Task Force on Reliable Electricity Infrastructure

Shortage of Specialized and Highly Trained Workers

- Human resource managers at utilities are very concerned about the looming shortage of workers within the industry. *Work Force Aging and Turnover in the U.S. Electric Power Industry, Preserving Legacies of Knowledge* by Michael Ashworth (2005) shows a study in which several top tier human resource executives were asked about their current problems in staffing the electrical industry. The biggest obstacle for these utility human resource officers was the aging work force with 71% of them ranking this the number one issue. Fifty-seven percent of the surveyed managers reported that the average age of their utility operations employees were between 47 and 49 years old. The ageing workforce was not the only concern expressed by these utilities. The employment levels within the industry have dropped 23.7% since the early 1990's while the output of the industry has increased by 30%.

- Over the next five to ten years, about 50 percent of our 2,000 employees will be eligible for retirement," reported Angie Robinson, HR manager for the Sacramento Municipal Utility District. "We expect to be losing a significant number of employees." At another large utility, Dominion Resources in Virginia, a 2003 in house study showed that a quarter of their 17,000 workers will be eligible for retirement by 2007, and 45% by 2012.

- In the report *Power Firms Look to Stem Labor Shortage* by Lisa Cornwell (2006) it is estimated that about half of the almost 400,000 employees in the utility work force will be qualified for retirement in the next decade. This report also states that utilities have hired less people over the last 10 to 20 years in an attempt to be more profitable in a deregulated market. It is not uncommon now, for Lineman to work over 1000 hours of overtime a year.

- The *IBEW Journal* (April 2005 p.12) discusses the impending exodus of skilled workers. By 2010 it is possible that the industry will lose up to 60 percent of its experienced workers. The Bureau of Labor Statistics shows that the average utility employee is older than the national average (43.7 years old in 2005) and the median age will increase over the next 25 years. The entire utility industry has 148,000 employees in the 55 to 64 year old range, with the median age increasing over the next 25 years.

- It takes an average of four years of training for an apprentice to become a lineman. It usually takes another three to five years before a lineman is proficient in most areas of the trade. This means that it could take seven to ten years to get an employee from the first day of training to the point that he can adequately replace an outgoing senior lineman. Usually the outgoing lineman is still taking with him more skill and value than the less experienced replacements have attained.

- In an article in *Energybiz Magazine* (2004, pp. 20-25) experts in the electrical industry discussed some of the reasons that they are experiencing a shortage of utility workers. They observed "too many companies wait until it's too late to try to get retiring workers to pass along their intuitive and understanding of the job they are leaving. You have a guy who's an expert because he's been doing his job for 40 years, Haugh said. "Wouldn't you like to have that knowledge captured before he's ready to walk out the door?"

- *Powerlineman.com*. On November 2, 2006 there were 35 different companies from Florida to Hawaii posting lineman jobs; some were for multiple openings with hourly wages up to $40 an hour. These job opportunities are not abnormal but have been available for several years and show no signs of letting up. It is very clear that this shortage of lineman is a national problem that may not be solved by increasing wages alone.

- *Utility Automation & Engineering T & D, Preventing Knowledge Loss as More Utility Workers Retire* by Wayne Bishop Jr. (May/June 2005 pp. 16-20) states, “The United States is one of the most electrically dependent nations in the world. A loss or serious reduction of available electric power would make it extremely difficult-if not impossible-for U.S. infrastructure to function at an acceptable level.” Despite industry restructuring, the latest challenge is a shrinking knowledge base within the industry. Over the next 5 to 10 years the utilities industry will have to minimize its loss of critical knowledge and skills in order to safely and efficiently operate. Mr. Bishop explains, “Traditional utility training programs address the explicit knowledge contained in written documents, technology manuals, and utility policies and procedures. But, it is the tacit knowledge held in a worker’s mind that is harder to capture and transfer to new employees. Expert utility workers are an extremely valuable asset in maintaining reliable and safe delivery of electric power to consumers”.