The Technical Talent Challenge

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The viability of the electrical infrastructure, and ultimately the economic outlook of the power industry as a whole, could be in jeopardy due to the declining availability of relevant expertise. Many factors have led to the ever increasing scarcity of technical skills, specifically those related to the design, engineer, and operations of power systems.

Utilities and power users alike have reduced staff to meet short-term earnings goals resulting in fewer positions for new hires, early exiting of seasoned talent, and more work for those retained. Meanwhile, building and maintaining the electrical infrastructure has become more challenging due to increases in load requirements and the necessary utilization of sophisticated software for modeling, control systems, and automation.

Incoming talent to replenish the power industry workforce is at risk. Some universities have experienced a decline in enrollment for power related courses which has negatively impacted the availability of power curriculums. Furthermore, demographic trends depict the industry as male dominated resulting in the lack of non-traditional role models for women and minorities thus reducing the pool of available entrants and the attractiveness of pursuing a career in the power industry. Finally, universities are schooling those from overseas, as a career in this industry is viewed as prestigious in some parts of the world, creating a dynamic that further adds to the complexity of the situation in the US.

The availability of talent in the power industry is greatly influenced by various factors. This presentation puts the talent challenge into context and includes recommendations for next steps to proactively address the situation.

BIOGRAPHY

Wanda Reder is the Vice President of the Power Systems Services Division at S&C Electric Company. This division offers consulting and engineering services, field services, and project management to utilities and power users.

She received an Engineering Bachelor of Science degree from South Dakota State University in 1986 and a Masters in Business Administration from the College of St. Thomas in 1990.

Wanda joined Northern States Power Company in 1987 and held numerous leadership positions there.

She was involved in the justification and deployment of distribution automation, planning for long-range delivery systems needs, and development of conservation and load management initiatives.

In 1997, she started and led Ultra Power Technologies, Inc., a deregulated subsidiary of Northern States Power that performed predictive diagnostics on underground cable for utilities in the US and Canada.

Later she served as VP-Energy at Davies Consulting, where she developed asset management and reliability improvement strategies for various utilities. In 2001, she joined ComEd as Vice President of Engineering and Planning. ComEd provides electric service for approximately 3.4 million customers in northern Illinois. Wanda’s areas of responsibility included system planning, engineering standards, maintenance, reliability, and mapping. In 2003, she assumed leadership of Exelon Energy Delivery Asset Management, spanning the service areas of ComEd and PECO in Philadelphia. She was additionally responsible for asset investment strategy, electric transmission, substation standards, new business engineering, delivery engineering, and work management.

Wanda has served on the IEEE Power Engineering Society Governing Board since 2002 and is currently the IEEE PES President. She has researched the maturing workforce of the power industry to prepare a “road map” for actions to be taken. She has been featured as a distinguished lecturer at many conferences and her interpretation of the challenge and outlook for next steps to collaboratively address the situation have been extensively published.