

Position Statement #29

Maintaining a Viable Nuclear Industry Workforce



Maintaining highly educated and skilled personnel is crucial to ensuring the long-term viability of nuclear technology as a major resource for energy, defense, and health care as well as to sustain education and research and development in the United States and the world. The development and maintenance of this specialized workforce, and its related educational needs, is a major effort of the entire industry.

By 2000, knowledge retention, education, and workforce planning evolved as major issues facing the nuclear industry. Corporate downsizing in the 1990s, in all work classifications, created a lean, older workforce. By 2004, the average age of nuclear workers was 48, with 28% eligible to retire within five years.

The aging of the workforce is expected to create a severe shortage of qualified workers to:

- maintain the safe and reliable operation of commercial and defense nuclear plants;
- continue necessary research and development in education, medicine, power and manufacturing;
- continue development and construction of new nuclear facilities;
- address and staff nuclear medicine needs;
- continue high-quality nuclear education and the recruitment of students to nuclear education and careers.

The nuclear industry recognizes the growing complexities of these workforce issues. Significant resources have been devoted to initiatives to assess current and future industry educational and workforce needs. Initiatives include:

- collaborations that established special workforce committees, representing the entire industry, to recognize and address emerging issues;
- major industry surveys to quantify current staffing and educational levels and predict future gaps near (five years) and longer term (ten-plus years);
- collaborations to foster student interest in nuclear careers and provide financial support;
- educational programs developed collaboratively between universities and community colleges to meet needs of specific industry workers;
- innovative means of providing educational opportunities to traditional and nontraditional students through technology;
- programs to ensure appropriate transfer of knowledge, effective integration of a multigenerational industry workforce, and initial and continuing training of the current workforce.

The American Nuclear Society is committed to promoting the highest levels of education to support the future nuclear industry workforce. To this end, ANS recommends that nuclear related

organizations (such as industry groups, the U.S. Department of Energy, universities, community colleges, vendors, and nuclear utilities) continue existing efforts and expand those efforts as necessary in order to:

- promote and improve the education, knowledge, and qualifications of the nuclear workforce;
- continue efforts to effectively capture, manage, and transfer critical knowledge between successive generations of workers;
- develop self-sustaining efforts to attract new, well-qualified workers to ensure future industry workforce needs are met.

Note: Position Statement 29, revised June 2006, was originally titled “Human Capital in Nuclear Science and Technology,” issued November 2002



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