable operation of our facilities. We have the ability to create huge amounts of information, far more than anyone can absorb, that can help us improve operations at our facilities or can confuse and overwhelm our workforce. Organizations must rise to the challenge and ensure effective integration, collaboration, and coordination of these technologies to ensure that human factors, behaviors and proficiency are used to enable maximum performance. Come learn from our panel of experts how to ensure that we use these advances in technologies to improve performance, reliability, safety, quality, productivity in our organizations and to result in improvements in overall organizational culture.

#### REGULATORY RELATIONS

##### The Committee to Review Generic Requirements and Backfit Experiences

**Session Organizer:** Darani Reddick (*Exelon Corporation*)

**Participants:** Eric Benner (*US NRC*), Jerry Bonanno (*NEI*), Darani Reddick (*Exelon Corporation*), Marty Murphy (*Xcel Energy*), Chris Nolan (*Duke*)

**Room:** Talbot A/B

Several reforms to the NRC's backfitting program have been instituted in the past year, including an increased role for the NRC's Committee to Review Generic Requirements (CRGR). This session will discuss the fundamental framework of the backfit rule and provide an update on the recent changes to the backfitting program. This session will also offer key insights from recent licensee backfitting experiences, describe ongoing challenges with the backfit rule, and explore potential improvements to the backfitting program. Attendees will refresh their understanding of the backfit rule, and leave the session with practical advice on how to most effectively tackle backfitting issues.

#### RISK MANAGEMENT

See Executive/Leadership

#### TECHNOLOGY AND INNOVATION

See Business/Economic Performance

Breakout  
Sessions:  
Tuesday  
August  
7



## TUESDAY AUGUST 7

EDUCATIONAL SESSIONS 6: 3:30-5:00 PM

### BUSINESS/ECONOMIC PERFORMANCE & EXECUTIVE/LEADERSHIP

#### Let's Get Down to Business

**Session Organizer:** Wayne Kinnison (*Texas A&M University*)

**Participants:** Bill Woodward, Matt Sunseri (*Zeus Enterprises LLC*), Everett Perkins (*Certrec Corporation*)

**Room:** Cumberland A

In this highly-competitive energy market, it is imperative that nuclear technical leaders become proficient in running a large business in addition to having a strong understanding of their technology. This session will feature a lively and interactive panel discussion featuring three well known and respected senior nuclear power plant executives, who will give examples of projects where business acumen (or lack thereof) in conjunction with a strong technical understanding allowed them to pull a success out of the mouth of defeat (or vice versa). Methods for improving this commercial knowledge will be discussed, including the program which is being started up at Texas A&M University to help technical experts start down the path towards being future industry leaders with the nuclear business knowledge and leadership skills that are required for the task.

### EXECUTIVE/LEADERSHIP

See [Business/Economic Performance](#)

### ENGINEERING AND EQUIPMENT RELIABILITY & RISK MANAGEMENT

#### Extracting and Applying the Insights from Fire PRA Models

**Session Organizers:** Gene Kelly (*Exelon*), Ed Simbles (*Jensen Hughes*)

**Participants:** Greg Zucal (*Jensen Hughes*), Gene Kelly (*Exelon*), Jeff Ertman (*Duke Energy*), Ed Simbles (*Jensen Hughes*)

**Room:** Amelia Ballroom 2/3

Many plants have fire PRA models in varied stages of evolution. Some are new and being finished; others are under review. Yet others are signed-off models of record, but undergoing additional refinement, and NFPA-805 plants have gotten there sooner. Such models are complex, which brings a whole new set of challenges. Given this considerable investment in fire modeling, we would expect the models to be useful with credible results. These models are "telling" us something, suggesting additional plant changes (procedures, modifications, transient controls) for a variety of reasons and benefits. This begs the question of what new insights are we gaining, other than large metrics and questions of realism? Where are the true risks due to fire at our plants ... and what are we doing about it?

### SUPPLY CHAIN

#### Keeping the Lines Alive

**Session Organizer:** Greg Keller (*Rolls-Royce*)

**Participants:** Robert Cole (*Framatome*), Julio Adame (*Curtiss-Wright*), Frank Helin (*Energy Steel*)

**Room:** Ossabaw A/B

Being a supplier in the nuclear industry has many high fixed costs. And for many products, the sales volume cannot support those fixed costs. Many companies that manufacture products for general industry have chosen to abandon their nuclear programs, finding the risks outweighing the potential rewards. Some of these manufacturers may not have high sales volumes, but do have large installed bases and dropped nuclear programs can have significant adverse effects. Several third-party suppliers have stepped in and kept various product lines alive. This session explores the various strategies for maintaining otherwise obsolete product lines, as well as the challenges involved.

### MAINTENANCE & WORK MANAGEMENT

#### Mis-position Events and Electrical Safety

**Session Organizers:** Jon Anderson (*ACA*), Pete Arthur (*INPO*)

**Participants:** Pete Arthur (*INPO*), Bryant Hearne (*INPO*)

**Room:** Amelia Ballroom 1

This session will discuss recent emerging industry events around component mis-positions and electrical safety.

### WORK MANAGEMENT

See [Maintenance](#)

Breakout  
Sessions:  
Tuesday  
August  
7

## TUESDAY AUGUST 7

EDUCATIONAL SESSIONS 6: 3:30-5:00 PM

### OPERATIONS/OPS TRAINING

#### Innovative Use of Simulator Training

**Session Organizer:** Darren Stiles (*Southern Nuclear*)

**Participants:** Bruce Hennigan (*Exelon Corporation*), Sara Lange (*Ameren*), Bill Stucker (*Wolf Creek*)

**Room:** Cumberland C

Innovative simulator training heightens operator engagement and allows stations to more directly focus their training on desired outcomes. Creative training solutions provide memorable and impactful experiences for operating crews. This panel will focus on innovative ways to challenge operators and improve operator performance.

### PERFORMANCE IMPROVEMENT

#### Industry Benchmarking Session

**Session Organizers:** Fred Lake (*WD Associates*), Reiko Perleberg (*Southern Nuclear*)

**Participants:** Kevin Rackley (*TVA*)

**Room:** Conference Room 2/3

An open forum to ask all the questions of the PI leaders in the industry to get a pulse on what, where, and when, and how your peers are headed. It is a great opportunity to see and hear what everyone is doing around the industry. You will not want to miss it!

### REGULATORY RELATIONS

#### Incorporating Risk and Safety Insights into the Reactor Oversight Process

**Session Organizer:** Chris Nolan (*Duke*)

**Participants:** Mike Franovich (*US NRC*), Greg Krueger (*NEI*), Greg Halnon (*First Energy*), Marty Murphy (*Xcel*), Jim Barstow (*Exelon Corp*), Ron Gaston (*Entergy*)

**Room:** Talbot A/B

The Reactor Oversight Process (ROP) has proven itself to be an effective tool that incorporates risk insights and has guided the Nuclear Regulatory Commission's (NRCs) inspection and assessment processes for over 15 years. This session will explore ways to further use risk insights and operating experience to drive efficiencies and eliminate redundancy in the program. This session will explore the industries experience with significance determinations and their interface with the RAS Handbook to better understand ways to make risk determinations more efficient. This session will also to provide insights into how we can transform the existing process to eliminate redundancies and provide a greater focus on safety. Refocusing the program on safety behaviors and the performance improvements gained when utilities find and fix their own gaps can provide more balance to the risk determinations that guide the Agencies decision-making.

### RISK MANAGEMENT

[See Engineering and Equipment Reliability](#)

### TECHNOLOGY AND INNOVATION

#### Data Analytics - DIANA

**Session Organizer:** Jerrold Vincent (*Arizona Public Service*), Vincent Williams (*Southern Nuclear*)

**Participants:** Bradley Fox (*Arizona Public Service*), Jerrold Vincent (*Arizona Public Service*)

**Room:** Amelia Ballroom 4

Using machine learning and artificial intelligence techniques, Palo Verde has developed several new tools that improve Condition Reporting processes. These tools include an Automatic INPO Performance Objective & Criteria Coder for Condition Reports, and the Data Ingestion and Network Analysis (DIANA) tool for automatic common cause analysis. The functionality of these tools will be presented, as well as the results of their use at Palo Verde. Additionally, the use of these tools external to Palo Verde will be discussed, including results of using the Automatic PO&C Coder on other Nuclear Industry data.

Breakout  
Sessions:  
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## WEDNESDAY AUGUST 8

EDUCATIONAL SESSIONS 7: 10:30 AM-12:00 PM

### BUSINESS/ECONOMIC PERFORMANCE, ENGINEERING AND EQUIPMENT RELIABILITY MAINTENANCE & WORK MANAGEMENT

#### What Others are Doing to Improve Work Management and Maintenance That Are Out of the Box for Us

**Session Organizer:** Jon Anderson (*ACA*)

**Participants:** Jon Anderson (*ACA*), Sorin Marinesco (*Southern Nuclear*)

**Room:** Amelia Ballroom 1

In this session other industries that are “ahead” of the domestic nuclear industry when it comes to how they manage their assets, including monitoring component performance, work management and maintenance. Some of these organizations include the use of continuous online monitoring and automatically generating work orders based on need. Participants will take away “out of the box” ideas on how other for-profit companies are more efficiently managing their resources.

### ENGINEERING AND EQUIPMENT RELIABILITY

See [Business/Economic Performance](#)

### MAINTENANCE

See [Business/Economic Performance](#)

### WORK MANAGEMENT

See [Business/Economic Performance](#)

### OPERATIONS/OPS TRAINING

#### Improving Shift Manager and STA Oversight

**Session Organizer:** Wayne Jarman (*Duke Energy*)

**Participants:** Matthew Norris (*Southern Nuclear*)

**Room:** Cumberland C

Shift Managers and STAs are continuing to be challenged to provide oversight and stay in role. The panel will discuss insights and practices to drive Leadership and Teamwork behaviors of Shift Managers and STAs.

### PERFORMANCE IMPROVEMENT

#### An Innovative PI Model that Pushes Efficiency While Improving the Results

**Session Organizers:** Reiko Perleberg (*Southern Nuclear*), Fred Lake (*WD Associates*)

**Participants:** Tim Steele (*Southern Nuclear*)

**Room:** Conference Room 2/3

Is there a Performance Improvement Model that drives the right behaviors, ownership, and accountability? Is there a model that does more with less? Can we still do this and achieve even better results? Well, come to this session and find out...

### REGULATORY RELATIONS & RISK MANAGEMENT

#### Solutions for Licensing Risk-Informed Initiatives (RICT, 50.69, TMRE) and Incorporating FLEX into Regulatory Activities

**Session Organizers:** Dave Mannai (*Entergy*), Bruce Morgan (*EPM*)

**Participants:** Mike Franovich (*NRC*), Greg Krueger (*NEI*), Andrew Howe (*EPM*), Joe Donahue (*Duke Energy*), Ken Lowery (*Southern*)

**Room:** Cumberland A

This session will discuss the regulatory roadblocks associated with utilization of risk-informed initiatives (RICT, 50.69, TMRE, FLEX) – and how the industry and regulator can arrive at consensus solution for these roadblocks. The session will be less about models and cutsets, and more about how industry can work more efficiently with NRC, to license and use these important initiatives. The session will explore what better licensing strategies can be employed, and understand what’s beneath the review delays, the associated NRC questions, and the attendant regulatory concerns. These initiatives are not just needed by industry – providing operational flexibility with no compromise in safety or quality - they represent an improvement in public health and safety. The technical issues in question (methods, common-cause failure, loss of function, PRA model quality) are not insurmountable. This combined session will attempt to better understand this fundamental licensing dilemma and chart potential solutions.

Breakout  
Sessions:  
Wednesday  
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## WEDNESDAY AUGUST 8

EDUCATIONAL SESSIONS 7: 10:30 AM-12:00 PM

### RISK MANAGEMENT

See Regulatory Relations

### TECHNOLOGY AND INNOVATION

#### DOE Research Reports - Common Cause Failures and Embedded Digital Devices

**Session Organizers:** Richard Wood (*University of Tennessee*), Suibel Schuppner (*US DOE*)

**Participants:** Ted Quinn (*Technology Resources*), Richard Wood (*University of Tennessee*)

**Room:** Amelia Ballroom 4

Concerns about Common-Cause Failure of Equipment with Embedded Digital Devices constrain the application of current technology to modernize plants. DOE is sponsoring research to contribute to the resolution of those concerns. Specifically, EPRI, industry, and universities are nearing completion of key projects focused on the underlying issue of assurance of CCF-resistance. The outcomes of these projects include definition of an extended, graded diversity and defense in depth analysis process, development of a model-based testing approach to provide objective evidence that test suites cover all postulated fault types, establishment of a simplified digital sequencer architecture suitable for verification by co-simulation, and generation of a hardware-based digital sequencer employing micro-logic implemented using Micro Electro-Mechanical Systems (MEMS) technology. The session provides description of the technical developments and discussion of opportunities to apply the resulting products and methods.

Breakout  
Sessions:  
Wednesday  
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# Exhibitors List

3DInternet	Booth 614	Joseph Oat Corporation	Booth 403
AECOM	Booth 316	Kinectrics	Booths 301, 303
AEGIS dba Electro Static Technology, An ITW Company	Booth 213	Konecranes Nuclear Equipment & Services	Booth 511
Aerofin	Booth 210	L3 MAPPS	Booth 509
Aggreko	Booth 506	Lean Power	Booth 209
Alithya	Booth 503	Lockheed Martin	Booth 405
Alphasource, Inc.	Booths 502, 504	Maxeta Technologies	Booth 410
ATOS	Booth 408	The McLain Group	Booth 409
The Austin Company	Booth 513	Mesa Associates Inc.	Booth 600
AZZ Nuclear	Booths 313, 315	Mirion Technologies (IST) Corp.	Booth 211
Barnhart	Booth 103	Mitsubishi Electric Power Products, Inc.	Booth 510
BCP Engineers & Consultants	Booth 606	Mitsubishi Nuclear Energy Systems, Inc.	Booth 205
BHI Energy	Booth 416	National Inspection and Consultants	Booth 214
Black & Veatch	Booth 601	Navigating Nuclear	Booth 109
Burns & McDonnell	Booth 407	New York Blower Company   SSM Industries	Booth 508
BWX Technologies, Inc.	Booths 306, 308	NextAxiom Technology, Inc.	Booth 104
CableLAN Nuclear	Booth 216	NTS	Booth 215
Canadian Nuclear Laboratories	Booth 414	Nuclear News	Booth 105
Ceradyne, Inc., a 3M Company	Booth 113	Nuclear Plant Journal	Booth 411
Certrec Corporation	Booth 09	Nutherm International, Inc.	Booth 101
ChemStaff	Booth 314	Power Services Group	Booth 615
Copperleaf Technologies	Booth 117	Radwaste Solutions	Booth 107
Curtiss-Wright Nuclear Division	Booth 402	ReNuke Services, Inc.	Booth 03
DataGlance	Booth 608	Rolls-Royce	Booth 302
Day & Zimmermann	Booth 501	RSCC Wire & Cable, LLC	Booth 515
EK USA	Booth 516	Strategic Insights Inc.	Booth 204
Electrical Builders, Inc. (EBI)	Booth 07	Structural Group	Booth 203
ENERCON	Booth 307	Structural Integrity Associates, Inc.	Booth 310
Energy Steel	Booth 415	Studsvik Scandpower	Booth 604
EnergySolutions	Booth 102	Sulzer Pumps (US) Inc.	Booth 305
EPM, Inc.	Booth 412	System One	Booth 304
EXCEL Services Corporation	Booths 05, 06	TECNATOM, S. A.	Booth 309
Fisher Improvement Technologies	Booth 116	Teledyne Brown Engineering	Booth 206
Flowserve Corporation	Booth 401	Thermo Fisher	Booth 505
Framatome Inc.	Booth 08	Toshiba America Energy Systems	Booth 406
Gateway for Accelerated Innovation in Nuclear (GAIN)	Booth 311	Transco Products Inc.	Booth 207
GLSEQ, LLC	Booth 208	UniTech Services Group	Booth 12
Imperia Engineering Partners, LLC	Booth 507	United Controls International	Booth 404
INL Light Water Reactor Sustainability Program	Booth 312	United Nuclear Industry Alliance (UNI)	Booth 04
James C. White Company, Inc.	Booth 605	ValvTechnologies	Booth 202
Jensen Hughes	Booth 613	Williams Industrial Services Group, LLC	Booth 11
		Wiss, Janney, Elstner Associates, Inc.	Booth 603
		Zachry Nuclear Engineering, Inc.	Booth 201



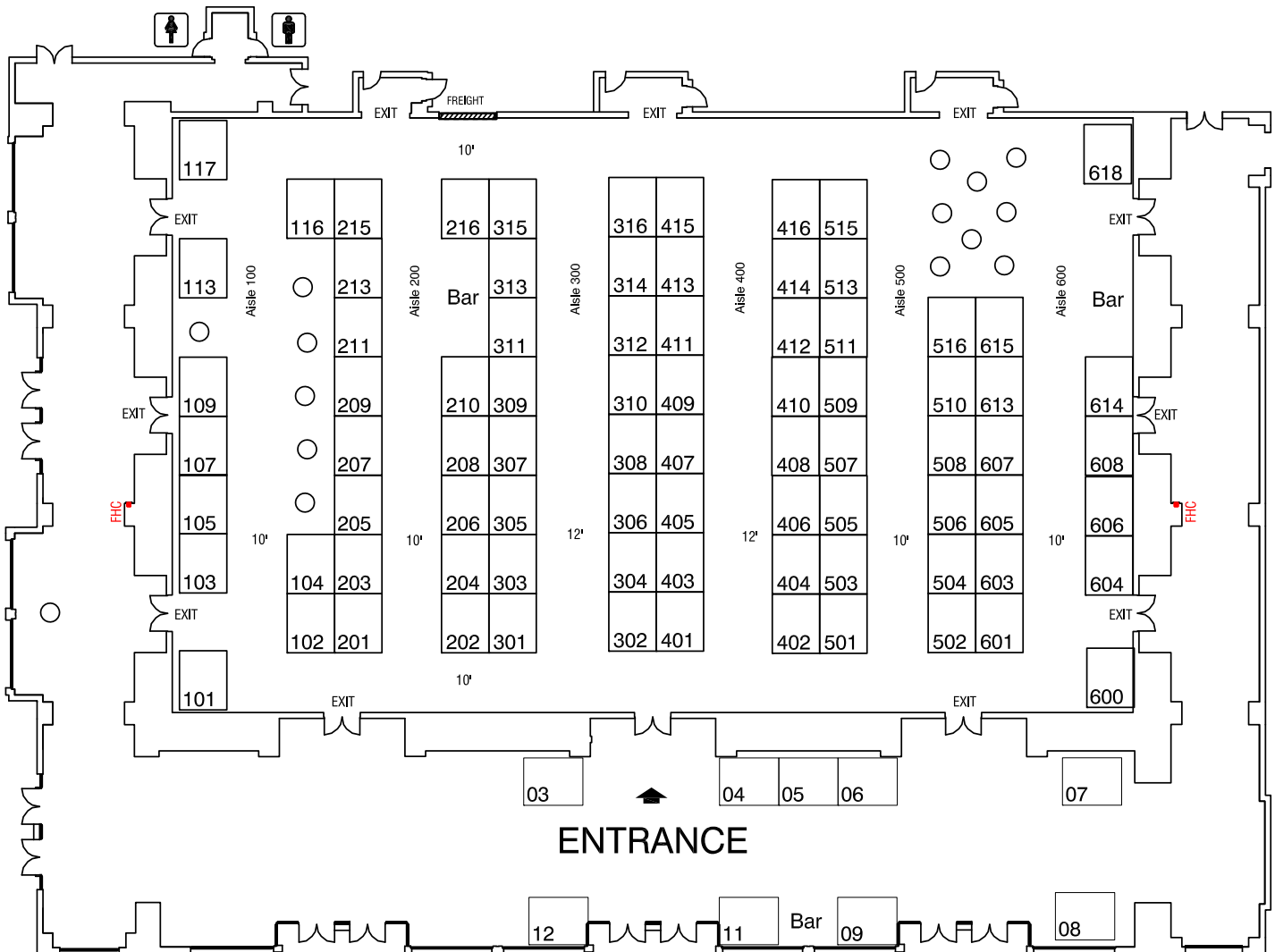
# ANS

# 2018 Utility Working Conference Vendor Technology Expo

Omni Island Plantation Resort  
Amelia Island, Florida

## EXPO HOURS:

Sunday, August 5	6:00-8:00 pm
Monday, August 6	7:00 am-4:30 pm
Tuesday, August 7	7:30 am-7:30 pm
Wednesday, August 8	7:30-9:00 am



# Exhibitors

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## **3DInternet**

Los Angeles, CA (Booth 614)

3DInternet is a leader in 3D technology development specializing in providing web-based, interactive courseware and App development for the Energy Industry and Utility Industries. We employ advanced gaming platforms and cinema grade animation for training simulations. Virtual reality (VR) environments are custom configured to client specifications. Visit us at [www.3dinternet.com](http://www.3dinternet.com).

## **AECOM**

Fort Mill, SC (Booth 316)

AECOM is a global network of design, engineering, construction and management professionals partnering with clients to imagine and deliver a better world. We provide support for new nuclear technologies, the small modular reactor market, major component replacements and facilities that support the nuclear fuel cycle, as well as D&D. [aecom.com](http://aecom.com)

## **AEGIS dba Electro Static Technology, An ITW Company**

Mechanic Falls, ME (Booth 213)

The AEGIS Reactor Pump Protection Ring (RPPR), manufactured by Electro Static Technology, and ITW Company, protects reactor coolant/recirculating pump face seals from electrical erosion by reducing the voltage potential between rotating shafts and the seal housing. AEGIS provides effective seal protection for an entire maintenance cycle between shutdowns.

## **Aerofin**

Lynchburg, VA (Booth 210)

Aerofin is a leading manufacturer of Safety Related and Non-Safety Related heat transfer equipment including extended surface cooling & heating coils, shell & tube heat exchangers, vessels, and parts. Aerofin holds ASME Certificates of Authorization for ASME N, NPT, NS, S, U and PP, and we are NUPIC audited.

## **Aggreko**

Houston, TX (Booth 506)

Aggreko is the global leader in providing mobile, modular power, cooling, heating and oil-free air solutions. With more than 50 years' experience, our unrivalled international experience and expertise helps businesses around the world improve productivity, manage power demands and plan for emergencies.

## **Alithya**

Toronto, Canada (Booth 503)

Alithya is one of the most prominent private strategy and information technology consulting firms in Canada. With clients in the financial services, telecommunications, energy, transportation, health care and government services sectors, Alithya advises, guides and assists its diverse clients in their pursuit of innovation and excellence.

## **Alphasource, Inc.**

Philadelphia, PA (Booths 502 & 504)

Alphasource is the leading custom manufacturer and distributor of quality FME/FOD maintenance and drop-prevention supplies, specialized RFID solutions and innovative safety supplies for the Nuclear Industry.

Benefit from our award-winning FME/FOD Turnkey Program, RFID-Barcode Operational Efficiency Solutions, Tarps/Protective Covers, MRO, Safety, Wiping Cloths, and Decon. Supplies Programs.

Count on us for field-proven products and services backed by three generations of practical experience with quick turnaround capabilities that ensure your deadlines and compliance needs are satisfied.

## **Atos**

Irving, TX (Booth 408)

Atos delivers real-time integration between IT and OT with sophisticated vertical solutions for energy and utility companies. With more than 35 years of experience across the power, water, oil and gas value chains, we help drive digital change and business value for energy and utility organizations. [www.na.atos.net](http://www.na.atos.net)

## **The Austin Company**

Cleveland, OH (Booth 513)

The Austin Company, founded in Cleveland, Ohio, in 1878, provides planning, architectural design, engineering, design-build, EPC, construction management, and construction solutions for nuclear support facilities throughout North America. We deliver "Results, not Excuses®".

## **AZZ Nuclear**

Fort Worth, TX (Booths 313 & 315)

AZZ Specialty Welding is the global leader in specialty welding solutions with over 40 years of experience solving critical issues including repair, replacement and overhaul solutions and services to the energy industry.

## **Barnhart**

Memphis, TN (Booth 103)

Over the last three decades, Barnhart has built an impressive nuclear project résumé. Our team of nuclear experts includes personnel with backgrounds from both the construction and operations side of the nuclear industry. And that experience directly translates into innovative solutions that provide our customers with the same outcome they desire – a safely executed and quality project that reduces schedule and overall project cost.

## **BCP Engineers & Consultants**

Gretna, LA (Booth 606)

BCP is an Engineering, Project Management and Specialty Services consulting firm that fills the gap between Design and Operations to deliver Safe and Reliable Power, Better. We provide trusted leadership for developing and implementing technical solutions and in bringing the right people, processes, and technologies at the right time.

# Exhibitors

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## **BHI Energy**

Weymouth, MA (Booth 416)

BHI Energy is a leading provider of specialty maintenance, professional and technical services to the power generation industry. With more than 38 years of experience, BHI's proven approach combines strong leadership with a highly skilled technical and craft workforce to deliver these services individually, or bundled as an integrated, turnkey offering to our customers.

## **Black & Veatch**

Overland Park, KS (Booth 601)

Black & Veatch is an employee-owned company with more than 100 offices worldwide. Our work results in long-lasting client relationships, reliable infrastructure improvements, and recognition from the industry as a global leader. Since 1915, we have provided comprehensive services to our clients across the globe. Learn more at [bv.com](http://bv.com).

## **Burns & McDonnell**

Kansas City, MO (Booth 407)

Burns & McDonnell is a full-service engineering, architecture, construction, environmental and consulting firm. Our over 6,000 employee-owners are comprised of engineers, architects, construction experts, planners, estimators, technicians and scientists. We plan, design, permit, construct and manage facilities all over the world, with one mission in mind: Make our clients successful.

## **BWX Technologies, Inc.**

Lynchburg, VA (Booths 306 & 308)

Headquartered in Lynchburg, Va., BWX Technologies, Inc. (NYSE:BWXT) is a leading supplier of nuclear components and fuel to the U.S. government; provides technical and management services to support the U.S. government in the operation of complex facilities and environmental remediation activities; and supplies precision manufactured components, services and fuel for the commercial nuclear power industry. With approximately 6,100 employees, BWXT has nine major operating sites in the U.S. and Canada. In addition, BWXT joint ventures provide management and operations at more than a dozen U.S. Department of Energy and NASA facilities.

## **CableLAN Nuclear**

Norfolk, MA (Booth 216)

CableLAN Nuclear is an Appendix B, NQA-1 distributor that supplies fiber optic and electrical communication products designed specifically for nuclear power plants. CableLAN Nuclear has decades of experience in specifying, designing and manufacturing fiber optic and electrical safety related cable - from outages to new reactors. We are active in IEEE nuclear standards development.

## **Canadian Nuclear Laboratories**

Ontario, Canada (Booth 414)

Canadian Nuclear Laboratories (CNL) is Canada's premier nuclear science and technology laboratory, dedicated to developing peaceful and innovative applications from nuclear technology through its expertise in physics, metallurgy, chemistry, biology, and engineering. We address global issues across the nuclear lifecycle and develop novel medical isotopes and devices.

## **Ceradyne, Inc., a 3M Company**

St. Paul, MN (Booth 113)

Stable isotopes from Ceradyne, Inc., a 3M company have been helping the nuclear industry operate more efficiently and safely for nearly 30 years. From reactor criticality control to fuel and waste management, our neutron absorbing materials are helping to make nuclear power a safer and more affordable option for powering tomorrow's world. [www.3m.com/boron](http://www.3m.com/boron)

## **Certrec Corporation**

Fort Worth, TX (Booth 09)

Founded in 1988, CERTREC is a regulatory compliance process expert that helps utilities manage the regulatory process to their advantage. With more than 1,000 cumulative years of regulatory and industry experience with the Nuclear Regulatory Commission (NRC), the Federal Energy Regulatory Commission (FERC), the North American Electric Reliability Corporation (NERC), and other Regional Entities, Certrec's Office of Licensing and Compliance, Office of NERC Compliance, Office of Assessment and Recovery, and New Plant services are used by utilities across North America.

## **ChemStaff**

Joliet, IL (Booth 314)

ChemStaff is an engineering consulting company serving the global power industry with core expertise in Chemistry, Engineering, Environmental, Radwaste & Health Physics Programs. We are headquartered in Joliet, Illinois, with 40+ consultants located throughout the US. Our team brings decades of experience working directly for leading US utilities and new power plant producers to solve problems and help optimize plant performance, reduce cost and operator burden, reduce radiation fields, improve compliance and build enduring value. Contact ChemStaff at [info@chemstaff.com](mailto:info@chemstaff.com)

## **Copperleaf Technologies**

Burnaby / BC / Canada (Booth 117)

Copperleaf™ is a global provider of decision analytics to organizations facing the challenges of managing critical infrastructure. We leverage operational and financial data to empower organizations to manage risk, improve performance, and deliver the highest value to stakeholders. [www.copperleaf.com](http://www.copperleaf.com)



# Exhibitors

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## **Curtiss-Wright Nuclear Division**

Brea, CA (Booth 402)

Curtiss-Wright Nuclear provides a comprehensive range of products and services that sustain the safe, reliable, and cost-effective operation of nuclear power plants worldwide. We offer proactive solutions to critical plant obsolescence issues, and we provide innovative technologies in support of Plant Life Extension and Delivering the Nuclear Promise.

## **DataGlance**

Fremont, CA (Booth 608)

DataGlance, Inc. develops products and services for Enterprise Data Management that support electronic Work Package (eWP), data conversion, data migration, data archiving, Web services, and document generation.

Our unique experience and skill sets with nuclear work management processes and data management has positioned DataGlance as the leading commercial nuclear power eWP solution provider.

## **Day & Zimmermann**

Lancaster, PA (Booth 501)

Day & Zimmermann is a leading provider of engineering, construction, and maintenance services for the power, process, and industrial markets. We deliver complex projects safely, on time, and within budget by leveraging wide-ranging capabilities, long-standing industry experience, innovative technology, and expert project teams. [www.dayzim.com](http://www.dayzim.com)

## **EK USA**

Logan, UT (Booth 516)

EK USA is a USA manufacturer and premier supplier of FME solutions which include, ID lanyards, Credential holders, Dosimeter leashes, tool leashes and multi device holders. New for 2018 is our anti-fog safety eyewear kits with our #1 rated anti-fog and goggle insert for safety eyewear and safety eyewear retainer.

## **Electrical Builders, Inc. (EBI)**

St. Cloud, MN (Booth 07)

For 44 years, EBI has served over 75% of the U.S. nuclear fleet and earned the reputation as North America's "Bus Duct Experts". Your one stop solution for; supply, installation, design, fabrication, modification, inspections, repair and more. EBI's expertise spans all OEM designs, both current and obsolete. Visit [www.electricalbuilders.com](http://www.electricalbuilders.com).

## **ENERCON**

Kennesaw, GA (Booth 307)

Enercon Services, Inc. (ENERCON) is an architectural engineering, environmental, technical and management services firm known for innovation, excellence, responsiveness and commitment. With 28 strategically located offices and over 1300 professionals, ENERCON provides a broad range of professional services to private, public, and government sector clients throughout the United States and internationally.

## **Energy Steel**

Lapeer, MI (Booth 415)

Energy Steel has over 35 years of dedicated "Exclusively Nuclear" service emphasizing safety and quality first while maintaining the highest certifications in the field. Experts in providing integrated solutions through custom fabrication. Specializing in pressure vessels, mechanical components, heat exchangers, piping, pumps, fabricated structural supports, and component refurbishment including replacement of OEM legacy parts & components.

## **EnergySolutions**

Oak Ridge, TN (Booth 102)

EnergySolutions is an international nuclear services company with operations and facilities in the United States, Canada, Asia and United Kingdom. Our more than 4,000 professionals provide integrated services and solutions to the nuclear industry. EnergySolutions is the global leader in the safe recycling, processing and disposal of nuclear material.

## **EPM, Inc.**

Framingham, MA (Booth 412)

EPM is a multi-discipline engineering company that provides services in fire safety, Deterministic and Performance based, PRA/PSA, Risk Informed Regulation, 10CFR50.69, RITS 4B, RITS 5B, PRA F&O closure, and other programs like Environmental Qualification (EQ), Safety Classification (Q-List). Our safety related software solutions include cable and raceway, cable aging management, post fire safe shutdown analysis and Environmental Qualification (EQ) modules.

## **EXCEL Services Corporation**

Rockville, MD (Booths 05, 06)

EXCEL Services Corporation provides operations, engineering, safety/regulatory services for the global energy industry, including License Renewal, Power Uprates, 24-Month Cycle Extensions, ITS Conversions/Upgrades, Training, New Nuclear Build, Critical Infrastructure Protection, and Executive Performance Solutions. In its 33-year history, EXCEL has worked globally and with every nuclear utility in the U.S.

## **Fisher Improvement Technologies**

Concord, NC (Booth 116)

Fisher Improvement Technologies provides consultation, mentoring, education, and proven technologies that enable our clients to improve safety, quality, effectiveness, efficiency and productivity. Companies utilizing our products and services report reducing fatalities and serious injuries to zero, substantially lowering error and event rates, and achieving excellent employee engagement. [improvewithfit.com](http://improvewithfit.com)

# Exhibitors

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## **Flowserve Corporation**

Charlotte, NC (Booth 401)

Flowserve provides comprehensive solutions for your Pump and Mechanical Seal needs. We offer a broad array of equipment and services: OEM Parts, Upgrades, Replacement Units, Installation and Turnkeys, Repair, Advanced Diagnostics, System/Equipment Assessments and Engineering Support. With heritage names like Byron Jackson and Pacific, we are here to support the nuclear customer and help deliver on the Nuclear Promise.

## **Framatome Inc.**

Lynchburg, VA (Booth 08)

Framatome Inc. in North America (former subsidiary of AREVA NP) combines U.S. and Canadian leadership to deliver innovative solutions and value-added technologies to support the operation of the commercial nuclear fleet and prepare for the next generation of nuclear power plants. Framatome Inc. has approximately 2,300 employees in North America.

## **Gateway for Accelerated Innovation in Nuclear (GAIN)**

Idaho Falls, ID (Booth 311)

GAIN's mission is to provide the nuclear energy industry with access to the technical, regulatory, and financial support necessary to move new or advanced nuclear technologies toward commercialization in an accelerated and cost-effective fashion. Through private-public partnerships, GAIN connects nuclear innovators to DOE national laboratory capabilities and RD&D programs.

## **GLSEQ, LLC**

Huntsville, AL (Booth 208)

GLSEQ, LLC is featuring GLS Advanced I&C Hydrogen and Oxygen Monitors. GLS Severe Accident Instruments: IS-SAIL™ and Condition Monitoring Instruments: M-FI™ require no electronics in containment and directly measure hydrogen, oxygen, temperature, and pressure. The benefits are streamlined SAMG scenarios and elimination of most equipment in combustible gas control systems.

## **Imperia Engineering Partners, LLC**

Bordentown, NJ (Booth 507)

Founded in 1986 as Altran, now Imperia Engineering Partners, delivers high quality, cost conscious multi-discipline engineering solutions to the nuclear power industry. We pay particular attention to our customers' concerns and critical requirements to optimize solutions. Our specialties in the nuclear industry include digital instrumentation and controls, engineering programs, operating plant Codes and Standards analysis and design, material science, and failure analysis.

## **INL Light Water Reactor Sustainability Program**

Idaho Falls, ID (Booth 312)

The Light Water Reactor Sustainability (LWRS) Program is an R&D program sponsored by DOE with participation by NRC and the nuclear industry. The LWRS Program leverages the extensive capabilities of DOE's national labs to provide the technical foundation for licensing and managing the long-term safe operation of existing nuclear power plants.

## **James C. White Company, Inc.**

Greenville, SC (Booth 605)

The manufacturer of TUBETRACK® AND CABLE-RACE®, complete systems for the support of instrumentation to control tubing, pipe, cable and instruments including solid stainless steel tube and pipe clamps. Custom machining and fabrication to customer specifications is available. Established 1954, supporting the nuclear industry since the early 1970's. Nuclear QA Program (10CFR50 Appendix B, ANSI N45.2, ASME NQA-1, ASME III NCA-3800, CSA 299.2).

## **Jensen Hughes**

Baltimore, MD (Booth 613)

JENSEN HUGHES is a comprehensive engineering firm dedicated to smart, practical solutions for the built environment. Strategically linking Engineering, Policy, and Research, our Power Services Group partners with utilities in creating optimal solutions for all disciplines, including civil-structural, mechanical, electrical, I&C, fire protection, thermal hydraulics, risk-informed engineering, and failure analysis.

## **Joseph Oat Corporation**

Camden, NJ (Booth 403)

Joseph Oat is a well renowned OEM designer and fabricator of Safety-Related products for the Nuclear Power Industry. We have supplied critical heat exchangers, coolers, pressure vessels, tanks, spent fuel canisters, and special NQA-1 component fabrications to nuclear utility customers worldwide. We have continuously held an 'N' Stamp certification since 1966 and maintain an excellent reputation in the industry. We Make Metal Work©.

## **Kinectrics**

Toronto / Ontario / Canada (Booths 301 & 303)

Kinectrics' offers expert capabilities and advanced lab facilities for radioactive materials and analytical chemistry testing, materials characterization, nuclear waste management, fuel channels, refurbishment, and licensing support. We provide complete life cycle management solutions for EQ and CGD, design engineering, reverse engineering, inspection and maintenance systems, and leading-edge nuclear inspection tooling. [www.kinectrics.com](http://www.kinectrics.com)

# Exhibitors

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## **Konecranes Nuclear Equipment & Services**

New Berlin, WI (Booth 511)

Konecranes can expertly provide all nuclear material handling equipment, services, and equipment modernizations worldwide with a capability of servicing and modernizing any manufacturers' equipment within nuclear power plants, nuclear waste storage, fuel processing, and test facilities including the most critical safety-related lifting equipment.

## **L3 MAPPS**

Montreal, Quebec (Booth 509)

Count on L3 MAPPS to effectively deliver a simulator solution that best suits your training or engineering needs. We offer simulators ranging from classroom trainers and system trainers to full scope operator training simulators including severe accident simulation—all designed and aimed at unlocking value for your organization. We even provide innovative learning technologies for efficient fundamentals and systems training.

## **Lean Power**

Chicago, IL (Booth 209)

Lean Power helps plants reduce costs and increase safety with smart procedures. We increase wrench-time efficiency, reduce human error, and eliminate administrative waste with digital, interactive, and mobile smart procedures. Convert your existing paper and PDF procedures instantly, preserve planner knowledge, trend manually collected data, and achieve fleetwide procedure consistency with Lean Power smart procedures.

## **Lockheed Martin**

Archbald, PA (Booth 405)

Headquartered in Bethesda, Maryland, Lockheed Martin is a global security and aerospace company that employs approximately 100,000 people worldwide. Lockheed Martin provides total systems solutions and services for civil nuclear power applications. Lockheed Martin has provided discrete and digital safety-critical instrumentation and control (I&C) systems for civil and DoD customers for over 60 years.

## **Maxeta Technologies**

Skillman, NJ (Booth 410)

Maxeta Technologies has been developing software for the nuclear energy industry for over 15 years. RadSurv, our electronic survey (eSurvey) software, streamlines the process of completing, storing and retrieving radiological surveys. Convert your manual surveys to a streamlined electronic process while saving time with self-service briefings. Other products include nTAP for facilitating self-assessments, and eWalkdown, web-based software for performing pre-work walkdowns.

## **The McLain Group**

Norco, LA (Booth 409)

The McLain Group, established in 1999, is a leading provider of top talent in the power industry. We are experienced at identifying the right people to meet critical staffing needs as well as the right jobs to meet career objectives. We are committed to satisfying both clients and candidates.

## **Mesa Associates Inc.**

Knoxville, TN (Booth 600)

Mesa is a woman/minority-owned full service multi-discipline engineering, procurement, and construction management firm providing engineering services for the nuclear power generation utility industry. Mesa provides BOP multidiscipline engineering support specializing in plant modifications, upgrades, and fast-track projects. Mesa has configuration verification and management capabilities ranging from laser scanning to 3D modeling to fab-level drawings. Mesa's staff is qualified and experienced in developing engineering/design modification documentation, 10 CFR 50.59 evaluations, and FSAR review/updates under our approved/proven Appendix B QA Program.

## **Mirion Technologies (IST) Corp.**

Horseheads, NY (Booth 211)

Mirion (IST) designs and manufactures in-core and ex-core detectors, electrical penetrations, thermocouples, temperature sensors, cable/connector assemblies, and electrical conductor seal assemblies. Mirion also manufactures visual imaging systems for use in both high and low radiation environments, as well as high temperatures and under water, health physics radiation detection and protection instruments, radiation monitoring systems, and dosimetry radiation monitoring services.

## **Mitsubishi Electric Power Products, Inc.**

Warrendale, PA (Booth 510)

Mitsubishi Electric Corporation (MELCO) is a world leader in designing, manufacturing and implementing advanced nuclear power plant control solutions, with more than 30 years of experience and plant-wide digital control systems installed in over twenty operating nuclear power reactors worldwide.

## **Mitsubishi Nuclear Energy Systems, Inc.**

Charlotte, NC (Booth 205)

Mitsubishi Nuclear Energy Systems (MNES), Inc. is the US nuclear subsidiary of Mitsubishi Heavy Industries (MHI), LTD. MNES delivers MHI's advanced technologies to the US nuclear market in the form of innovative NDE systems, heavy component fabrication, robust RCP seals, integrated engineering, and advanced reactor solutions.

## **National Inspection and Consultants**

Fort Myers, FL (Booth 214)

NIC can perform non destructive testing services on various segments of a nuclear plant.

NIC has established Quality Assurance Programs that meet the requirements of 10CFR50, Appendix B; NQA-1; 10CFR Part 21. NIC has been audited and approved by Nupic.

# Exhibitors

## **Navigating Nuclear**

LaGrange Park, IL (Booth 109)

ANS has joined forces with Discovery Education to launch Navigating Nuclear: Energizing Our World, a bold, new education initiative providing nuclear science and technology curriculum to 50% of U.S. schools. Learn about the program and how you can support or be a part of this landmark effort. [ans.org/navigatingnuclear](http://ans.org/navigatingnuclear)

## **New York Blower Company | SSM Industries**

Willowbrook, IL (Booth 508)

The New York Blower Company and SSM Industries have teamed together to provide filtration decommissioning skids to the nuclear industry. New York Blower is an industry leader in manufacturing premium-quality, engineered fans and blowers to the industrial, OEM and nuclear marketplace. SSM Industries, Inc. (formally Schneider Sheetmetal), is the largest Safety Related HVAC Designer-Fabricator-Installer in the United States with over 40 years continuous Nuclear Experience.

## **NextAxiom Technology, Inc.**

San Francisco, CA (Booth 104)

Nuclear Utilities worldwide use NextAxiom software to implement a seamless digital environment and deliver on the Nuclear Promise.

NextAxiom Digital Middleware enables a new class of advanced nuclear solutions such as: integrated electronic work package, interactive procedures, corrective action workflows, advanced real-time analytics, role-based mobile apps, and real-time application integrations.

## **NTS**

Huntsville, AL (Booth 215)

NTS Huntsville is one of the largest suppliers of safety related spare parts and a primary provider of Equipment Qualification and Dedication services to nuclear utilities and power plant equipment manufacturers worldwide. NTS is a leading organization providing valve qualification/certification, flow testing and snubber services for the nuclear industry.

## **Nuclear News**

LaGrange Park, IL (Booth 105)

Nuclear News, the official publication of the American Nuclear Society, is the world's premier nuclear magazine! Published since 1959, hundreds of nuclear-related vendors continue to rely on us to deliver their marketing message to nearly 11,000 readers throughout 60 countries every month. Editorial coverage includes plant operations, maintenance, security, international developments, waste management, fuel, and industry. Make advertising part of your business development strategy and subscribe to help stay informed [www.ans.org/NN](http://www.ans.org/NN).

## **Nuclear Plant Journal**

Downers Grove, IL (Booth 411)

Nuclear Plant Journal, a US publication now in its 36th year, provides technical information exchange among managers and engineers in nuclear power industry worldwide with over 12,000 readers. The editorial focuses on industry innovation, new plants worldwide and Small Modular Reactors. The Journal is published six-times per year and reaches every country in the world with a civilian nuclear energy program. The Journal is published in digital as well as printed version. Digital versions of the Journal may be upgraded with rich media provided by advertisers. The Products & Services Directory is published yearly in December. Online: [nuclearplantjournal.com](http://nuclearplantjournal.com); [facebook.com/nuclearplantjournal](https://facebook.com/nuclearplantjournal); [twitter.com/npjtweet](https://twitter.com/npjtweet). Representatives: Anu Agnihotri and Michelle Gaylord.

## **Nutherm International, Inc.**

Mt. Vernon, IL (Booth 101)

Nutherm is an innovative company committed to delivering world class solutions to the commercial nuclear power industry and the Department of Energy that meet the demands of the 21st century while providing unprecedented levels of service. We utilize our technical expertise to exceed customer's expectations. We will provide risk management solutions that create financial returns for our customers and manufacturing partners.

## **Power Services Group**

Anderson, SC (Booth 615)

Power Services Group (PSG) provides an alternative to the OEM for turnkey maintenance and repair of nuclear steam turbines. We focus on providing a cost-effective alternative to the OEM for steam turbine outages, with specialized expertise on steam turbine valve inspections at our nuclear qualified facility in Gainesville, Georgia.

## **Radwaste Solutions**

LaGrange Park, IL (Booth 107)

Radwaste Solutions is the only industry trade publication providing dedicated coverage of worldwide decommissioning and waste management activities. Editorial features include the generation, handling, transportation, treatment, cleanup, storage, and disposal of radioactive waste. The magazine was created by the American Nuclear Society in 1994 for members and professionals working within these specialized segments of the nuclear industry. If your company is performing or seeking work related to waste management and facility remediation, advertise or subscribe today: [www.ans.org/rs](http://www.ans.org/rs)

## **ReNuke Services, Inc.**

Oak Ridge, TN (Booth 03)

ReNuke brings innovative project management and staffing programs to commercial and government nuclear power markets. ReNuke's service offerings are supported by leadership with over 300 years of collective nuclear industry experience. We are technically qualified in project management, project controls, contract administration, engineering, licensing/regulatory affairs, operations, outage management, procurement, health physics, decommissioning, transportation, and quality assurance. ReNuke provides direct, turnkey project performance solutions for client's end of fuel cycle and radioactive waste management challenges.

# Exhibitors

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## **Rolls-Royce**

Huntsville, AL (Booth 302)

Rolls-Royce provides a broad range of commercial nuclear expertise with a focus on providing nuclear utilities with integrated, long-term support solutions and services. Its newly created Nuclear Services business provides a comprehensive suite of services and fleet solutions including remote tool design and delivery; engineering and obsolescence management services and software solutions, plant monitoring solutions; and an N-stamp custom design / build capability.

## **RSCC Wire & Cable, LLC**

East Granby, CT (Booth 515)

RSCC Wire & Cable, LLC is the premier full line manufacturer of Nuclear Safety cables with over 50 years of nuclear experience. In addition to Firewall III®, our flagship Low Voltage product line, we offer PermaLife™ Nuclear Qualified Medium Voltage Cables as well as specialty products, including fiber optic and data cables.

## **Strategic Insights Inc.**

Toronto / Ontario / Canada (Booth 204)

Strategic Insights is a market intelligence and strategy advisory firm specializing in nuclear, energy and infrastructure—We provide market and competitive analysis, business development and lead generation services. Choose the trust factor. We have steered \$5-250 million in new business to our clients.

## **Structural Group**

Columbia, MD (Booth 203)

STRUCTURAL, a Structural Group company, integrates technology-driven solutions into its industry-leading specialty contracting services. STRUCTURAL's specialty contracting services improve, protect, and repair infrastructure and are provided directly to owners or through general contractors and designers.

## **Structural Integrity Associates, Inc.**

Huntersville, NC (Booth 310)

Structural Integrity Associates, Inc. is an internationally recognized leader of engineering and inspection services for the prevention and control of structural and mechanical failures with more than 30 years of experience. We offer services from R&D to engineering, metallurgy, and nondestructive testing; from nuclear and fossil-fueled power plant support to oil and gas transmission pipeline applications; and renewable energy sources including hydro, geothermal and wind generation. Contact us today: 1-877-4SI-POWER, info@structint.com, www.structint.com.

## **Studsvik Scandpower**

Waltham, MA (Booth 604)

Studsvik Scandpower AB, GmbH and Inc., are part of Studsvik AB (STO:SVIK) headquartered in Stockholm, Sweden. Studsvik Scandpower's state-of-the-art software is used throughout the world for fuel and core design, in-core fuel management, core monitoring, transient analysis, simulator training for reactor operators, fuel pool criticality, and back-end analysis.

## **Sulzer Pumps (US) Inc.**

Chattanooga, TN (Booth 305)

The Sulzer Nuclear Service Center in Chattanooga has a quality program which meets 10CFR50 Appendix B and Part 21 requirements, holds N-stamp and NPT-stamp Certificates of Authorization for ASME Section III Classes 1, 2 and 3. We test, service, repair and provide parts for Sulzer and Non Sulzer pumps.

## **System One**

Pittsburgh, PA (Booth 304)

For more than 35 years, System One has delivered a full suite of staff augmentation, managed staffing, quality assurance, quality control, and NDE solutions to nuclear power producers, utilities, OEMs, EPCs, and service providers. We support the full production lifecycle, from licensing and construction to operations and maintenance. [www.systemone.com](http://www.systemone.com)

## **TECNATOM, S. A.**

Madrid, Spain (Booth 309)

TECNATOM is an engineering company owned by the Spanish utilities that provides products & services to the nuclear industry since 1957.

Its main technical capabilities are: Simulation & Control Rooms Supply and Modernization, NDT Inspection & Structural Integrity, Testing, Plant Operational Support, Training Centres, Development & Manufacture of NDT Equipment & Systems, Long Term Operation, New Comers, Safety Management and Emergency Response, carrying out projects in a wide range of technological areas for all type of reactors in more than 40 countries worldwide through their offices in France, Brazil, China, Emirates, Mexico and USA.

## **Teledyne Brown Engineering**

Huntsville, AL (Booth 206)

Teledyne Brown Engineering, Inc. has supported the nuclear industry for over 45 years and is a leader in providing innovative systems engineering, cutting edge technology, radiological analysis, and advanced manufacturing solutions. Our strengths in both engineering and manufacturing distinguish us from our competitors and allow us to provide extensive, precise solutions.

## **Thermo Fisher**

San Diego, CA (Booth 505)

Thermo Fisher Scientific is a leading provider of Class 1E qualified safety-related Nuclear Instrumentation systems and services for nuclear power plants world-wide. We manufacture neutron flux monitoring systems for all ranges of reactor power. Our systems demonstrate high immunity to EMI and noise and meet U.S. NRC RG 1.97 Post Accident Monitoring requirements. The company also offers radiation measurement systems, personnel dosimetry, data recorders, and radiation hardened cameras.

# Exhibitors

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## **Toshiba America Energy Systems**

Charlotte, NC (Booth 406)

Toshiba America Energy Systems Corporation (TAES) provides turbine/generator services and equipment for the energy industry in the Americas, including Nuclear, Fossil and Hydroelectric power plants. The dedicated service ethic of our employees and our rigorous safety culture combine with world class technology from Toshiba to result in high-quality, reliable and cost-effective products and services to meet your current and future power generation needs.

## **Transco Products Inc.**

Chicago, IL (Booth 207)

Transco Products Inc. is proud to introduce RadVision3D – a suite of 3D gamma detection, visualization, and mitigation products and services. With over seven decades of experience in the power industry, Transco has provided products and services to over 200 nuclear power plants around the world. Visit our website at <http://www.transcoproducts.com/products/radvision3dsolutions> to learn more.

## **UniTech Services Group**

Springfield, MA (Booth 12)

UniTech Services Group, Inc. is the world's largest supplier of nuclear protective clothing and accessories. Our nuclear licensed decontamination facilities throughout the US and Europe provide the following services: radiological laundering of protective clothing, decontamination and testing of respirators, and the decontamination of tools & equipment (scaffolding, hand tools, portable HEPA vacuums, etc.). Our products and services are designed to provide our customers cost effective protection for their workers with minimal generation of radioactive waste.

## **United Controls International**

Norcross, GA (Booth 404)

For over 40 years, United Controls International has delivered "The Quality Behind the Power" to a global nuclear clientele. Some of our services include: commercial grade dedication, harsh environment qualification, testing services, engineering services, motor services, and panel and MCC design/fabrication/integration, all performed under our NQA-1, 10CFR50 Appendix B, and ISO 9001 quality program.

## **United Nuclear Industry Alliance (UNI)**

Rockville, MD (Booth 04)

The United Nuclear Industry Alliance (UNI) functions to create interlocking business relationships among its Members and leverage the local, state, and federal government, to maximize Members' ability to reduce costs and be more competitive and reenergize the U.S. nuclear industry business domestically and globally. UNI is dedicated to the vision that within the next several years, the nuclear industry will have: preserved our current fleet; improved the efficiency and costs of generating nuclear power; and reenergized member ability to more effectively compete domestically and globally. UNI will aggressively work with local, state, and federal government, Congress and the industry to facilitate the development, continued use and future development projects for nuclear power.

## **ValvTechnologies**

Houston, TX (Booth 202)

Founded in 1987 and based in Houston, Texas, ValvTechnologies is the leading manufacturer of zero-leakage, severe service isolation valve solutions. Best known for our four-year zero-leakage guarantee, ValvTechnologies has been solving problematic valve applications for almost 30 years. ASME N & NPT Authorized with a 10CFR50 Appendix B program for safety related equipment. For more information visit our website at [www.valv.com](http://www.valv.com).

## **Williams Industrial Services Group, LLC**

Tucker, GA (Booth 11)

Williams Industrial Services Group, LLC (Williams), founded in 1958, provides a comprehensive range of maintenance, modification and construction services to the Nuclear & Fossil Power Generation sector, as well as multiple other markets. The service disciplines have ranged from mechanical, electrical and civil scopes in addition to specialty services such as coatings applications, lead and asbestos abatement, insulation, valve maintenance and repair, roofing systems, crane upgrades and enhancements and fire protection.

## **Wiss, Janney, Elstner Associates, Inc.**

Northbrook, IL (Booth 603)

WJE specializes in the investigation, analysis, testing, and repair and rehabilitation design of structures. More than two-thirds of the nuclear power plants in the United States have used WJE's services to assess a variety of structural and materials conditions associated with initial construction, modifications, structural monitoring, and license renewal.

## **Zachry Nuclear Engineering, Inc.**

Stonington, CT (Booth 201)

Zachry Nuclear Engineering is a full service engineering firm that provides Engineering, Analysis, Design, and Project Management services to the Nuclear Power Industry. Zachry offers the services of experienced mechanical, electrical, controls, civil/structural engineers and designers who are highly skilled in nuclear power plant systems, engineering analysis, including GOTHIC™, RELAP, RETRAN, RADTRAD-NAI™, and CentralStor™, as well as modification package development. For more information please visit [www.ZachryNuclear.com](http://www.ZachryNuclear.com) and [www.numerical.com](http://www.numerical.com).



# ANS Meetings

## 2018 Utility Working Conference and Vendor Technology Expo

*Our most sincere thanks to the following contributors for their support of the 2018 UWC Golf Tournament*

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Breakfast Sponsor



Luncheon Sponsor

# Golf Information

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## 2018 UWC GOLF TOURNAMENT

Sunday, August 5th, 8 am

### General Information

The 2018 ANS Utility Working Conference (UWC) Golf Tournament will be held at the Oak Marsh Golf Course starting at 8 am. This tournament is open to all conference attendees and guests. However, attendees must pay the appropriate fee to participate. When submitting your registration for the UWC, you must check the appropriate box on the registration form and make sure the golf fee is included in the "Grand Total" section.



Your foursome will be assigned after receipt of your registration, payment and e-mail, and you will be notified a week prior to the Tournament.

### Fees

A \$95 golf tournament fee is required from each UWC registered attendee. You may register your guest(s) for golf at a fee of \$125, per person. The fee includes:

- One round of golf, cart fee, and range balls prior to play
- Grab-N-Go Breakfast (at the course)
- Post-Tournament Lunch (at the hotel)
- Golf Prizes (Award Categories are TBD)

### Transportation

The Oak Marsh Golf Course is conveniently located on the property of the Omni Amelia Island Plantation Resort. Transportation will be provided to/from the main hotel and the Oak Marsh Golf Course, starting at 6:30 am.

### Format

The format of the tournament will be Captain's Choice or Super Ball. With this format each player will hit his/her drive. You select the best shot and everyone plays their next shot from that location. You continue this format until the ball is holed out.

We will make every attempt to have the teams evenly paired to keep the scores as competitive as possible. If you have someone that you wish to be paired with, please be sure to include this in the e-mail you send to the ANS Registrar.

### Cancellations

If you are unable to participate in the golf tournament after you have registered, please contact the ANS Registrar at [registrar@ans.org](mailto:registrar@ans.org), immediately. Refunds will be issued until Friday, July 13. No refunds will be issued after Friday, July 13, 2018; however, you may send a substitute.

Reminder: Registration for the ANS UWC Golf Tournament is not part of the conference registration fee. If you plan to participate in the 2018 UWC Golf Tournament, you must check the box on the conference registration form and include the payment in the "Grand Total" section. If the registration form, full payment and the required e-mail are not received, your foursome will not be assigned. Golf sponsors may contact Jeff Mosses direct by e-mail regarding preferred pairings at [jmosses@ans.org](mailto:jmosses@ans.org).





- LANDMARKS**
- ① Hotel Lobby
  - ③ Oceanside Wing
  - ⑥ Guest Breezeway
  - ⑦ Sunrise Wing
  - ⑩ Parking Garage
  - ⑫ Real Estate
  - ⑯ Plantation Chapel

- MEETINGS**
- ⑧ Sunrise Café
  - ⑮ Falcon's Nest
  - ⑲ Natural Slice
  - ⑳ Marche Burette
  - ㉑ PLAZE
  - ㉒ Verandah
  - ㉗ Marsh View Bar & Grill

- RESTAURANTS**
- ② Seaglass
  - ④ Oceanisde

- MEETINGS**
- ⑨ Conference Center
  - ㉓ Racquet Park Conference Center

- RECREATION & ACTIVITIES**
- ⑤ Pools
  - ⑪ Nature Center
  - ⑬ Heron's Cove Adventure Golf
  - ⑭ Canopy Park
  - ⑰ Amella's Wheels
  - ⑱ The Spa & Salon

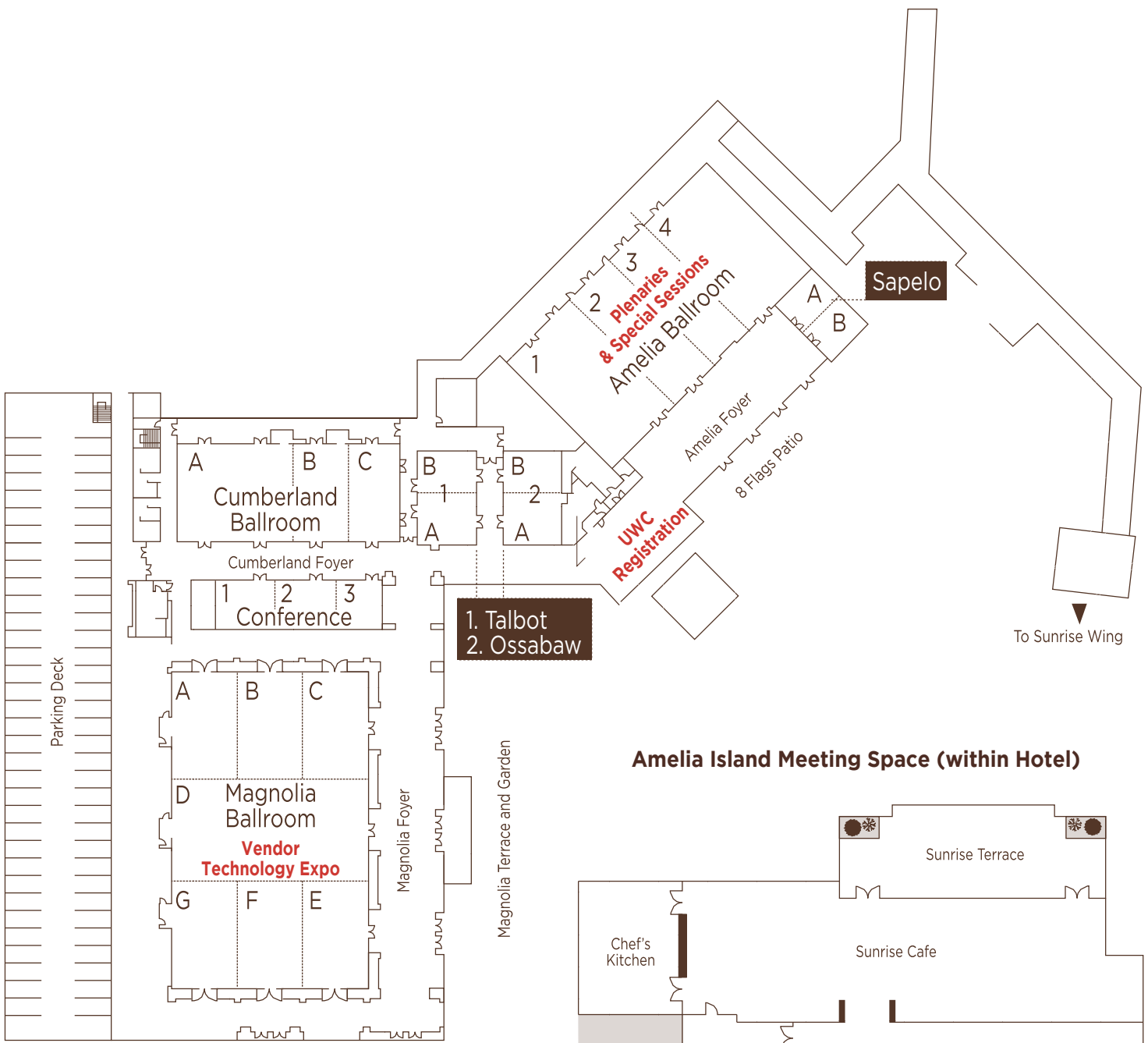
- MEETINGS**
- ⑨ Conference Center
  - ㉓ Racquet Park Conference Center
  - ⑲ Natural Slice
  - ⑳ Marche Burette
  - ㉑ PLAZE
  - ㉒ Verandah
  - ㉗ Marsh View Bar & Grill
  - ② Seaglass
  - ④ Oceanisde
  - ⑧ Sunrise Café
  - ⑮ Falcon's Nest
  - ⑲ Natural Slice
  - ⑳ Marche Burette
  - ㉑ PLAZE
  - ㉒ Verandah
  - ㉗ Marsh View Bar & Grill
  - ⑨ Conference Center
  - ㉓ Racquet Park Conference Center
  - ② Seaglass
  - ④ Oceanisde

- MAP ICONS INDICATE:**
- Roadways
  - - - Pedestrian Walkway
  - P Parking Lots
  - ☎ Ocean/Intracoastal
  - 🚏 Tram Stop
  - 🏖 Beach Access
  - 🎣 Fishing Area
  - 🌳 Nature Viewing
  - 🏀 Basketball Court

**OMNI HOTELS & RESORTS**  
 amelia island plantation

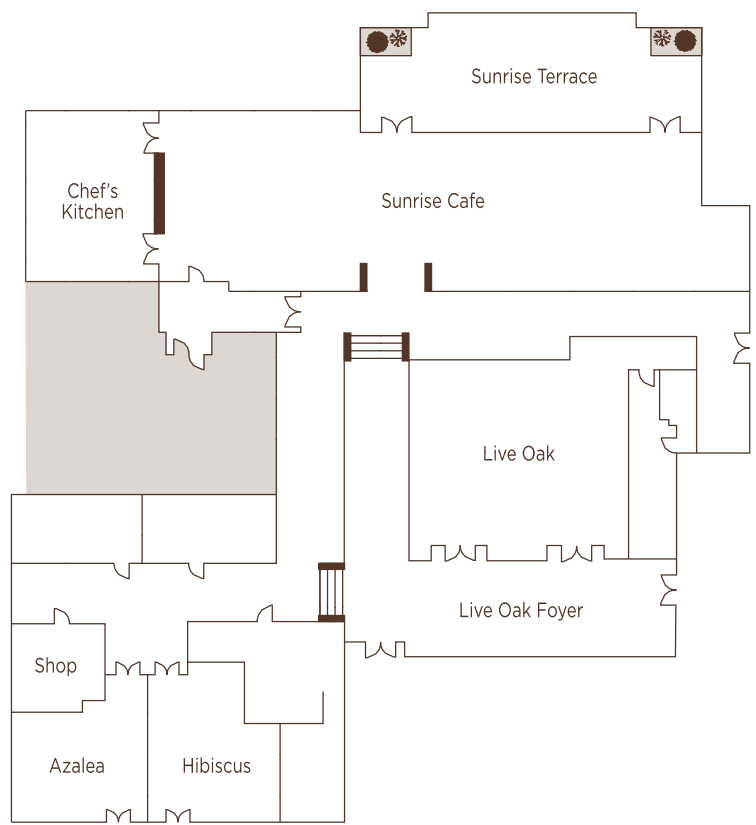
# Amelia Island Conference Center

▲ To Oceanside Wing



▼ To Sunrise Wing

## Amelia Island Meeting Space (within Hotel)







# ANS Meetings

**20TH TOPICAL MEETING OF THE RADIATION PROTECTION AND SHIELDING DIVISION OF THE AMERICAN NUCLEAR SOCIETY**

AUG 26-31, 2018 | Santa Fe, NM | Drury Plaza Hotel

**PLUTONIUM FUTURES—THE SCIENCE 2018**

SEP 9-14, 2018 | San Diego, CA | Wyndham San Diego Bayside

**ADVANCES IN NUCLEAR NONPROLIFERATION TECHNOLOGY AND POLICY CONFERENCE 2018**

SEP 23-27, 2018 | Wilmington, NC | Hilton Wilmington Riverside

**APPLICABILITY OF RADIATION-RESPONSE MODELS TO LOW DOSE PROTECTION STANDARDS**

SEP 30-OCT 3, 2018 | Pasco, WA | Red Lion Hotel Pasco

**2018 PACIFIC BASIN NUCLEAR CONFERENCE (PBNC 2018)**

SEP 30-OCT 5, 2018 | San Francisco, CA | Hyatt Regency

**2018 ANS WINTER MEETING AND NUCLEAR TECHNOLOGY EXPO**

NOV 11-15, 2018 | Orlando, FL | Hilton Orlando Bonnet Creek

**EMBEDDED TOPICAL: 23RD TOPICAL MEETING ON THE TECHNOLOGY OF FUSION ENERGY (TOFE)**

**EMBEDDED TOPICAL: INTERNATIONAL TOPICAL MEETING ON ADVANCES IN THERMAL HYDRAULICS**

**CONTE 2019: CONFERENCE ON NUCLEAR TRAINING AND EDUCATION: A BIENNIAL INTERNATIONAL FORUM**

FEB 5-7, 2019 | St. Augustine, FL | World Golf Village Renaissance St. Augustine Resort

**11TH NUCLEAR PLANT INSTRUMENTATION, CONTROL AND HUMAN-MACHINE INTERFACE TECHNOLOGIES (NPIC&HMIT) 2019**

FEB 9-14, 2019 | Orlando, FL | Renaissance Orlando at Sea World

**NUCLEAR AND EMERGING TECHNOLOGIES FOR SPACE (NETS) 2019**

FEB 25-27, 2019 | Richland, WA

**2019 STUDENT CONFERENCE**

APR 4-6, 2019 | Virginia Commonwealth University

**INTERNATIONAL HIGH-LEVEL RADIOACTIVE WASTE MANAGEMENT 2019 (IHLRWM 2019)**

APR 14-18, 2019 | Knoxville, TN | Knoxville Convention Center

**2019 ANS ANNUAL MEETING**

JUN 9-13, 2019 | Minneapolis, MN | Hyatt Regency Minneapolis

**19TH INTERNATIONAL CONFERENCE ON ENVIRONMENTAL DEGRADATION OF MATERIALS IN NUCLEAR POWER SYSTEMS - WATER REACTORS**

AUG 18-22, 2019 | Boston, MA | Seaport Hotel & World Trade Center

**GLOBAL/TOP FUEL 2019**

SEP 22-27, 2019 | Seattle, WA | The Westin Seattle

