



# Go Nuke!

A North American Young Generation in Nuclear Newsletter

Summer 2011

## Presidents Corner-

Duncan Robinson, NA-YGN President

A couple months ago I was sitting in the control room at Calvert Cliffs, talking to the Reactor Engineers. The conversation drifted to the sobering loss of life due to the earthquake and tsunami in Japan and the brave plant workers at the Fukushima site. At the time, I was working an outage, assisting with the 2012 conference planning efforts, and had just learned of one of the most significant nuclear incidents of our time. I remember saying, "Man did I pick the wrong year to run for NA-YGN president." Funny thing is, that stuck with me and after sleeping on it, I realized *the exact opposite was true*. One of the greatest benefits of being involved with NA-YGN is the chance to take on opportunities and challenges that we might not otherwise have had access to.

This organization was founded, in many ways, to ensure young professionals had access to these opportunities. While the challenges this coming year are daunting, I realized that I absolutely want to be on the front lines leading our efforts. The events at Fukushima represent the worst nuclear incident the world has seen since this organization was founded. As a result, the public's faith in nuclear energy is likely more fragile now than we have ever seen. We must not be afraid to engage the public. We need you now, more than ever, to get out there and support what you believe in: the amazing potential for nuclear science and technology to do good for this world. NA-YGN members are a powerful force for grassroots outreach and public engagement, and through our strength we can challenge mis-information, ease fears, and promote rational discourse.

NA-YGN will bring the 2012 International Youth Nuclear Congress (IYNC2012) to Charlotte in August 2012. It will be the same high caliber conference you have come to expect, but will be joined with technical tracks, giving members an opportunity to present papers to their peers. The extended format adds days and offers participants technical tours, special events, and workshops. The international participation provides a rare chance to network globally and foster understanding on a worldwide scale. We are excited to showcase for the world what we do here in North America and to learn from each other in this unique forum. Planning an international conference of such size and scope, while also facing the challenges resulting from Fukushima, will certainly test us. That said, I have the highest confidence that we will exceed all expectations. I have this confidence because our membership has the capacity to do such great things. To meet the challenges of this next year, I need all of our members to bring to bear the passion you have for this industry and our mission.

The Core met in May to develop our [2011-12 Strategic Plan](#). There are three significant themes throughout the plan. As mentioned earlier, responding to the situation at Fukushima and planning IYNC2012. The third is an initiative near and dear to my heart, chapter health and diversity. Our 91 local chapters are the life blood of this organization, and the primary way we deliver value to our membership. While the majority is vibrant and growing, others have struggled. I will personally lead the effort to develop tools and processes to help re-invigorate struggling chapters by leveraging the experience, influence, and talents of the continental organization. Additionally, the May conference kicked-off our efforts to diversify our membership. 63% of our membership works in engineering, and the next closest discipline is Operations at 5%. It is time to look for activities that engage a more diverse membership, and learn from each other. It is truly an exciting time for NA-YGN. I look forward to working with all of you over this next year and seeing many of you in Charlotte next year.

## 2011 PD Conference- We heard you!

Erin West, Professional Development Chair

On May 8-10th NA-YGN hosted our annual Professional Development Conference. This year's theme was Redefining Diversity: Uncovering a World of Opportunities in Proven Technology. The conference theme included 3 distinct tracks:

- 'Redefining diversity'- meaning you were not going to hear about traditional things like race or age but would hear about the importance of diversifying your career background;
- 'World of opportunities'- these three little words were meant to convey two meanings- the first related track was designed to give you an appreciation for the perception of nuclear outside of the U.S. (in part as a lead-in to IYNC2012);
- The third track expanded further on that thought and added in the 'proven technology aspect'- this track was meant to show all the ways in which proven nuclear science was used outside of power production. (Are you impressed by how much thought goes into the conference theme?) We know many NA-YGN members cannot attend the continental conference, so we post all of the presentations on our website. Here is a link to the presentations:

[http://www.na-ygn.org/professionaldevelopment/workshops/2011/2011\\_Agenda-Final.pdf](http://www.na-ygn.org/professionaldevelopment/workshops/2011/2011_Agenda-Final.pdf)

I'd like to thank those of you that provided the feedback critical to making our next conference, IYNC2012, a success- WE HEARD YOU! I personally read through every comment you made. You loved that we had presentations regarding nuclear science used outside of power production (we thought this was a departure from what you are used to, and were happy to see that so many of you loved it). You thought Hill Day was once again a rewarding experience. You were inspired to hear from industry executives and network with other young professionals. You benefited from hearing about the industry's response to Fukushima and how to communicate the events to friends and neighbors.



I also got some great suggestions for next year- You want to see sessions on the following topics: communications (already being planned by the PI committee), small modular reactors, and WANO/INPO. Additionally, your comments on the Awards Ceremony, logistics, timing, and the desire to see more technology used at the conference will also be considered by the PD Committee to make IYNC2012 our best conference yet!

Thanks again for taking the time to provide feedback either in person at the conference or via the survey. For those of you who have not participated on the Professional Development Committee, planning for the next conference begins almost immediately following each May conference. If you'd like to participate in planning for next year's conference, please contact me at [pd@na-ygn.org](mailto:pd@na-ygn.org). PD Committee meetings will commence soon!





The NA-YGN mission of promoting nuclear science and technology could not be achieved without the efforts of the members. The energy from all of our members is what makes local chapters, committees and the core successful.



In 2010 NA-YGN Exelon West Annual Professional Development Meeting brought together over 105 attendees from all seven Exelon West sites (Braidwood, Byron, Cantera, Clinton, Dresden, Lasalle, and Quad Cities) for Professional Development, Networking, and Community Outreach. The event was modeled after the 2010 National Professional Development Conference with the theme, 'Going Green: Leading the Change,' in an effort to bring the messages from the national conference to all of the Exelon West members.



Exelon West completed 2681 Professional Development hours in 2010. Other notable Professional Development achievements include various Lunch and Learns with executives, toastmasters meetings, national webinars, Individual Development Plan sessions, Nuclear Safety Review Board attendance, meetings with NRC Commissioners, and over 30 members attending the national NA-YGN Professional Development conference.

With almost 3200 networking and social hours in 2010, Exelon West is no stranger to having a good time at NA-YGN social functions. Their social activities include the following: Participating in sports teams (football, volleyball, softball, basketball, golf, disk golf, bowling, darts), Monday night football at a local restaurant, trivia nights, weekly dinners, holiday parties, ice skating, attending local sporting events, breakfast with interns, happy hours after work, participation in the Chicago PRIDE parade, and paintball tournaments. For the Annual Exelon West Social, members from all seven sites came together at Rock Bottom brewery in Warrenville, IL where corporate headquarters is located.

Community Outreach is an integral part of sustaining an exceptional outlook from the local populous on the nuclear professional. Over the past year, Exelon West NA-YGN was involved with volunteering to help local residents. In 2010, Exelon West found a great medium for helping volunteer organizations. The bowling medium was that opportunity, bowling for both 'Kids Sake' (Big Brothers and Big Sisters Organization) and the Junior Achievement Bowl-a-thon. The largest event that the chapter hosted was the Dogs and Bags for Haiti Fundraiser Event.

Exelon West has continued to focus on membership activities to recruit new members and to get the word out about what our chapter has been doing. Currently, the chapter is focusing on recruiting non-traditional members such as security personnel, radiation protection technicians, and equipment operators. Beyond the social scene of NA-YGN, the Exelon chapter has participated in many team activities. Exelon West has had particular success in attracting a wide variety of members because we have managed our activities to appeal to everyone. They make a conscious effort to plan a balance of activities in professional development, public information, community outreach, and networking and social.

## What's your next move

Michael Hope, Membership Chair

Professional chess players always think three to four moves ahead of their opponent. What's your next move going to be? A young chemist or engineer joins a nuclear company in hopes of starting a great career. A few years go by and the young engineer starts becoming a star performer. After a few more years he or she receives a promotion to become manager of that group. What experience do they have in leading and influencing people? A great engineer does not always make a great manager.

Current technical achievements in the nuclear industry would have baffled scientists hundreds of years ago. Because the general population does not understand the details of the nuclear fission process, it takes a well rounded nuclear professional with technical expertise and interpersonal skills, to be an effective communicator for nuclear power and convey this message to the public. First and foremost on the public's mind are their finances. The people will only grasp the power and benefit of nuclear energy when they see lower electrical bills. In order for nuclear power to be cheaper, more people are needed with business intelligence. A Master's of Business Administration (MBA) degree is way to achieve sound business acumen. The MBA is the most popular master's degree in the world<sup>[1]</sup>. Many universities even offer dual master's degree in business with engineering degrees. The nuclear industry is discovering the value of employing technically minded professionals with a good mind for business.

A shift is happening in the industry's idea of who will be the next leaders. This new idea is not abandoning the need for the technical degrees, but a desire for more well rounded and diverse employees. Those who already have a technical background (ie engineers, chemists, mathematicians) are more valuable with extended education, communication skills, and experience. Having more skills and knowledge in the nuclear industry will not only enhance the tactical position of nuclear power in the country but also enhance the individual who possesses it. The industry needs to think three moves ahead, to be positioned strategically for expansion and the new nuclear renaissance. As a nuclear professional, what can you do to develop your skills to improve your contribution to the industry? What's going to be your next move?



# Conserving Tomorrow

## Gluttons for Electricity

Jana Thames, Communications Chair

As industry workers, as well as everyday people, we know that electricity is an essential part of our modern life. In our homes, we use it for lighting, running appliances and electronics, and often for heating and cooling. Most consumers don't think much about electricity until a power outage or a high utility bill.

Electricity was first sold in the United States in 1879 by the California Electric Light Company in San Francisco, which produced and sold only enough electricity to power 21 electric lights. Electricity which was considered a token resource in 1950 has steadily increased in percentage due to a rising popularity for heating and the increasing number of electrical appliances that are now commonplace. For example, 99% of American households had at least one color television and almost half had central air conditioning in 1997. In 1998, 42% of households had at least one computer and by 2000 that percentage had risen to 51% and currently 76% of Americans own a computer, with many homes having more than one. Now in comparison, we plug in an appliance, iphone, tv or turn on a switch without giving it a second thought. Our parents and grandparents saw the advent of television and radio. In their day, the only thing plugged into the TV was an antenna, now we need multiple plug strips to support our Playstations, Wii's, DVRs and DVD players. Every night we are charging our mp3 players, smartphones, bluetooths, tablets, laptops and soon our cars.

According to the US Energy Information Administration, electricity consumption totaled nearly 3,741 billion kilowatthours (kWh) in 2009, which was about 13 times more than electricity used in 1950. With 305,529,237 people living in the US in 2009, the population only doubled since there were 152,271,417 in 1950. Our population only doubled, yet our electrical consumption increased by 13 times. 60% of our electrical usage is directly from small appliances and lighting, items that are easily controlled in usage by the consumer.

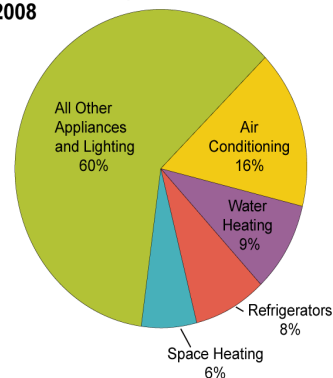
Some states have had brownouts because they cannot meet consumer demand. Some counties in California have had to resort to rolling blackouts to keep the distribution system going. A rolling blackout is a series of intentional electrical blackouts that affect small areas in succession as a means of conserving electricity when supply is lower than demand.

There are numerous ways that we as individuals can conserve electricity.

Purchasing energy efficient appliances can put a large dent in consumption. Energy Star refrigerators use 20% less energy, a water heater can save up to 50%, and a new air conditioner can cut 30%. Another easy step is to stake our energy vampires. These are the small appliances that are plugged in without being operated, like toasters, gaming stations, coffee makers, etc...

The U.S. Department of Energy says that about 75% of the electricity powering our homes electronics is consumed while the products are turned off. According to a study published by the California Energy Commission, an estimated 13 percent of household electricity used is from appliances in low-power mode (meaning that they are not performing any of their primary functions). To limit this type of consumption, remember to turn the item off when you are done using (this also means unplug after your item is fully charged). Enable the automatic power down feature, which will shut down your device if it's left idle for a certain amount of time.

How Electricity Is Used in Homes, 2008



# REGIONAL REPORTS

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## **Atlantic (Regional Lead-Bobby Ashworth, [atlantic@na-ygn.org](mailto:atlantic@na-ygn.org))**

Chapters in the Atlantic Region have put a lot of hard work and planning into their upcoming Regional Event held at AREVA in Lynchburg, VA. The event will take place on August 20<sup>th</sup> with a registration deadline of August 5<sup>th</sup> approaching rapidly. This event hosts an AREVA Senior Director as the keynote speaker and includes various events such as tubing down the James River, the Global Nuclear Fuel Cycle activity as well as some soccer mixed in. So, please make sure your chapters have registered for the event because it sounds like an awesome opportunity thanks to the Regional Planning committee. More information on the event can be found at the event website (<https://sites.google.com/site/atlanticnaygn/>).

## **Northeast (Regional Lead- Elizabeth Haupin, [northeast@na-ygn.org](mailto:northeast@na-ygn.org))**

Chapters in the Northeast Region have also been hard at work planning their upcoming Regional Event which is being held in Syracuse, NY on August 12<sup>th</sup>. This year's workshop theme is "Globalization: The Challenges of the Nuclear Industry in the 21<sup>st</sup> Century". The workshop will include sessions on the following topics: *Fukushima Daiichi – The Aftermath of a Nuclear Accident*, *Knowledge Transfer and Retention*, *Maximizing the Power Output of Existing Plants – Extended Power Uprate*, *World Fuel Cycle Interactive Activity* and *Re-invigorating Your NA-YGN Chapter: A Workshop for Local Chapter Leads*. The agenda also boasts two networking socials at some of the Syracuse local hotspots so make sure and get registered. We are all looking forward to this exciting opportunity thanks to the Regional Planning committee.

## **Carolinas (Regional Lead- Ryan Boyle, [carolinas@na-ygn.org](mailto:carolinas@na-ygn.org))**

The Carolinas Region has been busy hosting several multi-chapter functions in the past few months including a minor league baseball game and some after work socials. Most recently, they held a joint event with the local ANS chapter at UNC Charlotte where Westinghouse showcased their new Small Modular Reactor Design. On a side note, many of the Regional Chapters are getting involved in next year's IYNC 2012 Conference planning which is a huge effort, so keep up the joint events and good luck with the planning. We are all excited about next year's super-conference.

## **Southeast (Regional Lead- Jessica Needham, [southeast@na-ygn.org](mailto:southeast@na-ygn.org))**

The Southeast Region is in full planning mode for their much anticipated Regional Event being hosted in Jupiter Beach, FL. The event is currently scheduled to be held November 3<sup>rd</sup> – Nov 6<sup>th</sup> at the Juniper Beach Resort and Spa. If you are interested in getting involved with the planning committee please contact [southeast@na-ygn.org](mailto:southeast@na-ygn.org).

**Regional Reports, continued on page 8**

# REGIONAL REPORTS- CONTINUED

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## **Midwest (Regional Lead- Sean Tanton, [midwest@na-ygn.org](mailto:midwest@na-ygn.org))**

Chapters in the Midwest are putting the finishing touches on their upcoming Regional Event which is being held in Chicago, IL. This year's theme is OPEX (Operating Experience) and will boast speakers from INPO, Davis Besse as well as DC Cook. The event also includes a White Sox baseball game social, so make sure and get registered now for this opportunity to learn about critical industry experience, network with other young professionals and experience Chicago. Thanks to the Regional Planning committee for their hard work and efforts.

## **West (Regional Lead Jessica Joyner, [west@na-ygn.org](mailto:west@na-ygn.org))**

The AREVA Richland Chapter, in the West Region, recently organized a joint professional development event with Mid-Columbia Chapter to tour the Manhattan Project B Reactor at the Hanford site. The tour provided extensive information on the B-Reactor and Hanford from both a historical and engineering perspective. Participants got to see the core of the first full scale nuclear reactor in the world. Other upcoming events around the Region include summer BBQs, New Member pizza parties as well as Leadership Luncheons.

## **Canada (Regional Lead Chris Waugh, [canada@na-ygn.org](mailto:canada@na-ygn.org))**

The Chapters in Canada have recently held an extremely successful CNS PD Seminar in June at Niagara Falls. 65 people attended and there were some great presentations put together by NA-YGN members. The region has also raised \$12,000 through charity events. AECL Mississauga and AECL Chalk River chapters participated in a Relay for Life race and Bruce Power chapter held a golf tournament. AECL Chalk River is working with a local science academy to setup a design competition for high schools where they use micro controllers to complete a task. Other local chapters have focused on networking as well as PD events including beach volleyball, mini-golf, Toastmasters information sessions and a seminar series where senior leaders spoke about the unique opportunities in their departments. Congrats to the Region and keep up the good work!



# EVENTS

## **August 11-13**

Midwest 2011 Regional Conference on Operating Experience  
Chicago, IL

[Midwest Regional NA-YGN Conference Flyer](#)

For more information contact [Midwest@na-ygn.org](mailto:Midwest@na-ygn.org).

## **August 20**

Atlantic Regional Conference  
Lynchburg, VA.

<http://sites.google.com/site/atlanticnaygn/regional-event-faq>

For more information contact [atlantic@naygn.org](mailto:atlantic@naygn.org).

## **August 20**

Northeast Regional Meeting  
Syracuse, NY

For more information contact [northeast@na-ygn.org](mailto:northeast@na-ygn.org)

## **October 13**

Society of Women Engineers  
NA-YGN Career Awareness Booth  
Chicago, IL

## **October 27-28**

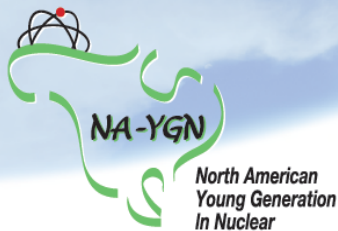
Society of Hispanic Professional Engineers  
NA-YGN Career Awareness Booth  
Anaheim, CA

## **November 17-18**

Association for Career and Technical Education  
NA-YGN Career Awareness Booth  
St. Louis, MO



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