

SPRING 2007

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CNTAware Newsletter

CNTA's First International Symposium Presentation

On February 28, 2007, I gave a presentation entitled “Effective Citizen Advocacy of Beneficial Nuclear Technologies” at the 2007 Waste Management Symposium (WM’07) in Tucson, Arizona. This was the organization’s first such presentation given at the invitation of one of our members, Sonny Goldston of WSRC, who was a member of the WM’07 Program Committee. It reflects our growing national visibility and stature. The abstract further spawned two more presentation invitations for 2007 at conference across the country. The presentation was captured in a paper which will be part of the Symposium Proceedings to be published later this year.

At WM’07 we were part of Session 10.2 “Achieving Stakeholder Consensus, Cultural, Community, and Equity Issues”. This area is, of course, central to CNTA’s mission and part of the reasoning behind our extensive educational outreach activities. It is also an area which will continue to be important locally and nationally as the new generation of commercial nuclear reactors moves forward in the U.S.. Our Tucson presentation was very well received and the session organizers (as well as the audience) have become aware of the organization’s unique position and capabilities. We were immediately invited to participate in the development of the WM’08 program session and will now be part of the Program Committee affording more opportunity for nuclear advocacy. Here, our goals are expanding to provide guidance on the formation of “CNTA-like” organizations to other communities.

We should be proud of how far we have come in a relatively few years. CNTA is now known and respected nationally.

Our growing opportunities for visibility are stretching our resources so be aware—we may be calling on you to be an active spokesperson!!



**TAKING
RESERVATIONS
NOW!**

MAY 11, 2007

**CNTA GOLF
TOURNEY**

**BWXT IS
OUR TOURNAMENT
SPONSOR**

A handwritten signature in black ink that reads "Susan Wood". The signature is written in a cursive, flowing style.

Dr. Susan Wood

Chair, CNTA Board of Directors

UP & ATOM BREAKFASTS

Kari Frederickson, Assistant Professor from the University of Alabama and Historian gave an excellent talk on March 14th at Newberry Hall. The title of her talk was “The Cold War at the Grassroots: Militarization and Modernization in Aiken in the 1950s and 1960s. She spoke of the cultural, economic and physiological changes in the Aiken/Augusta in the 1950-60s. She told some interesting and humorous stories that happened in those ‘good old days’.

Our members and guests enjoyed her talk. We hope to bring her back again.



Dr. Kari Frederickson, University of Alabama

NEXT BREAKFAST—Our next breakfast will be on Tuesday, April 24th, 2007 at Newberry Hall. Our guest speaker is Mr. James Latham, Vice President Barnwell Operations, Chem-Nuclear Systems. The title of his talk is: Commercial Radioactive Waste Disposal in South Carolina.

If you'd like to attend, please call or email your reservations soon, deadline is April 20th.

HOPE YOU CAN JOIN US!



Mr. James Latham

WEBMASTER RECOGNIZED FOR SERVICE

By Dawn Haygood



Jeff Allender accepting plaque and letter of commendation from Dr. Susan Wood, Chairperson, CNTA at the Up & Atom Breakfast.

At the March Up and Atom Breakfast, the CNTA membership and Board of Directors recognized a member of the organization who goes beyond being a member—this is a member who also serves the organization by volunteering with our education mission. Dr. Jeff Allender who serves as the CNTA's webmaster, received a plaque and a letter of commendation on behalf of the membership and the Board of Directors. Jeff has been performing this function for approximately three years and has ensured that our website is up to date, appealing and easy to use. In her remarks at the Breakfast, Chairperson, Dr. Susan Wood noted that our website is our “window to the world”. As such, it is a communication too, which is essential and invaluable in today's environment. As CNTA's horizons and visibility continue to expand the web site's value will also grow. Jeff's work in maintaining the website is exceptional. By day, Jeff is a Senior Fellow Scientist in the Operations Planning Division of the Savannah River National Laboratory. He is very engaged in activities aimed at helping the Department of Energy effectively manage its active and surplus nuclear materials.

We thank Jeff for the contributions he makes to our organizations!!!

The following article is from The Independent News & Media website, published on February 15, 2007. Dr. Patrick Moore, will be our Edward Teller Lecture/Banquet speaker this year.



15 February 2007 14:22

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Patrick Moore: Nuclear energy? Yes please...

It is simply not credible to claim that wind and solar energy can replace coal and natural gas

Published: 15 February 2007

Last summer, the UK government's Energy Review looked at the big picture surrounding energy needs, and wisely called for a resurgence in nuclear power generation. Meanwhile, Friends of the Earth, Greenpeace and other activist groups have adopted policies that specifically exclude nuclear from the UK's future energy supply. While they talk about "transitioning to a low-carbon system", they dismiss nuclear, the only energy source capable of actually delivering us from an increasing use of fossil fuels and their resulting carbon emissions.

As a lifelong environmentalist, a co-founder and 15-year leader of Greenpeace who finds himself critical of many activist groups today, I am perplexed by this logical inconsistency. It is simply not credible to claim that wind and solar energy can replace coal and natural gas.

Wind and solar are by nature intermittent, and therefore not capable of delivering the baseload power required for an energy grid. In fact wind and solar must be backed up with baseload energy so there is power when the wind stops blowing and the sun is not shining. Simply put, the only choice is between fossil fuel and nuclear.

I choose nuclear for clear and compelling environmental reasons. Worldwide, 442 operating nuclear plants avoid the release of nearly 3 billion tons of CO2 emissions annually - the equivalent of the exhaust from more than 428 million cars. In the UK alone, 23 nuclear reactors avoid the release of approximately 150 million tons of CO2 each year, while quietly providing 20 percent of its electricity.

The UK is the EU's largest, and the world's third-largest natural gas consumer, and in 1994 became a net-importer of natural gas. The risk of building an energy infrastructure that depends on gas from Russia and the Middle East is worth considering. The twin policy drivers of climate change and energy security complement each other in directing us towards an aggressive programme of replacing fossil fuels with a combination of renewable energy and nuclear.

I am not an alarmist on the subject of climate change. But I do believe that it would be very wise to adopt a realistic program to reduce CO2 emissions. Nuclear energy has an impressive operational record, yet unease continues to surround this proven source of clean and safe power. Each concern deserves careful consideration.

Concern: nuclear energy is not safe. Fact: nuclear energy is one of the safest industrial sectors worldwide. Modern nuclear power plants follow strict government regulations, which mandate continuous employee training and redundant safety features. By contrast, the Soviet-designed Chernobyl reactor was an accident waiting to happen; it had no containment structure, and its operators literally blew it up. While tragic, the number of deaths from Chernobyl confirmed last year by the United Nations was, at 56, well below initial reports. The Three Mile Island accident in the US, on the other hand, was a safety success story. The containment structure functioned as designed, and prevented radioactive material from escaping at harmful levels, resulting in no deaths or injuries. In the last 35 years, no one has died of a radiation-related accident in the UK civilian nuclear reactor programme.

Concern: nuclear energy is expensive. Fact: nuclear reactors deliver electricity on par with the cost of coal and hydro, and cheaper than natural gas, wind or solar.

Continued on page 7

SPRING IS HERE!! IT'S time to start get your team together and join us at the CNTA Golf Tournament

DON'T HESITATE....GET YOUR TEAM SIGNED-UP NOW!

CNTA Golf Tournament May 11, 2007 Houndslake C.C.

8:30 am shotgun start, 7:30 am registration— Lunch following play

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CHALLENGE?

Citizens for Nuclear Technology Awareness experienced a burst of new members a decade ago when the organization was formed to provide factual, objective information on nuclear subjects for the public, teachers, students and officials. The founders of the organization knew a strong membership must be cultivated if the organization's grass-roots base was going to thrive.

Now ten years later, while still going strong, CNTA individual memberships have started to slowly decline. It's now time to focus our energy on keeping established members and inviting new ones. New members are the key to the growth, viability and vitality of CNTA. The more members we have, the further we will go. If each CNTA member were to bring in just one new member, we would double the size of the entire organization. How's that for a challenge?

This year's campaign focuses on connecting and relationships, a large part of the satisfaction people seek in their volunteer roles. Ironically, many members leave an organization because of boredom or lack of involvement. We don't want that to happen at CNTA. We want to develop a constituency of people whose personal involvement in CTNA ensures heartfelt commitment and continued success.

Do you enjoy your interactions during the Up and Atom Breakfasts? Do you feel a sense of pride when you see CNTA referenced as a factual information source in the news? Are you comfortable with your contributions to CNTA? Do you have some great new ideas? Are you willing to step out of your comfort zone and ask a co-worker, neighbor or friend to become a part?

To add a bit of incentive, we're going to track referrals to CNTA and put your name in a drawing for prizes at future Up and Atom Breakfasts. The sooner you start recruiting new members, the more chances you'll have to win, so get going!

Let's all do our share to double the organization and ensure CNTA remains a dominant force in nuclear technology awareness. We do make a difference, and we are a great organization, so let's all do our part. Look for opportunities to tell people about CNTA, and ask them if they would like to get involved. Whether you work at SRS, a local hospital or university, or any local business, you benefit from the efforts of this organization, and we all benefit from an informed and supportive community.

New members can join CNTA via our website at www.c-n-t-a.com or call us at 800-CNTA and we'll be happy to mail you an application and more information.

Craig Martin, Membership Chair



The southeastern region has the potential to be the center of the emerging nuclear renaissance in the United States that is already underway in many other countries around the globe. The demands of the southeastern region's expanding population for

increased electric power are projected to continue (an additional 28,000 MW of new generation capacity will be needed by 2020), and will be greater than those of other regions (e.g., only 5,000 MW will be needed for the Northwest). The nuclear industry is well represented in the region and the utilities in the region are clearly committed to growing their nuclear generation component – to-date, more than half of the announced plans for new reactors would be located in the Southeast.

The financial incentives needed for this expansion of the nuclear enterprise have been incorporated into the Energy Policy Act of 2005, but the lack of human capital may limit its growth. In addition to the manpower needs this revitalization will impose, half of the current nuclear workforce is eligible to retire within the next five to ten years. Thus, not only must the current nuclear workforce be expanded, but much of it must be replaced in the near-term. **SUNRISE** (Southeast Universities Nuclear Reactors Institute for Science and Education) has been

incorporated as a not for profit organization (Section 501(c)(3)) to support the rebuilding of the nuclear workforce in the southeast and the nation. Specifically, SUNRISE was organized and will be operated to enhance the quality of nuclear education and research and other services in the region for the purpose of supporting the development of the next-generation nuclear workforce, nuclear technology, and advanced nuclear research.

SUNRISE currently has eight university members from seven southeastern states, five industrial partners, and is developing a Memorandum of Agreement with the Oak Ridge and Savannah River National Laboratories for cooperation and support in pursuing nuclear related projects and initiatives. Ultimately, a nuclear education and training center will be established to support the growing workforce needs as the nuclear renaissance becomes a reality in the U.S.

Dr. M.R. (Mel) Buckner has been appointed to be the Interim Executive Director of SUNRISE, responsible for planning and managing the activities under the direction of the Board of Directors. Dr. Farzad Rahnema (Georgia Tech) is the Chair of the Board, Dr. Paul Turinsky (North Carolina State University) the Vice-Chair, and Dr. Travis Knight (University of South Carolina) the Secretary. Initial activities include building the academic and industrial membership, and pursuit of opportunities with the SRNL and ORNL (with regard to PACE (Protecting America's Competitive Edge) educational and research initiatives, GNEP (Global Nuclear Energy Partnership), and others) and other activities in line with SUNRISE objectives of advancing nuclear education and research in the southeastern region

FIRST CNTA HIGH-SCHOOL ESSAY SCHOLARSHIP WINNER ANNOUNCED!



We have our first winner of the CNTA High-School Essay Sponsorship. Amy Varallo, a senior at Aiken High School and daughter of Tom and Susan Varallo, Amy submitted an excellent paper on "Beneficial Uses of Nuclear Technology in Everyday Life.

In the last issue of CNTAware we told you about the essay scholarship that CNTA created to recognize and reward area students to have a better understanding of nuclear technologies. Area schools would also benefit by receiving a \$500 award if their student was the winner. The essay contest for the first year was held in Aiken, Richmond and Columbia County Schools. We hope to expand this to other schools for next year. Students who are current juniors and seniors in high school are invited to submit an essay on nuclear technology topics. The competition will be judged by the CNTA staff and representative of the general membership. Essays should be 1000-1500 words in length.

The winner of the essay contest would receive a \$1000 scholarship, and the school will receive a \$500 award. The winning student will be honored along with their parents and a school representative at the Edward Teller Lecture as guests of CNTA.

The essays we received were excellent and the judges expressed that the decision to select just one was difficult. We hope to expand the scholarship to more counties next year and offer more than one scholarship. This will require securing sponsors....if you or your corporation are interested, please contact the CNTA office. We need to get our young people interested in nuclear technologies. (We have included Amy's Essay as a separate sheet)

By Bill Wabbersen

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Concern: nuclear waste will be dangerous for thousands of years. **Fact:** spent fuel, which contains 95 per cent of its original energy, is being safely stored at nuclear power plants around the world, and will be re-used by future generations for electricity. Within 40 years, spent fuel has less than 1000th the radioactivity it had when it was removed from the reactor.

Concern: nuclear reactors are vulnerable to terrorist attack. **Fact:** even an airliner could not penetrate the five-foot-thick reinforced concrete containment structure, which protects contents from the outside as well as from the inside.

Concern: nuclear energy is directly linked to nuclear weapons proliferation. **Fact:** it is not necessary to have a nuclear reactor in order to produce enriched uranium for a nuclear bomb. Uranium can be enriched by using new centrifuge technology; that is what Iran is suspected of doing at present. Nuclear proliferation must be addressed as a separate issue from nuclear power generation.

The only significant obstacle facing a greater reliance on nuclear energy is the wrongheaded opposition by activist groups like Friends of the Earth and Greenpeace. These groups use misinformation to scare the public into believing nuclear energy is unsafe. They want fossil fuel power plants and nuclear plants phased out, falsely claiming that conservation, efficiency and renewables alone will provide sufficient energy to power the UK's cities and manufacturing sectors.

Once people see nuclear energy for what it truly is - safe, reliable baseload power with no greenhouse gas emissions - they will wholeheartedly support their government's forward-thinking policy. Then the engineers and scientists can get on with the job of building an energy infrastructure that makes it possible to reduce the use of fossil fuels and the threat of climate change.

The writer is a former leader of Greenpeace and chair and chief scientist of Greenspirit Strategies

See what our 2006 Bob Maher recipient has been up too!



Emily Colvin is the 2006 recipient of the Bob Maher Memorial Scholarship. The following announcement may conflict with her appointment as Mission Commander for Crew 60 at the Mars Desert Research Station (Utah) in Spring 2007. Undoubtedly, either mission may involve the radiation detector systems she is prototyping as part of her Master's degree research. Because she was already planning to participate in the MDRS research in the spring, it is unlikely that the FMARS assignment would interfere with completing her Bachelor's degree in May.

On November 6, 2006, the Mars Society announced the selection of seven crew members and two alternates for the four-month Mars mission simulation that will be conducted at the Flashline Mars Arctic Research Station (FMARS) on Devon Island Between May 1 and August 31, 2007. The nine selected team members were chosen out of a pool of over 50 highly qualified applicants from all over the world. The overall purpose of the Mars Society simulations is to investigate field exploration techniques that would be relevant to the scientific exploration of Mars.

We're proud of you Emily. Best of Luck with the 2007 FMARS program.

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DID YOU KNOW:

WORLD STATISTICS—As of January 2007, 30 countries worldwide were operating 435 nuclear reactors for electricity generation. Twenty-nine new nuclear plants were under construction in 12 countries. Nuclear power plants provide some 16 percent of the world's electricity production in 2005. Countries generating the largest percentage of their electricity in 2005 from nuclear energy were:

- France—78.5% Lithuania—69.5%
- Slovakia—56.1% Belgium—55.6%
- Ukraine—48.5% Sweden—46.7%
- Bulgaria—44.1% Armenia—42.7%
- Slovenia—42.4% Hungary—37.2%
- Unites States—20%

The amount of electricity generated by a 1,000-MWe reactor at 90% capacity factor in one year: 7.0 billion KWh—enough to supply electricity for 740,000 households. If generated by other fuel sources, it would required:

INSTEAD OF AN UP & ATOM BREAKFAST IT'S GOING TO BE A DINNER! We are planning a joint dinner with the American Nuclear Society with guest speaker Don Hintz, President Elect of ANS.

Because of Mr. Hintz's schedule it is necessary that we combine his talk into one event. The proposed date is late May. We will keep you updated when final arrangements have been completed.

Oil-13.7 million barrels	1 barrel yields 576 KWh
Coal-3.4 million short tons	1 ton yields 2,297 KWh
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(based on average conversion rates from the Energy Information Administration)	

World Statistics from NEI website

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