

2008 Country Report

U.S. Nuclear Industry Highlights

The U.S. nuclear power industry continues to perform at very high levels. The industry has shown again that it is technically reliable, financially sound, environmentally friendly, secure, and safe. High capacity factors, optimizing refueling and maintenance outages and a commitment to performance in all areas of plant operation and maintenance have contributed to an average availability of 91.8% in 2007. Multiple U.S. Plants achieved a rating of 100% availability. The outstanding performance of the fleet communicates a positive message and illustrates the importance of nuclear energy. The financial community has recognized the performance and is consistent in ranking nuclear as a viable investment opportunity.

Environmental performance: The environmental benefits of nuclear energy continue to be recognized by former critics and independents. Nuclear is one of the few options for no-carbon (a critical greenhouse gas emission) electricity production and environmental groups are now working to preserve the nuclear option. When considering that carbon emissions would be almost one-third higher without nuclear power, the potential for reduction in greenhouse gas emissions is seen as significant. The positive message is not without drawbacks as critics in the current election year are mobilized and vocal. The U.S. industry is standing on the clear record of achievement for reliability and safety.

Used Nuclear Fuel: Action is still needed by the U.S. Government to meet obligations to move used nuclear fuel from operating and decommissioned radiation sites to a permanent storage facility. Despite some positive aspects there remain significant challenges to be resolved before the Yucca Mountain repository becoming fully operational is a reality. The US Department of Energy is expected to submit an application to the NRC for licensing of the Yucca site in 2008. Interim storage remains the approach of choice to manage the issue but the industry is looking at an integrated strategy that includes recycling used fuel. Significant research and development is needed in addressing recycling prior to this option becoming a cost-effective and efficient option.

License renewal: The power industry in the U.S. is steadily building the value of its assets through license renewal by adding 20 years to the original 40-year operating term for nuclear plants. Forty-eight renewals have been granted so far with 47 additional submittals in process or expected to be submitted to the US NRC in the future. Operational practices and maintenance strategies to ensure continued safe and reliable operation through a 60 year life are at the top of the industry's initiatives as plants approach the extended life period. The industry through the NEI-03-08 materials initiative is taking a pro-active approach and is positioned to inspect the fleet with a fresh look as the first plants in the U.S. fleet enter the life extension period. The possibility of 80 years is now a subject for serious consideration as the USNRC and DOE jointly sponsored a recent conference on "Life After 60". The primary conclusion drawn was that the regulatory process for extending to 80 years would be the same as that used to extend to 60 years. The industry must now turn their efforts to development of the technical basis to support an 80 year life.



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Safety: Safety of the public and the existing fleet remains a priority. The safety record of the operating nuclear installations remains secure as measured by the Nuclear Industrial Safety Accident Rate. No other energy supplier or industry comes close to the performance of the nuclear fleet. Critical to success is pro-active engagement with the public to plan for the unexpected. Establishing a clear partnership between operators and the public in Emergency Planning and open communication on issues of concern is an effective means to ensure continued public acceptance.

New Plants: The nation's active fleet added one to its number in the past year, growing from 103 to 104 operating units with the restart of Tennessee Valley Authority's Browns Ferry Unit 1 on time and within budget. TVA is also in the initial stages of the process of completing Watts Bar Unit 2. The industry is firmly committed to new plants as evidenced by the placement of the first orders in thirty years. Record levels of support continue for the power industry. Surveys indicate that even in an election year 62% of the general public agree that nuclear energy will play an important role in meeting future electricity needs.

The Nuclear Power Industry in the United States is facing many challenges from maintaining the current fleet to encouraging talented young people to look at careers in the industry to reaching out to inform the public on the benefits of nuclear technologies. The industry is working to be well-positioned to respond to nuclear technology needs in the years ahead both in the U.S. and the global community.

U.S. WIN Update

U.S. Women in Nuclear continues to grow, with over 2700 members. The 2007 National meeting attracted over 300 participants. The U.S. organization established a Steering Committee in 2007 to enable more effective management of the ever expanding organization.

Members of the U.S. WIN Leading Group took part in a visit to the offices of the United States Congress. This yearly activity is key in maintaining and creating dialogues to provide information to the members of the national government.

Highly successful and well attended Regional meetings were also held in each of the four regions during the course of the year. These provided multiple opportunities for individual member networking on several levels.

Local chapters are the backbone of U.S. WIN and serve as the primary ambassadors to the public. Outreach activities included one on one mentoring to students and new hires, supporting local clubs and science conferences, conducting teacher workshops, and speaking engagements.

U.S. WIN continues to present the positive message of the industry by engaging the public in simple, factual, and consistent communication. We look forward to hosting the Women In Nuclear Global General Assembly in 2009.

Visit us at www.winus.org

