Help Wanted

NEW WORKFORCE PROGRAMS AIM TO FILL VACANCIES

BY GARY M. STERN

THE HELP WANTED SIGNS AREN'T proliferating in the utility industry. Yet. But reports indicate that retiring baby boomers in the next five years combined with fewer workers going into technical jobs could create a utility employment crunch.

The Workforce Trends in the Electric Utility Industry report issued by the U.S. Department of Energy in August 2006 confirmed what most utility executives and HR directors already knew. Employment openings will be increasing. The report noted that 78 million American baby boomers or 44 percent of the workforce would be reaching retirement age in the next few years. It concluded, "For electric utilities, whose service quality and reliability depends on maintaining an adequate, knowledgeable workforce, managing the upcoming retirement transition is a particular challenge."

Replacing retiring workers is only part of the challenge. Between now and 2030, many utilities expect 50 percent growth because of increased demand for power, says Mary Miller, vice president of HR at the Edison Electric Institute. "We're not only looking to replace workers but likely hiring will be increasing," she adds.

For example, demand will outpace supply for electrical line workers since about 50 percent of them will be retiring in the next five to 10 years. Estimates are that 20 percent of line worker openings may go unfilled if utilities don't take concerted action to replace them. In fact, the Centralia College Center of Excellence for Energy Technology predicts a growth rate of 50 to 60 percent in the hiring of power plant maintenance and mechanics, apprentice electricians, among several technical positions.

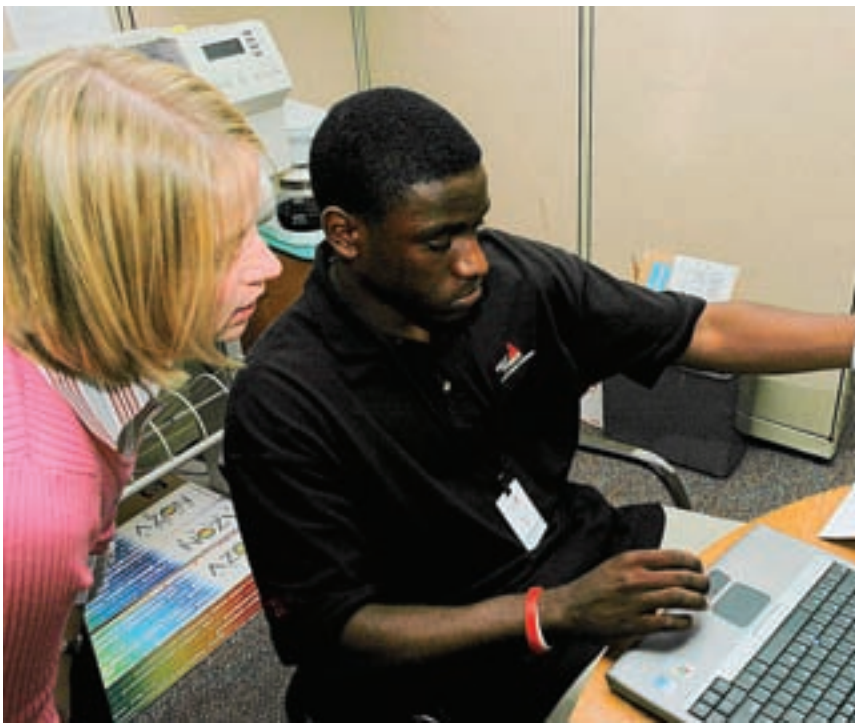
Solving the future employment needs of the utility industry is going to take a combined effort of industry organizations such as EEI, utilities partnering with four-year and community colleges to develop career programs, and utilities taking bold recruiting measures.

EEI established the Center for Workforce Development in March 2006 to provide "more comprehensive approaches to workforce development and identify and replicate the best practices of community colleges, high schools and apprenticeship programs," says Miller. In addition, it aims to "improve perceptions of energy utility careers," which diminished in the last few years, she adds.

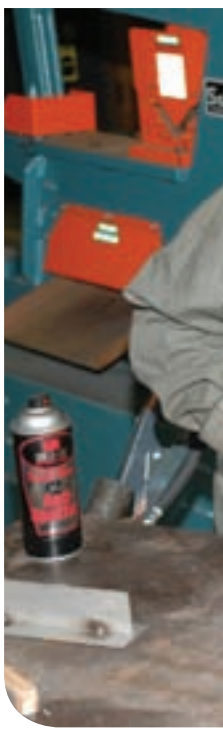
Even when utilities partner with community colleges to train technicians, timing these programs to meet employment needs can be tricky, suggests Donna Robichaud, a vice president of asset management at Duke Energy Generation Services and member of the advisory board of the University of Cincinnati's power technology program. "If you flood the market with graduates and can't hire them, you're going to create disillusionment. Currently we're going through an adjustment period, but we're trying to make sure we can meet our blossoming needs for 2010 or 2011," she says. In 2007, Duke will hire a handful of graduates, but in three to four years, it might recruit an entire class of 50 students.

Working with Duke Energy, AEP and First Energy, the University of Cincinnati started two programs in power systems technology in fall 2006. One is a two-year 96-credit program offering an associate's degree and the other a 24-credit one-year certificate program. Both concentrations train students to serve as power plant operators in the electric power generation and transmission industry. The utilities reviewed the curriculum and offered practical suggestions.

Students take courses in the fundamentals of electricity, electric wiring, and programmable logic control. By the time they complete the program they will have "electrical and mechanical skills to operate electric power generating stations," says Max Rabiee, chairman



Nelson Rembert, a Gulf Power Academy student, goes over an environmental report with Ashley Keough, an engineer with Gulf Power's environmental affairs.
PHOTO COURTESY OF GULF POWER.



NewsFlash

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CHINA EFFICIENCY GAINS

China is making progress on its commitment to reduce energy use per unit of economic output 20 percent by 2010.

In the first half of 2006, total energy use fell 2.78 percent, compared to one year earlier, *Xinhua News Agency* reported. But total electricity use increased 3.64 percent in the same period.

Chinese industry uses 20 to 100 percent more energy per unit of economic output than major industrial countries like the United States, according to the World Bank.

of the University of Cincinnati's Electric and Computer Engineering Technology department.

Every student will have a 10-week co-op experience working at a power plant generation station such as three Duke legacy plants or an AEP peaking station in Lawrenceburg, Ind. Though the program began last year, it expects to graduate 10 to 15 graduates in 2008 and have 50 students enrolled by the end of 2008. "Co-op programs create a link with textbook learning and help students know what to expect on the job. Seeing is believing," Robichaud says.

Not only do students gain but so does Duke Energy. "Younger students are more computer literate and can help with emission control requirements. Normal power plant workers who graduated years ago don't possess these computer skills," Robichaud says.

How marketable are students graduating from this program? "First Energy and AEP are aggressively hiring Applied Science graduates as plant operators in maintenance union positions," says Raymond Miller, an adjunct lecturer in the program. First-year power plant operators start at around $20 an hour but can earn $65,000 and up the second year with overtime and pay increases, depending on each individual's abilities, he says.

In 2001, Gulf Power, a subsidiary of Southern Company, joined with the West Florida High School of Advanced Technology in Pensacola, Fla. to create a tech preparatory program for high school students, explains Jennifer Grove, Gulf Power's workforce development coordinator. "We wanted to ensure that students had a solid understanding of construction math, algebra, and could read charts and graphs," she says.

Graduating students can handle a variety of incoming jobs such as apprentice line technicians, welder mechanics, electricians and plant operators. But the program also prepares students to go on to four-year degrees and major in engineering, another major need for utilities.

Starting in a student's junior year, every participant in the program, which usually has 20–25 students in the sophomore, junior and senior years, is mentored monthly by a Gulf Power employee who stays with them until graduation. Mentors can be plant managers, engineers, or line operators. "In mentoring, staff can take their 30 years of direct knowledge and transfer it to a student," Grove notes.

In their senior years, students spend 20 hours a week at a Gulf Power internship, learning the jobs of lineman, engineer, plant coordinator and customer service. Because Gulf Power can observe students at work and evaluate them, it makes it easier to hire them. Since the program's inception, Gulf Power has hired 19 of the program's graduates.

Grove says that 50 percent of its graduates move on to industry and construction-related careers, 25 percent to community colleges and 25 percent to four-year universities. Graduates receive 15 hours of college credit when attending Pensacola Junior College's electronics and engineering technology program and the University of West Florida's electrical engineering program.

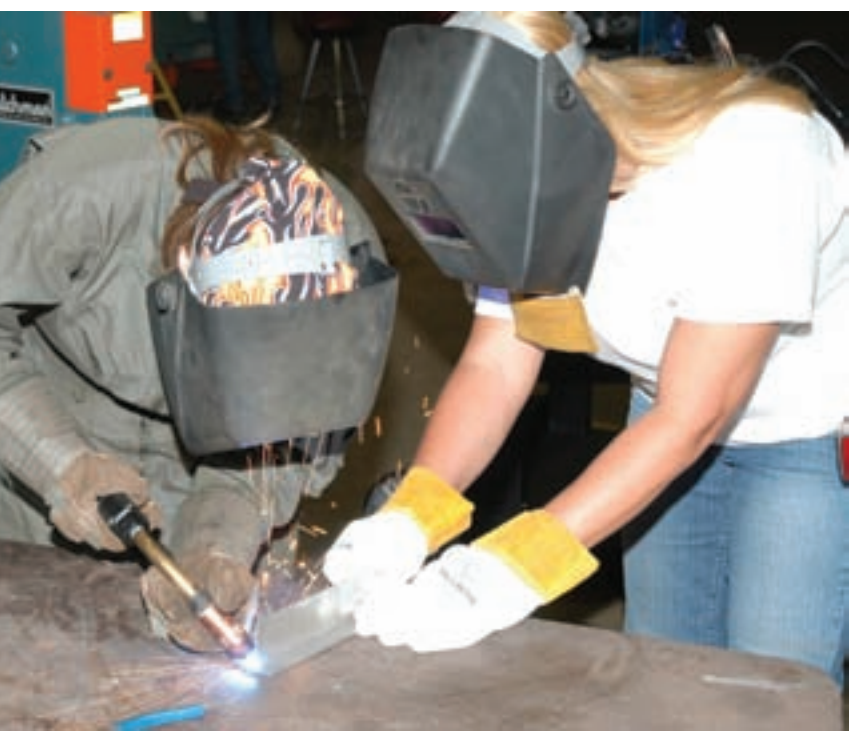
Why is it so critical to reach students at a high school age? "That's when students make career choices, choose curriculum and the direction they want to go," says EEI's Miller.

Washington State has been in the vanguard of meeting the employment needs of its utilities by creating the Center of Excellence for Energy Technology at Centralia College in Centralia, Wash. The center serves as a resource for utilities' workforce development programs and coordinates programs at six Washington community colleges that train workers for utility industry jobs. In addition, it offers in-hour training to staff at Seattle City Light and Puget Sound Energy to upgrade entry-level workers in electricity and math skills, explains Barbara Hins-Turner, executive director of the Center of Excellence for Energy Technology and a former Portland General executive.

Industry executives serve on the Center's advisory board and help design curriculum based on utilities' needs and set skill standards for power generation jobs.

Last year, 20 students graduated from Centralia College's power technology program and 14 from Clark Community College and all of them have been placed. Many are working at $18 to $22 an hour starting jobs as linemen at utilities or substation operators for Bonneville Power Association and Puget Sound Energy. By the time they reach journeyman, they'll earn $30 to $35 an hour.

"The center has become a recruiting site. Utilities come to us as a point of contact for job openings or beginning apprenticeship programs. No one college or utility has all the answers. It's about the partnership between industry and labor," says Hins-Turner.



Jennifer Naugle, left, a student with Gulf Power Academy, practices welding with Christine Farmer, a welder-mechanic at Gulf Power.
PHOTO COURTESY OF GULF POWER.

"YOU DON'T HAVE TO BE A LARGE UTILITY. YOU CAN ENGAGE AT ANY LEVEL."

Unions play a major role in working with graduating students who begin entry-level jobs and join pre-apprenticeship programs after attending Washington's community colleges. IBEW77, the local of the International Brotherhood of Electrical Workers, participates in the The Center of Excellence for Energy Technology's advisory board and provides subject matter expertise for setting power generation skill standards. Nineteen of the leading 20 utilities in Washington are affiliated with IBEW77, says Hins-Turner. If hired, graduates become IBEW members.

When Kansas City Power & Light realized that the average age of its utility line worker was 48 years old, it initiated a program with other utilities at a local community college. Rather than operate as a lone utility, it reached out to Aquila, Westar Energy, Platte-Clay Electric Coop and the Metropolitan Community College Business & Technology Campus (BTC) to launch a two-year Kansas City Line School at Metropolitan Community College in Kansas City. The program starts in fall 2007. Targeting linemen, it includes 400 hours of internship and should attract 15 to 20 students a year. After students graduate from the program, some will advance to KCP&L's six-week pre-apprentice training and apprentice training before vying for positions as full-time linemen.

Why collaborate with other utilities? "Joining with other utilities that want to draw out of the pool means we'd have more consistent hiring," explains William Herdegen, vice president of customer operations at KCP&L.

Though quota systems are not favored, the utilities that are partnering with community colleges, which attract large number of African-American and Latino students, are in effect targeting the often-overlooked minority student. "When most utilities are selecting a partner school, diversity is often a high priority," Miller notes.

Working with Metropolitan Community College in Kansas City, says KCP&L's Herdegen, means the students involved will "mirror the community we do business in. We want a diverse workforce."

Not only do these high school and community college programs teach job-training skills but also they help change students' perceptions of technicians' jobs, notes Gulf Power's Grove. Most parents want their children to attend college and obtain a four-year degree. But these internships and mentoring programs in high school show how "these advanced technical jobs play a mission-critical role in society," Grove says.

Though KCP&L is involved in the lineman program at Metropolitan Community College, that's only one aspect of its approach of hiring workers to replace retiring baby boomers. "We're also targeting women. We speak to women's sports organizations, to women in high schools and at job fairs," says Herdegen.

Gulf Power, a subsidiary of Southern Company, partnered with a tech high school in Pensacola. But according to Grove, any utility can get involved in educational partnerships. "You don't have to be a large utility. You can engage at any level. You can connect with a limited number of students or host students during the summer," she says.

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11	How to Value Energy & Electricity Assets New York	QL:	E16794
11-12	Investing in Energy Storage New York	QL:	E16887
15-17	EMACS 2007 Irvine, Calif.	QL:	E16874
16-19	Carbon Finance Asia Singapore	QL:	E16630
29-30	Investing in Solar Las Vegas	QL:	E16675

NOVEMBER

4-7	EEI Financial Conference Lake Buena Vista, Fla.	QL:	E12468
6-7	European Wind Power Projects Barcelona, Spain	QL:	E16973
8-9	Power Plant Financial Modeling and Evaluation Schenectady, N.Y.	QL:	E16926
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