U.S. Women in Nuclear

A Quarterly Update on U.S. WIN Activities

An Executive Perspective

by Maria Korsnick

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Constellation Energy

Improbable as it may have seemed a decade ago, nuclear is now a growth industry. Combined construction and operating license application submittals are scheduled for two dozen new reactors over the next 18 months. We can look to our future with optimism and enthusiasm. We also can expect accompanying growing pains to arrive quickly in the form of staffing.

At Constellation Energy, I'm watching staffing challenges grow in two ways. More than 50 percent of our generation work force becomes retirement eligible in the next four years. We also are witnessing a greater pull on our work force from organizations ramping up for the new reactors, like the Nuclear Regulatory Commission and engineering consulting businesses. We are challenged to simply maintain our work force, when times are calling for us to grow our work force.

While recognizing our optimistic future and the resulting challenges, it is imperative that we maintain focus on the here and now. The nuclear industry has built our potential future on a platform of safety and reliability. We must continue our performance and spirit of continuous improvement. As the resource challenges grow, maintaining our focus on safely and reliably running our plants today is the best way to reach our hopes for tomorrow.

A successful solution to our industry's staffing challenges will be multipronged; knowledge retention, succession planning, education partnerships and aggressive recruiting all will contribute to easing the pressure.

I am thoroughly enjoying watching a Ginna success story unfold. Over the past year, Constellation Energy's Ginna Chapter of Young Professionals (YP) has grown in numbers, activities and "attitude." I see this as a staffing challenge success story because our younger and newer employees are quickly becoming part of the fabric of our plant. Ginna's Young Professionals exhibit a pride and enthusiasm that can attract new workers and increase retention levels for our current employees.

With his group doubling in size in 2006, Chapter President Rick Brazener's year-end newsletter statement summed up a great year: "The Ginna Young Professionals have shown tremendous ownership and initiative throughout the year and have distinguished themselves as truly committed to Constellation Energy, our plant and our community."

Teens Living With Cancer and Habitat for Humanity are just a couple of the many Young Professionals community activities. Walking around the plant, you will see signs of YP energy through food collection boxes, recycling bins under fundraising signs and the workers themselves, collecting the results.

Out staffing solutions will come in many forms. The Young Professionals at Ginna bring vibrancy, creativity and an active pursuit for learning. As they make Ginna a better place to work, others will follow.

Chairman Dale Klein speaks to members of DC Women in Nuclear

Prepared remarks by Chairman Klein to DC WIN

I'm Good evening. As you may know, I am in my third month as Chairman of the Nuclear Regulatory Commission. The NRC Chairman is, by law, the agency's principal executive officer, and one of the interesting things I get to do is sign paperwork of every sort – a lot of it. Much of the output of the agency must go under my pen to be official.

Among my duties last month was to sign an agency announcement in honor of Women's Equality Day on August 26, commemorating the ratification of the 19th amendment, which granted women the right to vote. This year's theme for Women's Equality Day is "Women: Builders of Communities and Dreams." That's an inspirational theme, but I think a more practical one for next year might be: Women, building and operating nuclear plants.

As you well know, many in the current nuclear workforce are headed toward retirement just at the time when the useful lives of the current generation of nuclear plants are being extended and when those plants may be joined by many more. The potential work force of the future will likely be predominantly female and minority, and we must harness all of the talent in that workforce to replace and augment the nuclear pioneers who are now completing their careers.

I want to speak to you today about the industry's workforce needs and what must be done. But first let me speak a bit about the future of nuclear power and the NRC's role.

Today we hear predictions that nuclear power can make a pivotal contribution to the world in the 21st century. But when I hear it said we're going to build 50 nuclear plants in the next 20 years, I react like any other native of Missouri. I say, – show me – show me the designs, and then show me the hardware and the construction, and then show me you have the people and procedures in place to run those plants in a way that protects public health and safety. And as importantly, show me that you are maintaining the capability of running the current fleet of plants at the same high level.

I think a questioning attitude is an absolute necessity for a regulator, particularly at this time when the nuclear industry appears to be headed toward a period of resurgence. Both the NRC and the industry have enormous and complex challenges facing us for the foreseeable future. Vision is a fine thing, but it will take a lot of hard work to realize the vision. The U.S. nuclear sector must recreate a nuclear design and construction industry that essentially has been dormant for the past 20 years.

I have a vision for the NRC. First and foremost, NRC needs to be a strong regulator. We will hold our licensees accountable, we will articulate our requirements clearly, we will be demanding, and we will be responsive to our licensees' legitimate needs and concerns. In other words, the industry needs to show the NRC the attention to detail and the focus on quality necessary to protect the public health and safety. And in turn, the NRC needs to provide the industry, the financial community – and above all, the public – with assurances of regulatory stability as we all play our roles in this massive new venture.

The nuclear industry itself has more than 40 years of operating experience that are serving it well in its current operations. All of the measures of productivity and safety in nuclear plants reached impressively high levels starting in the mid-1990s and have been maintained there since then.

As you know, 103 operating nuclear plants currently supply about 20 percent of electricity in the U.S. That number will increase to 104 within the next two years, as a long-shuttered Browns Ferry unit is restarted. The Browns Ferry restart underscores the change now under way in the nuclear power industry in the U.S. Nuclear plants, once considered too costly, are now among their owners' most valued assets. Half the nation's nuclear plants already either have had their licenses extended for another 20 years or are under NRC review for extension. Most of the rest are expected to apply in coming years.

In addition, 13 companies – either individuals or consortia – have to date announced plans to apply to the NRC for combined operating licenses for a total of 27 reactors. That number may be joined by several more projects.

Nuclear plants are tremendously complex industrial facilities. Their construction must be robust enough not only to contain radiation, but to control steam temperatures in excess of 500 degrees and to channel the high-voltage electricity on its way to consumers. Most of the technology to accomplish those difficult tasks was developed in the United States after World War 2. The planning, design, and construction of the first generation of nuclear facilities, was an effort that occupied industrial giants such as Westinghouse and GE for decades, at a total cost well up in the hundreds of billions in today's dollars.

In the three decades since the last nuclear plant order and the two decades since the bulk of nuclear plant construction was completed in the U.S., the nuclear design, manufacturing, and construction industry in the U.S. has withered on the vine. The leading U.S. firms have either ceased operation, consolidated, or become subsidiaries of non-U.S. parent companies. The companies that remain have survived on retrofits and maintenance of existing U.S. plants and plant construction outside the U.S., where new nuclear construction has continued to flourish.

If the U.S. is going to build new nuclear plants, the architect-engineers, construction and component supply industries must reestablish themselves. NRC's primary charge as a regulator is to protect public health and safety, and those planning to build these new plants must come to us with quality designs and hardware, and workable construction and operational plans to meet our rigorous regulatory standards.

Restoring the U.S. supplier network needed to provide components – from the steam generators and vessel heads to the thousands of valves, pumps, heat exchangers and other parts used in a nuclear plant – would have advantages. There are now 442 nuclear plants in operation worldwide and 27 more under construction. The most ambitious construction projects are in China, India, and Russia – all of whom have announced plans for further expansions in their nuclear power production capabilities. There will be competition for materials, and a home-grown manufacturing industry should benefit those building U.S. plants.

Whatever this country does, it is clear that nuclear power is growing elsewhere in the world. The nation would be well served if our own energy needs serve as a springboard to rebuild U.S. technology and manufacturing capabilities to something approaching the leadership the nation once enjoyed, contributing to foreign markets as well as supporting our own.

Not only does the U.S. industry need additional infrastructures to supply the components for future nuclear plants, it also needs to ensure that the skilled workforce needed to manufacture them exists. The lack of a skilled workforce is a problem that goes far beyond the manufacturing and construction segments. The nuclear industry must answer a fundamental question regarding new plants: who will run them? What are

their educational qualifications? What is their training? As a regulator, the NRC has the responsibility of asking these questions, and of determining the adequacy of the answers.

The problem is a broader one than just staffing new plants. Both the nuclear industry and government are going to have difficulty even maintaining the workforce at their current facilities.

Nearly half of the current nuclear industry workers are over 47 years old, and nuclear energy companies could lose as many as 23,000 workers over the next five years – about 40 percent of the total jobs in the sector. That is a tremendous brain drain. To some degree, the knowledge is institutional and is transferable to future operations. But to a large extent, the knowledge is in the minds of older workers. How do we transfer the knowledge to their replacements, who will form the core of skilled workers as the next generation of plants starts up?

At the same time, the key suppliers to the industry – the architect/engineering firms, fuel suppliers and reactor manufacturers, anticipate that 32 percent of their workers will be eligible to retire within the next three years. Retiring workers must clearly be replaced and the existing workforce augmented if the nation is to restore its manufacturing capability sufficiently to supply the components for and to build the new plants.

I might add that the government also will be competing for the same nuclear-related skills. The NRC alone will hire 300 and 400 professionals per year through 2008 to handle the increased workload of new plant applications and other business, and to replace retirees. The U.S. Department of Energy, national laboratories, National Nuclear Security Agency and other government agencies also have urgent personnel needs.

I could quote you more numbers, but since most of them originate with Carol Berrigan, you are probably already familiar with them. The nuclear industry is working on many fronts to address this critical need – it has launched major programs to provide scholarships, establish training programs, conduct recruitment drives, and promote other activities. But I have the sense that it's just nibbling around the edges of an enormous challenge.

My background is in academia, running a university nuclear engineering program. During my time in the University of Texas program, I fought constantly against budget erosion and declining interest both by students and school administration.

Many of my nuclear colleagues at other universities fought the same fight – and some lost. The number of four-year nuclear engineering programs now stands at about 25, nationwide – down from 38 in the 1970s. That is a matter of extreme concern at a time when we need to increase the numbers of academic training programs to meet sharply increasing needs. Moreover, the potential for increased student interest has not influenced all remaining schools. Recently the University of Cincinnati announced that it would close its nuclear engineering study. Many concerned industry and government officials, I included, are hoping that they remain open.

The potential student interest is clearly there. A Department of Energy survey shows that undergraduate enrollment at 23 reporting institutions in nuclear engineering, health physics, and radiological and related fields nationwide has increased from 668 in 2001 to 1,520 last year. Graduate enrollment has risen above 1,000.

One other data point must also be taken into account in this context. The Navy nuclear program is not as large as it was in the past and will not supply the workforce in the same percentage.

In my brief tenure at the NRC, I already have spoken to events sponsored by NEI and INPO. I told them, I repeat now, and I will continue to say in my public appearances that a major industry effort is necessary to build a viable nuclear workforce and that it must address every level of education in this country, starting with a commitment to fostering the interest in science and engineering of elementary and middle school children.

We also must concentrate our efforts on women and minority students, who now represent the majority of potential candidates, but less than a quarter of the students currently enrolled in nuclear related undergraduate programs. When I arrived at the NRC, I was pleased to note the diversity of the professional workforce. While women hold just 16 percent of our scientific and engineering positions and minorities 24 percent, I believe those numbers compare favorably with industry. More important, they are increasing and will likely continue to do so.

Scholarships, training centers, and recruitment efforts are commendable ways to steer the technically-inclined toward careers in the nuclear industry. So are beefed-up internship programs with meaningful work. And once new recruits are on board, mentoring programs will help to augment their training as we engage in generational knowledge transfer.

Every segment of the nuclear industry needs to work to increase the talent pool, though, so that we are not competing for a small number of candidates. If we all spend the next 20 years offering incentives to the same people, there will be winners and losers. And if the industry wins and the NRC loses, or the industry wins and the manufacturers lose, we all lose. This is an issue that should be addressed, urgently, at the CEO level at every company with any involvement in the nuclear industry.

I hope that I don't sound unduly alarmist or negative. We have work to do to build an infrastructure and our workforce. But our glass is half full and not half empty. As I said, I have spent my career in the nuclear field, and I am personally excited by the possibilities ahead of us. I think the Nuclear Regulatory Commission has a very important and very positive role to play. We are gearing up for a vastly increased workload, and I am convinced that the NRC can discharge our obligation to provide rigorous regulatory scrutiny of the new reactor applications and associated duties without unnecessary delays. In fact, I believe that we will be able to reduce the lead times for regulatory approvals from their current duration while ensuring public health and safety.

I assure you that the NRC will do the hard work of creating the needed framework of regulatory stability. We, in turn, must be assured that the manufacturers, builders, owners, and operators of the projected new plants are prepared to meet their obligations to the public. When they show us good applications, we should show them a timely response.

- Finally, in closing, I would like to offer a few brief observations from my brief time at the NRC.
- First, I have been very impressed by both the competence and the dedication of the staff. I have been pleased with the quality of the work I have seen. They come early, stay late, and focus on the job to be done.
- That said, the NRC itself places too much emphasis on process. I would like to see us concentrate more on progress, with no compromise on safety.
- We need to develop more milestones and deliverables, and articulate them clearly to those we regulate.
- I also would like to see the NRC focus more on real risk and less on risk that is simply perceptual.

Thank you. I will be pleased to answer your questions.

Debate Brings Heat to Wisconsin

From the Blogosphere

I'm pleased to see a university encouraging and providing opportunities for its students to think critically and to thoughtfully consider both sides of issues that affect their community, state and nation.

Wisconsin currently has a law that prohibits its Public Service Commission (PSC) from approving the construction of a new nuclear plant unless 1) there is a facility with adequate capacity for the disposal of all high-level nuclear waste generated by power plants in Wisconsin and 2) the PSC finds that the proposed plant, in comparison with feasible alternatives, is economically advantageous to ratepayers.

Meeting the second requirement means that the PSC must:

1. determine that there is a reliable and adequate nuclear fuel supply
2. consider the costs for constructing, operating and decommissioning nuclear power plants and for disposing of nuclear waste
3. consider any other factor having an impact on the economics of nuclear power plants.

Early in 2006, bills were introduced to eliminate these special rules so that new nuclear power plants would be subject to the same approval requirements applicable to the construction of other generation sources. The Wisconsin legislature also created a special committee to investigate the issue.

Representing the opposition to repealing the statute was Alfred Meyer, executive director of the Wisconsin chapter of Physicians for Social Responsibility (PSR). I was surprised to learn that Meyer is not a physician of any kind. This is not an insult to him—he is obviously a well-educated man, but you may recall that Helen Caldicott founded PSR (though I could find no mention of her at the group's Web site). Every time I've heard Caldicott speak she has mentioned the "26,000 doctors around the world" who have joined PSR because they believe nuclear power plants harm people's health. So, after discovering that such a prominent local member is not a doctor, I researched the organization's Web site. I found that one needs only to be a "concerned citizen" to join. Furthermore, the group's primary missions are:

- security: for the prevention of nuclear war, against the development and use of nuclear weapons, and for a reduction in the role of armed force in U.S. foreign and security policy
- environment and health: to slow, stop, and reverse global warming and toxic degradation of the environment.

I had to search quite a bit to find evidence of the group's opposition to commercial nuclear power. Small points, to be sure, but further examples of Caldicott misrepresenting the facts.

In my opening statement I said that nuclear energy can help meet society's demand for clean, safe, reliable and affordable electricity and that my primary goal is to encourage citizens to evaluate each energy technology with the same objective criteria. In other words, we mustn't legislate special requirements for nuclear unless we hold all energy technologies to the same high standards of health and environmental protection and economic benefit. In addition, all technologies should be evaluated for their contribution to energy diversification and stable power supply.

In his statement, Meyer objected to calling the current law a "moratorium" (a word I never used) on nuclear, and said that it is a sensible measure to consider nuclear power's unique dangers. He strongly favors conservation as a policy to eliminate the need for nuclear power.

In my opening statement and in my answers to questions I made it clear that I support efforts toward conservation and energy efficiency, but that those can only slow the rate of increasing demand—they will not reduce our demand. I also support the development of renewable sources, but repeated that they must be evaluated with the same criteria as nuclear. Among the issues that I asked the audience to consider were:

- the effect intermittent sources have on grid stability (I used the recent story from Alberta's Electric System Operator as an example)
- the cost and feasibility of renewables providing a significant portion of our electricity when even the American Wind Energy Association states that under the most aggressive growth scenario wind could provide only 6 percent of the nation's electricity by 2020
- the disposal of toxic wastes from the production and use of solar panels—waste that never decays (and is Wisconsin too far north for solar, anyway?)
- the effect on cost and energy security of becoming too dependent on natural gas to generate electricity.

I repeatedly said that I am not opposed to any of these energy technologies but that if we evaluate each choice fairly we will find that nuclear, coal, natural gas and renewables must be thoughtfully deployed to protect our health, the environment, our economy, and the security of Wisconsin and our nation.

The arguments opposing nuclear were the standard ones to which I am accustomed to countering: waste, proliferation, economics, security, etc. It seems that people still think a terrorist can walk into a plant, throw a used fuel assembly on their shoulder, walk out with it and, with a little duct tape and other items from their neighborhood Home Depot, make a nuclear bomb. I carefully explained why commercial power plants are not a proliferation risk, but Meyer and others continued to blur the issues. Finally, I strenuously objected to Meyer tying commercial power to weapons. In response to one of his catastrophic scenarios I said, "I fail to see how terrorists smuggling a nuclear weapon by ship to San Francisco and detonating it has anything to do with commercial nuclear power plants in Wisconsin."

There were some strange questions from the audience. One fellow didn't believe that a terrorist attack at a nuclear power plant wouldn't destroy all the safety barriers and cause widespread death and destruction. He brought up aircraft attacks, assaults on used fuel casks, etc. For each of his points, I explained how the health and safety of the public is protected. He finally asked, "So even if terrorists dropped a nuclear bomb at a plant, you're saying that wouldn't be a problem?" I responded, "If a nuclear bomb explodes at a commercial facility, the power plant is the least of your concerns."

Overall I was pleased with the outcome of the debate, thought it is difficult to explain complex issues in two-minute rebuttals. Thanks again to the organizers and the participants.

Lisa Stiles-Shell, Manager-State Initiatives, Grassroots and Coalitions at the Nuclear Energy Institute (NEI) in Washington, DC as a loaned consultant from Dominion Generation. Stiles-Shell was in Wisconsin Dec. 7 attending a debate about the potential for new nuclear power plants in the state, which has a moratorium on new nuclear. The event was organized by University of Wisconsin-Madison students in Dr. Richard Shaten's course, "Energy, Society and the Environment." The following is an excerpt from Lisa's blog entry on the debate, available online at *http://neinuclearnotes.blogspot.com/2006/12/debate-brings-heat-to-wisconsin.html*.

Region I News

U.S. Women in Nuclear – Region I Conference

"Six hundred years ago, women could only dream of the options we have today"

PPL Susquehanna hosted the 2006 Win Region 1 conference, "Women in Nuclear and the Nuclear Renaissance," in Scranton, Pa., Dec. 4 and 5. More than 100 attendees participated in this educational, informative and fun conference.

Topics ranged from the new licensing of nuclear power plants to the new career opportunities in the nuclear industry. The two primary attractions for all attendees focused on state radiation monitoring programs, presented by Jill Lipoti, director of New Jersey's Department of Environmental Protection, and the process for licensing new nuclear power plants in the United States, presented by Stephanie Coffin, branch manager for the Nuclear Regulatory Commission. Breakout sessions focused on technical issues, business literacy and professional development.

A benchmarking exercise on best practices took place during lunch on the first day. It was a great way to see what other plants have instituted to improve plant performance.

Later that day, an exercise called "Team Building: City of Dreams" promoted active discussion about integrating core values into daily work lives. Each team had to create its own ideal city based on provided criteria. Each team shared its unique dream city with other participants.

Polls reveal that women score much higher than men when judged on trustworthiness, and that's a natural advantage for women as they promote nuclear energy, said Mimi Limbach, senior vice president of Potomac Communications Group.

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Dondi Scumaci, personal and professional development author, was the guest speaker Dec. 5. Dondi spoke on how to fire your inner critic and reinvent your inner dialog to release the "breaks" that hold you back. She also discussed how to shed inaccurate self-perceptions and begin believing in a future that will become true for an individual. Dondi was humorous and closed the conference on a positive note.

"Introduce a Girl to Engineering" Event Draws Large Group of Area Students to Westinghouse Facility

Westinghouse Electric Co.'s Pittsburgh chapter of Women in Nuclear (W-WIN) brought nearly 70 students from 16 Pittsburgh-area schools (including home schools) to the Westinghouse Waltz Mill site in Madison, Pa., on Nov. 9. The students packed the facility's auditorium and adjoining conference space and brought the loud sounds of excited teenage girls to two training bays containing full-scale mock-ups of components found in nuclear power plants.

The event provided a great opportunity for students interested in engineering careers to learn more about nuclear energy and receive hands-on experience working in the same training bays Westinghouse uses to train its field operations employees and customers.

"We are excited to provide this unique opportunity to high school students to gain practical information and hands-on experience regarding an engineering career path," said Michele DeWitt, vice president for Westinghouse's repair, replacement and automation services business and executive sponsor for W-WIN. "This is just one of the many W-WIN activities that matches experienced engineers to students in a viable, short-term mentoring partnership."

Nicole Brown, an engineer who works with power plant steam generators, worked with a 30 W-WIN members to coordinate the event at the Waltz Mill site. She kicked off the meeting with a warm welcome to the visitors, then introduced Field Services Vice President Jim Ferland to greet the students and explain how Westinghouse provides a wide array of services to nuclear power plant customers. Darlene Polk, chairperson for Westinghouse WIN, talked about WIN and its many activities.

Students enjoyed a skit in which two engineers role-played the importance of applying to colleges and choosing the right courses for an engineering career. Afterward, the students participated in mechanical, material and chemical engineering activities. A presentation on pressurized water reactors followed the activities. Students then received a radiation brief and blue Tyvec suits, gloves and hair coverings to change into. During this portion of the day, the auditorium looked and sounded more like a locker room as the girls pulled the suits over their street clothes to get ready for the hands-on work to come in the training bays.

The girls conducted activities in the steam generator and reactor vessel head mock-ups. After returning from about an hour in the bays, the students received a post-job brief and learned proper "dress-down" procedures. The girls reconvened in the auditorium for lunch and watched a panel discussion on specific engineering careers available.

Reaction to the event was overwhelmingly positive. Hilary Domencic, Shaler Area High School teacher, said, "I want to tell you how much the girls and I enjoyed Introduce a Girl to Engineering Day. I take students to dozens of career days every year, and this was definitely one of the most interesting, informative and inspirational. The four girls I brought along were very enthusiastic about their experience at Waltz Mill and are now more seriously considering careers in engineering. The day was beautifully organized and perfectly age-appropriate. Thank you!" Students also provided positive comments specifically related to the hands-on activities and the panel discussions.

The Pittsburgh Tribune-Review covered the WIN event in its Nov. 10 issue.

D.C. Women in Nuclear Hosts Industry Chief Nuclear Officers at Mixer

Washington, D.C. – The recipe for new membership success starts with a blend of current members. Add a pinch of interest from potential new members, and shake with splash of VIP guests.

Industry chief nuclear officers (CNOs) in Washington for a meeting were able to join D.C. WIN members at Morton's Steakhouse for the third and final membership mixer of 2006. Morton's, just a few blocks from the Nuclear Energy Institute, features a second-floor terrace half a block long along Connecticut Avenue. "Who could have imagined that we would have 65-degree weather on November 14, allowing WIN guests to enjoy a beautiful evening on the terrace?" asked Jennifer Patric, associate with Booz Allen Hamilton.

D.C. WIN pioneered mixers in 2005, borrowing an old-fashioned term for a dance and updating it for a new twist on membership recruitment. Each mixer is hosted at a different location by a company in the Washington area. Members can meet and greet after work, from 5 to 8 p.m. In 2006, D.C. WIN mixers were hosted by Exelon on Capitol Hill, by Constellation at a downtown location and by NEI at Morton's.

"The mixer is an opportunity to network with WIN members, meet new friends and enjoy Washington," says Amy Roma, attorney with the Winston & Strawn law firm, which joined the D.C. WIN membership committee. Members are encouraged to bring colleagues, business associates and friends to the mixer, where they are asked to fill out a membership form or leave a business card. The D.C. chapter's membership grew to 120 in 2006.

D.C. WIN again will hold three mixers this year, as well as an outing to a sports or cultural event. The chapter hopes to increase membership to 200 individuals. The membership committee is interested in your ideas for new-member recruitment and retention. Please contact Leslie Barbour at lpb@nei.org to help or to learn more about D.C. WIN.

Region II News

Lynchburg Chapter Grows

The Women in Nuclear Lynchburg Chapter is going strong. Activities have included guest speakers Thomas A. Christopher, president and chief executive officer of AREVA NP Inc. and vice chairman and CEO of AREVA Enterprises Inc.; and John A. Fees, president and chief operating officer of BWX Technologies Inc.

The chapter now has a logo and banner (see picture). We supported the First Lego League Competition by providing judges and a team coach. We also supported the Reading is Power program for regional elementary schools. Tours of the AREVA training facility were provided to college students and chapter members.

The chapter plans to support upcoming science teacher workshops in Lynchburg, Va., and Richmond, Va., and the Engineers Banquet in February. We are looking forward to additional growth and a great year of activities in 2007!

Region III News

Nuclear Power in Wisconsin: A Public Debate

A Dec. 7, 2006, debate on nuclear power in the state capital of Wisconsin was an exercise in public inquiry with two motivations. Primarily, its orchestration was an assignment for a course on the economic, environmental, and social impacts of the consumption and production of energy. Secondarily, it was meant to stimulate public awareness of the current deliberation regarding whether or not Wisconsin should lift its moratorium on nuclear power.

As a part of the introductory seminar to the University of Wisconsin-Madison's energy analysis and policy program, Dr. Richard Shaten instructed his students to host a series of public debates on controversial topics in energy. The nuclear energy team included Ashi Goel, Matt McKenna, Brianna Bakker, Ryan Finstad, Anna Jaffe, Nick Mengle, Brian Mirestzky and Megan Sharrow. With only one nuclear engineer on the team (Megan)—and in the class—the project required considerable research. By the end of the semester, the team had put together a series of questions it felt would challenge both panelists and highlight the multiple facets of such a complex issue.

Alfred Meyer of the Union of Concerned Scientists and Lisa Stiles-Shell of the Nuclear Energy Institute met to declare and defend their respective opinions on the issue in front of a capacity crowd. Throughout the debate, Ms. Stiles-Shell met the questions with what seemed to be hard facts found through extensive

research. She especially piqued the interest of the crowd when she noted that solar energy, when harvested through the use of photovoltaic panels, generates an equal volume per kilowatt hour of toxic waste as does nuclear power. Mr. Meyer, on the other hand, slightly damaged his rhetorical credibility when he stated that an audience member's concern about the risk of used nuclear fuel shipments being targeted by nuclear bombs was valid; this seemed redundant to logical members of the crowd. Overall, both panelists made strong cases for their respective opinions and audience members left with considerably more knowledge than when they arrived.

Whether or not Wisconsin lifts its moratorium on nuclear power is still being deliberated by a committee convened by the Wisconsin Legislative Council. Formally, the purpose of the Wisconsin Legislative Council is to provide nonpartisan legal, scientific, and other research services and administrative support to legislators, legislative staff, other governmental agencies and other state legislatures. The committee consists of various members of the Wisconsin community who can speak to the pros and cons of nuclear power; notably, UW-Madison Professor Dr. Michael Corradini is one such member. The purpose of the moratorium is to prevent the expansion of nuclear power in Wisconsin unless the federal government fulfills its responsibility to open a federal used fuel repository and nuclear power can prove economically viable.

As a result of the debate, the Madison-area community is more informed to participate in the Wisconsin Legislative Council deliberations. What began as a simple class assignment became a valuable learning experience, thanks to the consideration and dedication of the Union of Concerned Scientists and the Nuclear Energy Institute. For this contribution, we are grateful.

Region IV News

Our WINning Attitude

Callaway is continuing to pursue a WINning Attitude. The chapter held a membership drive in November that led to approximately 40 new members signing up. Callaway also held a luncheon held with the University of Missouri's dean of engineering, who discussed the engineering deficit in the United States.

Callaway WIN will be creating three committees in 2007. One will educate our high school and junior high students about nuclear energy. The second committee is establishing a crisis management team to further support Ameren during emergencies (such as storm damage). Our third committee is an outreach program to establish university WIN chapters

Last year, Callaway established a University of Missouri Chapter. Forty-seven students attended the first meeting in November. Dave Fitzgerald, manager at Callaway, and Dr. James Thompson, Dean of Engineering, were the guest speakers.

Callaway WIN's future pursuits include possible rotations and leadership certification for our diverse work force.

Our vice president nuclear, Adam Heflin, has supported WIN as the chairman of this chapter. Our current success is due to all of his efforts and support for this organization.

South Texas Project

I. NRG Energy, a 44 percent owner of the South Texas Project (STP), announced its intent to submit an application to the Nuclear Regulatory Commission for a combined construction and operating license (COL) for two new units at STP. Austin Energy (16 percent owner) and CPS Energy (40 percent owner) are working with NRG in the initial phase of reviewing this effort and are considering participation. All owners agree on the need for additional baseload generation in Texas. The preferred design is the 1,350-megawatt Advanced Boiling Water Reactor. The STP site originally was designed for possible expansion to four units, and licensed accordingly. The STP reservoir has the capacity to serve four units, and the land needed to build two additional units and the required infrastructure. In addition, STP has an excellent emergency preparedness program and is strongly supported by its neighbors and community. STP anticipates approval of the COL by the fall of 2007.

II. STP I completed its 13th refueling outage Nov. 4, 2006. During the outage time frame, personnel were challenged with nine first-time evolutions. To support the station in their aggressive schedule, approximately 1,550 contractors were added to the site's work force.

The significant accomplishments in 1RE13 include STP's outstanding safety performance, coordination of electrical bus outages, first-time evolution performance and continued improvement in ALARA. STP set a world record in our low pressure turbine replacement, and our reactor pressure vessel head inspection also was implemented successfully using new technology.

III. STP is diligent in its efforts to educate the public community. During the past three-month period [this time description probably won't be accurate when you go to print], on-site tours have included:

- ERCOT operators
- students and staff members from San Jacinto College
- students and staff members from Wharton County Junior College
- NRG auditors
- Boy Scout merit badge members
- Tidehaven High School (science and Spanish clubs)
- Sen. Glenn Heger and staff member.

In addition, STP supports off-site speaking engagements. In December, site representatives spoke at assemblies for students and faculty at Tidehaven High School, Travis High School, Van Vleck High School and Santa Fe High School

South Texas Project Nuclear Operating Co. (STPNOC) WIN Chapter

Sponsors:

- Executive Sponsor: Joe Sheppard (361) 972-8757
- Managing Sponsor: Wanda Redd (361) 972-7002

New Board elected Oct. 1, 2006

- President: Debbie Towler, Manager-Operations Division (361) 972-7222
- Vice-President: Vivian Wagnon, Operations Support Splst-Staff (361)972-8948

- Communications Administrator: Susie Brannon, Planner/Scheduler (361)972-7659
- Financial Administrator: Connie Milliff, Medical Nurse (361)972-8125
- Program Committee Chairperson: Jimmy Brown, Senior Radiation Protection Technician (361)972-4481
- Community Outreach Committee Chairperson: Sheila Ormand, Public Affairs Specialist (361)972-7521
- Ex-Officio: Bobbie LaSaint, Supervisor-Records Management Systems and Administration (361)972-7334

2007 Goals

- Board meetings – one each month
- Chapter meetings – one each quarter (Feb, May, August and November)
- Site newsletter - STPNOC WIN article each publication • Re-establish mentoring program
- Speaker at February, May and August meetings
- Increase meeting attendance
- Expand WIN member participation in community by 10 percent
- Expand WIN membership by 25 percent