

issues Update

Fall 2005

Utility Survey Identifies Skill Gaps in Future Workforce

Centers of Excellence Model Designed to Address Critical Needs of Industry

A recent *Craft Skills Gap* survey conducted by the Utility Workforce Planning Network indicates that electric and natural gas utility companies across the county are struggling to fill skilled technical and craft positions, and that without strong action, the shortage is likely to continue over the next five years and beyond.

The recently concluded survey identified four major areas where utilities faced the greatest hiring needs in 2005, from 2007-2009, and 2010 and beyond. These areas include:

- Maintenance and repair workers
- Electrical power line installers and repairers
- First-line supervisors and managers
- Power plant operators.

More distressing, utilities who responded to the Network survey indicated that current applicants lacked critical skills necessary to fill the company's greatest employment needs. More than half of

Centers of Excellence a cornerstone of Network efforts

A key strategy of the Utility Workforce Planning Network's plan to address the electric and natural gas industry's skilled technical worker shortage is to assist local utility efforts to develop effective partnerships with community colleges, high schools, other employers and economic and workforce development organizations and develop local systems to recruit and train the future utility workforce.

companies said that prospective employees showed deficiencies in technical knowledge, mathematical ability and communications skills. Significant concern was also demonstrated about lack of mechanical ability, reasoning ability, interpersonal skills and reading comprehension.

The results of this survey reinforce earlier findings, which led UBEC to create the Network in 2004 as a nationwide partnership dedicated to attracting more youth to the industry's skilled and craft labor jobs, ensuring opportunities for technical training, and engaging a diverse new generation of employees.

The *Craft Skills Gap* survey results mirror data from other research which indicates the utility industry and power producers face a deepening shortage of qualified, skilled workers over the next five years. With more than half of today's utility workforce eligible for retirement over the next decade, companies are finding a lack of adequately-trained entry-level employees a growing issue.

The *Centers of Excellence Model Partnership Initiative* is designed to identify and support sustainable education and training programs that meet utility workforce needs. These local programs will become part of a national network that will enable the replication of effective models, the sharing of successful curriculum, lessons learned and best practices, and the transfers of skill credentials.

“The loss of critical knowledge and the inability to find replacements with utility-specific skills are the two biggest challenges that public power utilities face as a result of the aging workforce.”

The American Public Power Association
September 2005
“Workforce Planning for Public Power Utilities”

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An effective *Center of Excellence* partnership will engage both K-12 and postsecondary education to create a seamless path to a utility industry career:

- At the middle and high school levels, programs will create awareness of utility career opportunities and encourage high academic achievement in core subjects such as mathematics, science and communications skills.
- At the postsecondary level, associate degree and certificate programs will provide the technical training necessary for success in entry-level utility positions to address clearly defined, high priority utility workforce needs.
- Utility partners will not only help define skill needs, but provide opportunities for internships, apprenticeships and other training.
- The Network and the *Center of Excellence* will work together to document progress and share the process and curriculum with other community college/utility partnership through a one-stop information clearinghouse.
- A *Centers of Excellence* Advisory Board will provide national direction and support, while helping the Network develop processes to accelerate the development and replication of model curriculum.

The *Centers of Excellence* Model Partnership Initiative is the result of a partnership between UBEC, the American Association of Community Colleges, and the U.S. Department of Labor. This multi-year effort will create a long-term framework to address the most pressing workforce issues, taking unique local needs into account.

The Network will support *Centers of Excellence* sites through the participation of utility companies in local and regional partnerships, the sharing of industry-specific employment data, industry-endorsed core curriculum and best practices through an online clearinghouse, and the active participation by Center representatives on the Network Advisory Board.

Almost 30 utility-community college partnerships have applied for *Center of Excellence* designation. Almost half of them have submitted a letter of commitment pledging more than \$1.4 million in in-kind services to support establishment of the initiative.

Network Survey Highlights Critical Workforce Issues

The *Craft Skills Gap* survey conducted by the Utility Workforce Planning Network reinforces the need for the utility industry to take immediate steps in addressing its critical future workforce issues. Highlights of the survey include:

- While two-thirds of utility companies who responded have conducted an analysis of current and future workforce retirements, less than 40 percent have a workplace planning process in place.
- Forty-five percent of companies indicated that maintenance and repair workers would be a priority hiring need in 2007-2009, while 42 percent identified electrical power line installers and repairers. More than one-third said first-line supervisors and managers would be a key need during the same time period. These same three job categories were listed as the top needs in 2010 and beyond.
- A significant correlation exists between jobs with the greatest hiring needs and the skill deficiencies of current applicants. A number of companies indicated that applicants for positions such as power plant operators, electrical power line installers and repairers, electricians and maintenance and repair workers often lack technical knowledge, mathematical ability, communications skills and mechanical ability.
- Utilities believe that government workforce agencies such as One-Stop Career Centers and Workforce Investment Boards are only moderately effective in helping meet recruitment goals.

“ The average age of utility craft workers is 50 years old, the highest average for any industry. ”

Edison Electric Institute
 Electric Perspectives Magazine
 September/October 2005 issue

Occupations with the Greatest Projected Hiring Need in 2007-2009 and 2010 (Percentage of Companies Listing the Occupation in the Top Three Hiring Needs)

	2007-2009	2010
Maintenance and repair workers	45%	38%
Electrical power line installers and repairers	42%	34%
First line supervisors and managers	36%	47%
Power plant operators	30%	28%
Electric meter installers and repairers	18%	13%
Electricians	15%	19%
Electrician and electronics repair	15%	9%
Industrial machinery mechanics	15%	6%
Power distributors and dispatchers	15%	0%

How Can Utility Companies Help Address the Skilled Workforce Shortage?

The Utility Workforce Planning Network is designed to engage the nation’s electric and natural gas utilities in a strategic, results-oriented effort to ensure a skilled workforce is available to meet the future needs of the industry. The goal of the Network and its utility company members is to build partnerships that create a seamless career path to a utility industry career by:

- Creating awareness of utility industry job opportunities and their educational and skill requirements to students and other potential employees.
- Helping ensure students graduate from high school with the mathematics, science, communications and employability skills necessary for success in postsecondary education and a skilled technical utility career.
- Developing model core utility curriculum for community colleges and high schools to increase the number of youth well prepared for utility careers and to reduce failure rates on company pre-employment test.
- Working with community colleges and other partners to prepare a diverse pool of candidates for skilled jobs in the utility industry.

- Providing entry-level job opportunities for qualified candidates.

You can help accomplish this agenda with your support and action:

- If your company has not already done so, become a member of the Utility Workforce Planning Network.
- Designate a key person as the company liaison, and ensure participation on a Network committee.
- Build partnerships with local community colleges, technical schools and other employers who require skilled technical labor to address local workforce needs.
- Utilize the resources of UBEC and the Network to move local efforts forward.

For more information about UBEC and the Utility Workforce Planning Network, contact Steven Kussmann, executive director, at 703.391.0033 or by e-mail at skussmann@ubec.org.

“The skilled trades will have the highest rate of retirements thought 2010 and they will be the most difficult to find replacement for retirees.”

The American Public Power Association
September 2005
“Workforce Planning for Public Power Utilities”

Percentage of Companies Noting a Skill Deficiency for Current Applicants in at Least One Occupation with the Greatest Demand

Skill Area	Percentage	Selected Occupations
Technical Knowledge	56%	Power Plant Operators, Electrical Power Line Installers and Repairers
Mathematical Ability	54%	Electricians
Communication Skills	54%	First Line Supervisors
Mechanical Ability	46%	Maintenance and Repair Workers
Reasoning Ability	46%	—
Interpersonal Skills	46%	First Line Supervisors
Reading Comprehension	41%	Electricians
Spatial Ability	33%	—
Physical Ability	33%	—
Perceptual Skills	28%	—