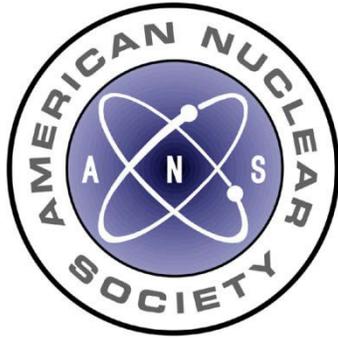


# Operations and Power Division

SPRING 2014



## From Your Chair

Mike Spellman

In 1994, a group of OPD members set out to create an annual conference that would bring together a cross-section of nuclear experts to focus on the industry's most immediate needs and challenges through a frank and timely dialog without the burden of formal presentations or unnecessary organizational barriers. They succeeded beyond expectations. The Utility Working Conference (UWC) continues to grow in the number of attendees and the diverse perspective of those attendees.

In keeping with the goal of the UWC creators, the 2014 UWC theme, "**Cost Effective Excellence**," will provide enhanced opportunities for a free exchange of multiple perspective ideas. Never in the history of the UWC – and maybe in the history of the US Nuclear Power Industry – has this free-flow of ideas been more needed and potentially beneficial.

Over the past 20 years, nuclear power plant operators in the US have continued to build systems and processes that inefficiently maintain safe operation of their nuclear plants. While no compromise in safety and plant system health can be tolerated, we must figure out how to more efficiently maintain our current high level of safe plant operation. US Nuclear Power Plants cannot continue to increase the cost of electricity production and survive.

This is why the 2014 UWC theme of "**Cost Effective Excellence**" is so timely and so important. The **Cost Effective Excellence** theme allows us as nuclear power plant operators the opportunity to combine ideas in an environment where no idea is taboo. Good, Bad, Half-baked and silly ideas are accepted. Good ideas stand on their own. Bad ideas often contain beneficial elements. Half-baked and silly ideas simply need combining and reworking. The UWC combines the best practices and ideas from across the industry to make recommendations for real improvement.

I hope all nuclear professionals will consider attending and actively participating in the 2014 UWC. If you have an area of expertise and would like to support this effort through presentation and organization, contact Bill Bishop and your area track leader.

Working together, we can make nuclear power more competitive and achieve **Cost Effective Excellence**.

### You are invited to attend...

#### 2014 International Congress on Advances in Nuclear Power Plants

April 6-9, 2014  
Charlotte, NC

### You are invited to attend...

#### 2014 ANS Annual Meeting "The U.S. Role in a Global Nuclear Energy Enterprise"

June 15-19, 2014  
Grand Sierra Resort, Reno NV

Embedded Topical Meetings:

*Decommissioning and Remote Systems (D&RS 2014)*

*Nuclear Fuels & Structural Materials for Next Generation Nuclear Reactors*

*International Topical Meeting on Advances in Thermal Hydraulics - 2014 (ATH '14)*

#### OPD Scheduled Meetings for Sunday June 15

Utility Working Conference Planning 11:30  
OPD Program Committee 2:30  
OPD Executive Committee 4:00

These meetings are open to all, and OPD members are encouraged to attend.

#### OPD Luncheon on Tuesday June 17

Guest speaker is the Honorable Peter B. Lyons, Assistant Secretary for Nuclear Energy, US Department of Energy

### You are invited to attend...

#### Utility Working Conference and Vendor Technology Expo "Cost-Effective Excellence"

Omni Amelia Island Plantation, Amelia Island, FL  
August 10-14, 2014

## ICAPP 2014

April 6-9, 2014

Charlotte, NC

The International Congress on the Advances in Nuclear Power Plants (ICAPP) provides a forum for leaders of the nuclear industry to exchange information, present results from their work, review the state of the industry, and discuss future directions and needs for the deployment of new nuclear power plant systems around the world. ICAPP will gather industry leaders in several invited lectures in plenary sessions.

Charlotte has the “who’s who” of energy. Nearly 200 energy companies, including major nuclear energy engineering firms, have chosen Charlotte as their home, which underpins an atmosphere of engineering excellence in the region.

This congress consists of peer reviewed published full-length technical papers, along with numerous plenary sessions featuring industry leaders. All authors will present their papers in English.

ICAPP is an annual event, cosponsored by ANS, Atomic Energy Society of Japan, Korea Nuclear Society and French Nuclear Energy Society and a number of major international nuclear societies.

Since its inception in 2002, ICAPP had been held biannually as an embedded topical meeting during the American Nuclear Society Annual Meeting. ICAPP is scheduled in Europe and Asia during the years that it is not held in the United States. As of 2014, ICAPP is being held as a separate topical meeting in the U.S., similar to its international standing.

Join us in Charlotte for ICAPP 2014 on April 6-9, 2014 at the Westin !!!

<http://www.icapp.ans.org/icapp14/index.html>

## Program Committee

Program Chair – Gale Hauck



The OPD Program Committee coordinates all of the technical sessions that OPD sponsors at ANS meetings.

The first step is planning and organizing the sessions. Over a year in advance, the OPD Program Committee brainstorms topics that would be of interest to our members. An OPD member prepares a short summary (100 words) of the proposed session. The member also decides if the sessions should be a paper session, consisting of technical paper presentations, or a panel session, which includes a panel of speakers.

Proposed sessions are submitted to the Technical Program Chair (TPC) of the meeting, who organizes all of the proposed sessions from all the divisions into the “Call For Papers,” which is issued around a year in advance of the meeting.

By five months before the meeting, the papers are written and submitted, and the speaker commitments are received for panel sessions. About four months before the meeting, representatives from all of the divisions finalize the meeting. At this time, the final meeting schedule is planned by assigning the various sessions to specific meeting rooms on a specific day.

There are many opportunities for your participation in ANS through OPD Program! One opportunity is to come up with an idea for a session and organize it. As a session organizer, you are responsible for making sure the session happens by asking others to submit papers or serve as panel members.

You can also serve as a speaker for a panel session. Most speakers are either deeply knowledgeable about the session topic or are strongly impacted by it. Generally, each speaker gets around 25 minutes to present at and answer questions from the audience.

If you are more interested in developing a paper, the requirement for a national meeting is a 1 to 4 page summary of the topic. Each paper author gets about 25 minutes to present their paper. The only real difference between a panel speaker and paper author is taking the time to summarize the presentation into a brief paper.

The benefit of submitting a paper is that the author gets to have their words and ideas immortalized in the ANS Transaction publication that is prepared for the meeting and given to each attendee. A panelist’s words and presentation are captured only in the memories of those people in the room at the time.

If you would like to get involved but are not able to write or present a paper, you can still support OPD Program by reviewing papers. Each paper that is submitted has to be reviewed by at least two people. The review is done online, so anyone can do it. A paper reviewer reads the paper, makes comments or suggestions, and makes a

recommendation if the paper is of high enough quality to include in the meeting. Reviewing papers is a great way to get involved with national ANS, as it can take less than an hour of your time.

Quality technical programs relevant to our members are of utmost importance. With planning starting a year in advance of each national meeting, timing is paramount in the selection of topics. These topics must reflect current interests in the nuclear industry and provide a balance between research, planning, and day-to-day operations. The perfect topic must balance fresh ideas with meaningful experience. If you'd like to participate, contact the Program Chair or any of the OPD officers.

## ANS Annual Meeting in Reno

**The OPD Luncheon is Tuesday June 17 at 11:30. The guest speaker is the Honorable Peter B. Lyons, Assistant Secretary for Nuclear Energy, US Department of Energy. This is a great way to meet other OPD members!**

The schedule for the OPD sessions during the Reno meeting is:

### MONDAY PM June 16 - Small Modular Reactor Developments

Small Modular Reactors (SMRs) have been a hot topic for several years, with designers planning to submit design certification applications to the USNRC beginning in mid-2014. Global interest continues for nuclear plant designs which expand the portfolio of currently offered designs to include those with power levels below 300 MWe. This session provides an update on recent developments in the design, licensing, and deployment of SMRs. Topics may include R&D activities, testing, licensing, modularization, and nth of a kind planning.

Session Chair: Sandra Sloan

Planned Panelists:  
Doug Lee (B&W mPower)  
Jose Reyes (NuScale Power)  
Stewart Magruder (NRC)

### TUESDAY AM June 17 - New Nuclear Construction Around the World (presented by the ANS Nuclear Construction Working Group)

This panel provides the latest information on the status and progress in new nuclear construction

around the world including government, regulatory, owner-operator, and vendor input. Speakers address the latest in key issues that have an impact on the selection of new designs and the status of construction activities.

Session Chair: Ted Quinn

Planned Panelists:  
Lawrence Burkhart (NRC)  
John Kelly (DOE)  
Keltoum Bouhelal (ENIM-Nat'l School of Mineral Industry)  
Ambassador Al-Kaabi (UAE)  
Kannan Iyer (IIT Bombay)

### TUESDAY 11:30 AM June 17 - OPD Luncheon in Charlie Palmer Steak

Guest speaker is the Honorable Peter B. Lyons, Assistant Secretary for Nuclear Energy, US Department of Energy

### TUESDAY PM June 17 - Advanced/Gen-IV Reactors

Session Chair: Art Wharton

- Efficiency of Nuclear and Conventional Air-Brayton Power Cycles
- A Comparison of a Recuperated Open Cycle (Air) Brayton Power Conversion System with the Traditional Steam Rankine Cycle for the Next Generation Nuclear Power Plant
- Market for Hot Air from Salt-Cooled Reactors with Air-Brayton Power Cycles
- Market Performance of the Mark 1 Pebble-Bed Fluoride-Salt-Cooled High-Temperature Reactor
- Hybrid Molten Salt Reactor (HMSR) System Study
- Chemical Compatibility of Containment and Other Materials with FHR Coolant Salts
- MSR On-line Reprocessing Technology and Nonproliferation Aspects
- Study of Neutronic-Thermohydraulic Coupled Calculation of SCWR
- Validation of AGREE with HTTR Control Rod Withdrawal Tests

## WEDNESDAY AM June 18 - Operations and Power: General

Session Chair: Don Eggett

- GIS Based Methodology for Evaluation of Water Use Constraints for NPP Site Selection in the Willamette River Basin
- Correlation Between the Microstructure and Mechanical Properties of Irradiated Fe - 9Cr ODS
- Thermal Annealing of Reactor Pressure Vessels: International Experience and US Perspectives

## WEDNESDAY PM June 18 - Post Fukushima Technology Enhancements to Improve Safety Margins--Paper/Panel

Session Chair: Ted Quinn

This session provides an overview of technology enhancements that have been developed or are in progress of development to improve safety margins since the Fukushima event in March 2011. This session addresses lessons learned in the advancement in technology to address both inside the design basis and outside the design basis safety margins. This session will consist of a technical paper and a panel of speakers who are involved with supporting the technology advancements to improve safety margins in the U.S. and around the world.

Planned Panelists:

Larry Burkhart (NRC)  
Doug Walters (NEI)  
James Gleason (IEEE SC2.1)  
Oliver Fritz (Schott)  
Claude Thibault (ASME)

Technical Paper

- Fukushima Lessons Learned - Severe Accident Goals

## Honors and Awards Committee OPD Honors and Awards Committee Chair (OPD First Vice Chair) – Dick Cole

The OPD Honors and Awards Committee is actively seeking nominations for the following

awards. While the deadlines for some submission are still a ways away, it's never too early to think about deserving nominees.

### Fellow of ANS

The honored membership grade of fellow is awarded to ANS members for outstanding accomplishment in any one of the areas of nuclear science and engineering. The worthiness of a given candidate for advancement to Fellow is determined by critical review and assessment of submitted credentials and qualifications; hence, nominators should take due care in determining the eligibility of the candidate and preparation of the nomination package.

Nominations for Fellows are evaluated by the Honors and Awards Committee, with the final decision made by the ANS Board of Directors.

The areas for qualifying as Fellow are:

- Notable original research or invention in the nuclear field.
- **Scientific or technical leadership in a nuclear enterprise of substantial scope.**
- Outstanding leadership as a teacher in the nuclear field.
- **Outstanding leadership in design, engineering, or operations in the nuclear power or other-related field.**
- Outstanding efforts in the areas of nuclear health, safety, or regulation.

The criteria highlighted in bold are directly applicable to areas where many OPD members work on a daily basis. **As Fellows from the commercial industry are under-represented, please consider if any your colleagues are deserving of this high ANS honor.**

To be eligible for consideration, approval and subsequent recognition at the ANS Annual Meeting, complete nominations must be submitted to ANS Headquarters by February 1. To be eligible for recognition at the ANS Winter Meeting, complete applications must be received by July 1.

Information about this award, including the nomination form, can be found at the following link: <http://www.ans.org/honors/va-fellow>

## Walter H. Zinn Award

This award was established in 1976 to recognize outstanding contributions to the advancement of nuclear power. It honors Walter H. Zinn, the Society's first president.

This award is granted to an individual for a notable and sustained contribution to the nuclear power industry that has not been widely recognized. It may be a technical contribution, one of leadership, or other notable service to the industry.

Zinn Award recipients are selected by the Operations and Power Division Honors and Awards Committee. Nominations (candidate names and supporting information) for the Zinn Award can be submitted throughout the year by Operations and Power Division members. Nominees need not be ANS members. Nominations are due January 22 and should be sent to the OPD First Vice-Chair.

Information about this award, including the nomination form, can be found at:  
<http://www.ans.org/honors/va-zinn>

## Meritorious Performance in Operations Award

This award was established in 1984 to recognize and honor outstanding achievement in the field of nuclear reactor operations.

The recipient may be a team or an individual. The award is intended for licensed and unlicensed personnel who comprise an active part of the operation of a nuclear facility and who have performed these duties in an exemplary manner. Following are several activities that may qualify the candidate for outstanding performance in the operation of nuclear facilities:

- Long term, superior performance in the discharge of normal operations,
- New or novel effective solutions to problems pertaining to nuclear operations,
- Outstanding and/or innovative applications of nuclear facilities to contribute to enhanced education, research, development or training programs,
- Long-term, safe operation with a high availability factor,

- Development and implementation of novel operating, maintenance or surveillance techniques and procedures,
- Development of a new or novel application of the nuclear facility or its by-products, or
- Any significant action worthy of national attention.

Meritorious Performance in Operations Award recipients are selected by the Operations and Power Division Honors and Awards Committee. Nominees need not be ANS members. Nominations may be submitted at any time during the year, but should be submitted by March 1 to be considered for the current year. Nominations should be sent to should be sent to the OPD First Vice-Chair.

Information about this award, including the nomination form, can be found at:  
<http://www.ans.org/honors/va-m pops>

## Utility Leadership Award

This award was established in 1994 by the Operations and Power Division to recognize an individual who has demonstrated outstanding leadership and has contributed greatly to the success of the nuclear power industry. Since the award criteria are non-specific, the nomination package must provide supporting details and sufficient facts for the selection committee to make an informed decision.

The award is presented each year in conjunction with the ANS Utility Working Conference (UWC). Nominations may be submitted at any time during the year, but should be submitted by April 30 to be considered for the current year. Nominations should be sent to the OPD First Vice-Chair. Information about this award, including the nomination form, can be found at: <http://www.ans.org/honors/va-utilleader>

## Utility Achievement Award

This award was established in 1994 by the Operations and Power Division (OPD) to recognize the commercial nuclear power plant(s) that demonstrate outstanding achievements in performance. The achievement may be either sustained outstanding performance or outstanding improvement in performance. Since the award criteria are non-specific, the nomination package must provide sufficient detail for the selection committee to make an informed decision.

The award is presented each year in conjunction with the ANS Utility Working Conference (UWC). Nominations may be submitted at any time during the year, but should be submitted by April 30 to be considered for the current year. Nominations should be sent to the OPD First Vice-Chair. Information about this award, including the nomination form, can be found at: <http://www.ans.org/honors/va-utilachieve>

## National Committees

### WANTED ALIVE!

OPD Members for Division and National Committees

Several national committees and OPD committees are looking for willing volunteers. A complete listing of the committees, with descriptions and requirements, is available at: <http://www.ans.org/about/committees/>

Interested OPD members may volunteer directly through the website, or may contact the OPD Chair for a recommendation from the Division. This is a great way to become more familiar with the way ANS operates, and a great way to network with professionals from all aspects of the industry.

## 2014 Utility Working Conference “Cost-Effective Excellence”

August 10-14, 014

### Omni Amelia Island Plantation Amelia Island, FL

**Technical Program Chair – Bill Bishop**  
**Assistant TPC – Marilyn Kray**  
**Assistant TPC – Tom Remick**

Continuous “Cost Effective Excellence” is the challenge that everyone in the nuclear generation fleet faces in the business climate of today. This, the 20th anniversary of Utility Working Conference, is sponsored by the Operations & Power Division and the Utilities Services Alliance, and is the premier opportunity to gain insights and information to move your station and utility forward.

The track leaders and organizers are committed to deliver information and good ideas at the 2014 UWC that

cannot be obtained from other conferences; much of the information will be delivered for the first time at the UWC. They have lined up an impressive slate of speakers, facilitators, and panelists from across the industry.

For example, if you are interested in Work Management and Maintenance cost and burden reductions this is the track for you. This track is a facilitated interactive discussion with Work Management and on day one Maintenance Managers to share ideas and assist each other in safely improving our cost effectiveness. Attending this track will be equivalent to making at least 10 individual benchmarking trips. What a cost savings!

There are also tracks for Operations, Engineering, Supply, Risk Management, Training, Performance Improvement, Emergency Response, Regulatory Relations, Business and Executive topics. The attendees at this year’s UWC will have a difficult time figuring out which sessions to attend - they are that good.

All of the sessions are complemented by an outstanding Vendor Technology Exposition. The Expo gives you the opportunity to talk directly to vendors and suppliers about how they can help us get the right results. Together, we will all move to a higher level of “Cost Effective Excellence.

This year also marks the return of the UWC to its traditional home at Amelia Island. The facilities there have been significantly expanded and upgraded, so it should be a great location for this essential conference.

Complete UWC information will be available at:

[http://www.ans.org/meetings/c\\_2](http://www.ans.org/meetings/c_2)

Hotel reservations can be now at the special UWC rate through the above meeting listing :



**OPD Leadership**

**OPD Officers**

Chair: Mike Spellman  
michael.spellman@duke-energy.com

First Vice-Chair: Dick Cole  
recole73@hotmail.com

Second Vice-Chair: Tom Remick  
thomas.remick@aps.com

Secretary: Art Wharton  
utnuke@gmail.com

Treasurer: Vince Gilbert  
vince.gilbert@excelservices.com

**OPD Executive Committee**

Term Expiring June 2014

Leo M. Bobek  
Richard E. Cole  
Artice Daniels  
Richard E. Gadbois  
Vince Gilbert  
Jere H. Jenkins  
Thomas A. Remick  
Michael L. Spellman

Term Expiring June 2015

Scott W. Ackerman  
Carolyne Joseph  
Frederick Markl Reinhart  
William Arthur Wharton

Term Expiring June 2016

Michel Debes  
Ben Holtzman  
Thomas H. Newton

Term Expiring June 2017

Frank Helin  
Myron M. Kaczmarek  
Ludwig E. Thibault  
Tammy L. Way



**OPD Program Committee Chair**

Gale Hauck  
hauckge@westinghouse.com

**Nuclear Construction Working Group Chairs**

NCWG Co-chair: Ted Quinn  
tedquinn@cox.net

NCWG Co-chair: Kyle Turner  
kyleturn@att.net

**2014 UWC Technical Program**

Technical Program Chair: Bill Bishop  
WHBishop@pplweb.com

Assistant TPC: Marilyn Kray  
Marilyn.kray@exelon.com

Assistant TPC: Tom Remick  
thomas.remick@aps.com

**2015 UWC Technical Program**

Technical Program Chair: Marilyn Kray  
Marilyn.kray@exeloncorp.com

Assistant TPC: Bill Bishop  
WHBishop@pplweb.com