



A Quarterly Update on U.S. WIN Activities

In this issue...

2nd Qtr 2014

U.S. WIN Chapters Expand Outreach Efforts during National Nuclear Science Week

Chapters and members of U.S. WIN turned out in force during National Nuclear Science Week (NNSW) to expand or establish new education and outreach efforts in the areas of science, technology, engineering and math (STEM). Several chapters' events were joined by chapters of North American Young Generation in Nuclear (NAYGN), and many included showings of Pandora's Promise, a 2013 documentary film directed by Robert Stone, which looks at changing attitudes in favor of nuclear power in the renewable energy debate. This quarter's issue details these important efforts to educate the public, encourage young people to pursue careers in STEM and inspire those currently in the industry to find new insight and inspiration in their work.

AREVA Celebrates NNSW in Lynchburg

Peggy Hobbs
AREVA Inc.
Region II

The Lynchburg, Va. chapters of U.S. WIN and NAYGN hosted a series of events to promote NNSW in recognition of nuclear science and the role it plays both locally and around the world.

Nuclear Clean Air Energy IndyCar driver Simona De Silvestro kicked off the event with a discussion stressing the importance of pursuing education and careers in STEM during a lesson on nuclear energy basics at a local STEM academy. Later that day, AREVA president and CEO Mike Rencheck addressed AREVA employees at a Lunch & Learn session, highlighting the importance of public outreach and encouraging them to participate in nuclear advocacy activities in support of the industry.



Nuclear Clean Air Energy IndyCar driver Simona De Silvestro (r, in black) talks with students of XLR8 STEM Academy in Lynchburg, VA

“As a world leader in the nuclear industry, AREVA plays an active role in advancing the dialogue about the importance of nuclear power and nuclear technology,” Rencheck said. “Outreach activities such as NNSW are aimed at building the workforce vital to tomorrow’s clean energy economy. We intend our participation in activities to spark additional interest in STEM education to inspire our industry’s next generation of leaders.”

Later that evening, members of U.S. WIN and NAYGN welcomed over 100 guests to a public screening of Pandora’s Promise. Attendees included representatives from local industry and civic organizations, public officials, students and citizens.

Ben Cavanaugh, a senior at Central Virginia Governor’s School, was impressed by the documentary: “Seeing how these formerly anti-nuclear environmental activists changed

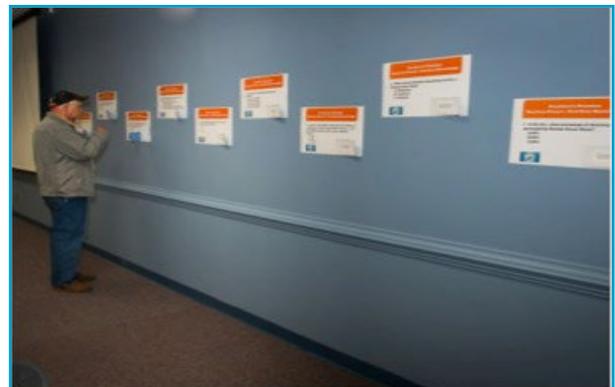
over to support nuclear power was surprising. I think if more people took the time to look at the real data [about nuclear energy] like those guys did, we would be building more nuclear plants in the U.S.”

AREVA also hosted other public screenings of Pandora’s Promise in Aiken, S.C. and Richland, Wash., and mobilized its employees in other areas of the country to support activities promoting NNSW. In partnership with utility customers, universities and community organizations, AREVA participated in a variety of activities including workshops for the Cub Scouts and Girl Scouts, a workforce development day in Aiken, S.C., and another visit by Simona De Silvestro to Augusta, Ga.

Throughout the year, AREVA and its employees across North America donate thousands of volunteer hours to promoting greater awareness of nuclear power through a variety of community service activities, contributing to forward-looking energy that makes a difference in our industry and in the communities where we live and work.



AREVA Chapter President Gloria Witt welcomes guests to the screening of *Pandora’s Promise* at AREVA’s Lynchburg, VA, facility.



Prior to the screening of *Pandora’s Promise*, attendees had an opportunity to test their knowledge of nuclear energy.



Oak Ridge Members Support 3rd Annual Science Expo

Julie G. Ezold
Oak Ridge National Laboratory
Region II

On October 26, 2013, the Science Club hosted its third annual Science Expo at the L&N STEM academy in downtown Knoxville, TN., scheduled to coincide with NNSW. The Science Club is a subsidiary of the Oak Ridge/Knoxville American Nuclear Society ANS and volunteered via the Oak Ridge Chapter of U.S. WIN. In addition to these two professional organizations, the event received generous support from both corporate and individual sponsors from across the East Tennessee region.

This year's event built on feedback received from previous Expos held in February 2012 and 2013 and was expanded to accommodate up to 200 children and their chaperones. The children were divided by age groups, with grades K-2 attending in the morning and grades 3-5 attending in the afternoon. This division allowed the instructors to tailor activities to the respective age groups. Student-teachers from the University of Tennessee were also on-hand to assist with instruction and provide feedback for the future Expos.



200 children and their parents enjoyed six STEM-related activities free of charge at the third annual Knoxville Science Expo.

Nothing stimulates interest and understanding as much as hands-on experience and play. The students participated in five hands-on activities related to radiation and detection. These activities included:

- **Nuclear Security:** How to be a nuclear detective – using radiation detectors to hunt down hidden source material
- **Simple Circuits:** How does electricity work and How it is used in a radiation detector? – building simple circuits with bread boards
- **Electromagnetism:** How can electricity be used to make a magnet and how can we see the flow of electricity? – building electromagnets and observing their effects
- **Cloud chambers and other cool stuff:** Watch the decay of atoms with your own eyes – observing radioactive decay with the naked eye in a cloud chamber and simulating half-life with Skittles® candies
- **Robotics:** Using robots to do the dirty work! – using robots to perform tasks like moving blocks and navigating an obstacle course
- **Raspberry Pi®:** How do computers really work? – using computers and devices to play games and interact with science applications

This year's activities included a full session dedicated to the revolutionary microcomputer, Raspberry Pi®, where the students learned about the inner workings of computers and how to do simple programming. A robotics demonstration included various robots such as Omni Ball, an Explosive Ordinance Disposal robot and the use of a Leap Motion Controller. The kids took home several items they built themselves, including a flashlight.

This event was part of the Science Club's outreach program to increase awareness of STEM education and make science activities available to children at no charge. In addition to the students' activities, a parent informational session showcased other STEM related activities and resources in the Knoxville area. Over 90 volunteers from area professional STEM fields and engineering students from the University of Tennessee assisted with the experiments.





Brunswick Nuclear Plant Members Expand Outreach Efforts

Melanie R. Roberts
Brunswick Nuclear Plant – Duke Energy
Region II

Following the U.S. WIN National Conference in July 2013, the Brunswick members took to heart the call to action for local chapters to do more in the area of public outreach. Their efforts began with a meeting with the local STEM counsel and planning for NNSW. Brunswick County Schools allowed the members to make presentations to students in three elementary schools, four high schools, and one early college. Forty-eight volunteers from the Brunswick site reached 1,685 students through these efforts. The weeklong schedule of activities included a robotics demo, 59 classroom sessions including nuclear-focused hands-on activities and screenings of Pandora's Promise. The Brunswick members are also participating in STEM Days with University of North Carolina–Wilmington providing hands-on learning activities for 50-100 students of all ages. The members also held one "Nuclear Myth-Busting Session" with the Southport Junior Women's Club (30 members), and intends to reach out to other local organizations for similar sessions quarterly. With an influx of requests for the members' involvement, they initiated conversations and identified beneficial opportunities to collaborate with NAYGN.



Pre-job brief for 72 second-grade students embarking on their trip through the NNSW Street Fair.



Smilesium experiment: demonstrating half-life for students in 4th-8th grade.



Storytime: starting the conversation about Nuclear Energy with 1st-3rd grade students, including steam cycles, fission, and a story.



The Duke East Chapter of U.S. WIN was recognized by U.S. WIN as "The Most Reactive Chapter" for activities during NNSW, and the Brunswick County School Board has recognized Duke Energy Progress to the NCSBA Business and Non-Profit Honor Roll and saluted the chapter's Public Outreach Chairperson with a recognition of service award. Their activities earned very positive praise from participating schools.

"Wonderful presentations today! Our students are talking. Great exposure! Thanks again!"
—**Letisha Cobb, North Brunswick High School**

"The students want more career guest speakers! I had Michael Long – he was GREAT. He suggested many career and education paths. The student feedback in high school was positive and the students were very engaged with questions and discussion."
—**Jessica McCoy, Brunswick County Academy**

"The volunteers today for first grade were fantastic! Mr. Todd Beane did a fantastic job single-handedly educating and entertaining our second grade students this morning! We are so appreciative of this opportunity! Your staff is helping to sow the seeds for future math and science geniuses!"
—**Laura Webb, Southport Elementary**

"Well done. Looking forward to next year. Thank you to all the presenters and Duke Energy for your support!"
—**Tom Ferguson, Brunswick County Schools**

If you would like to discuss lessons learned or best practices, contact MelanieR.Roberts@duke-energy.com.



PPL Susquehanna Members Encourage Middle School Girls in Engineering, Science

Susan Downs
PPL Susquehanna
Region I

Several members of the Susquehanna plant's U.S. WIN chapter promoted careers in science with local middle school girls in the Bloomsburg-Berwick, Pa. area as part of NNSW. For one of these events, members discussed the benefits of nuclear power with 15 seventh- and eighth-grade Girl Scouts. The volunteers then coached the girls in a popular group engineering activity known as "The Marshmallow Challenge," where they tried to build the tallest structure possible with just spaghetti noodles and tape that could hold a single marshmallow on top.



Students participated in a dress-out relay.

The exercise provided lessons not only about science and structural principles, but also about process, teamwork and diversity of approach. The evening ended with a discussion about radiation and safety plus a dress-out relay, where the girls took turns putting on protective clothing.

The aim of these events was to encourage young women to consider careers and opportunities in fields they may not have considered before by engaging the students in fun activities to introduce them to the nuclear industry.

The following day, the chapter also discussed nuclear energy, safety and dressing out with a group of six girls from Berwick Middle School. They then had the girls build a simple motor

and walked them through several career and self-esteem related activities.

“We worked with the school to select girls who can be high achievers and who would benefit from interacting with positive role models to help them reach their full potential,” said Mimi Mylin, a senior information specialist. “We plan to continue to work with the teens to help them successfully glide over the bumps in the road they may experience over the next few years.

“The reports the girls gave to the school were so positive, the principal wants to increase the number who participate in future activities,” Mylin said. “We’re looking forward to the expansion of the program.”

For more information on PPL Susquehanna chapter’s outreach initiatives, please contact Susan Downs sadowns@pplweb.com, or Mimi Mylin mmmylin@pplweb.com.



ENERCON Volunteers Find Inspiration in Student Outreach

Betsi Whiteman
ENERCON
Region II

As part of NNSW, ENERCON volunteers had the opportunity to participate in a number of outreach events in the Kennesaw and Atlanta, Ga. areas. They visited a local elementary school, a Girl Scout workshop, a Boy Scout merit badge workshop and a high school STEM outreach event throughout the week. Members of ENERCON’s U.S. WIN chapter made presentations to classrooms on nuclear science and energy, the fission process and careers in nuclear science.

During these visits, the students enjoyed interactive games such as acting out the fission process using



ENERCON volunteers during NNSW 2013.

balloons as neutrons and humans as control rods. Many students were eager to learn about how the nuclear industry is a part of their everyday lives, and one classroom even wrote thank-you letters following the visit asking to hear more about what else the volunteers do every day at their jobs.

The volunteers found the opportunity to interact with students who were so interested in learning more about nuclear science to be a rewarding experience. The ENERCON group now looks forward to next year's NNSW to expand their outreach activities and inspire more students.



DC Chapter Outreach: Making Connections, Making History

Elizabeth McAndrew-Benavides
Nuclear Energy Institute
Region I

Great things happen when you bring together U.S. WIN and the Society of Women Engineers (SWE). Members of the DC Chapter of U.S. WIN spent two days at a special outreach booth located at the SWE national conference in Baltimore, Md., an event that coincided with NNSW. The U.S. WIN volunteers were excited to engage with SWE and answer their questions about nuclear.

Roughly 6,000 women engineers, including many students, attended the SWE career fair, and nearly ten percent of the attendees visited the U.S. WIN booth. Once there, U.S. WIN volunteers shared information about nuclear energy and directed SWE attendees to visit the booths of nuclear companies exhibiting at the career fair.

"It was great having U.S. WIN at the career fair," said Sally Nadler from Public Service Electric and Gas Company. "The members directed attendees to our booth to learn about our careers."

Increasing traffic to nuclear booths is just one example of how U.S. WIN promotes careers in nuclear energy. The SWE event is a great place to attract the best and brightest to our field.

Local members of Constellation Energy Group's U.S. WIN and NAYGN chapters joined the DC Chapter members. These additional volunteers added expertise and perspective to the responses provided to the SWE members' questions.





Westinghouse-Shoreview Spends NNSW Educating Employees About Nuclear

Tova Anderson
Westinghouse
Region III

Members kicked off the week with a healthy breakfast and introduction to the NNSW activities. Each day of the week began with trivia questions relating to the theme of the day. Slide shows and short videos played in common areas where the employees could take a few minutes or a lunch break to watch. These slide shows included facts on different aspects of the industry outside of the employees' day-to-day work, such as nuclear medicine and how the industry is moving forward after the accident at Fukushima. They also screened two documentaries: Science at Work, which was created by and about a day in the life at Fermilab, and Powering America from the Heritage Foundation. The showings included popcorn and a special blood drive. The week closed out with more treats, including a give-away of can koozies made from recycled materials and featuring the NNSW logo, which asks everyone to "Get to know Nuclear."



ATTENTION ALL U.S. WIN MEMBERS: SUBMISSIONS NEEDED!

Sally Smor
Westinghouse Electric Company
Region I

Help us make the digital U.S. WIN Outreach Library the "go to" place for members to find prepared presentations, hands-on activities or instructions for event coordination. If you have any information to share with our members to help educate others about nuclear technologies, please send it to us.

It's easy! For a complete set of submission guidelines, go to www.winus.org, click on **Member Resources**, select **Publication Materials**, then **U.S. WIN Outreach Library Submission Guidelines**.

These guidelines provide step-by-step directions. Once completed, send your submittal to CommComm@winus.org. Please help us populate this digital library and make it an essential resource for your chapter and fellow U.S. WIN members.

The next time your chapter needs information, don't reinvent the wheel! Check out <http://www.winus.org/Member-Resources/Outreach-Library>

