



A Worker Shortage in the Nuclear Industry

By *Marianne Lavelle*

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The hunt for workers is on in south Texas, two years before construction begins on the first new nuclear power plant in the United States in 30 years.

The huge engineering firm Fluor already is canvassing high schools within a 100-mile radius of Bay City, with an extraordinary offer: After graduation, enter Fluor's training program—free of charge—to learn carpentry, welding, electrical work, or another skilled trade. You'll eventually be sent for work and on-the-job training at one of Fluor's other construction projects in Texas: an oil refinery in Port Arthur or coal plant in Oak Grove. When NRG Energy, the company planning the two south Texas nuclear reactors, receives the government go-ahead to start building, around 2010, Fluor aims to bring those workers back to Bay City for specialized nuclear plant training and to start in on the job. The annual pay: \$60,000 to \$75,000.

"We need to start to attracting people and training today for the new crowd we'll need in the future," says Ron Pitts, senior vice president for nuclear power at [Fluor](#). "We can't wait until we get a [construction and operating license]."

The reason for the hurry: Big energy construction will be booming in the next decade, concentrated in the South—not only nuclear generators but coal plants, liquefied natural gas terminals, oil refineries, and electricity transmission lines. All projects need skilled craft workers, and they are in drastically short supply.

The utility Southern Co. estimates that existing energy facilities already are short 20,000 workers in the Southeast. That shortfall will balloon to 40,000 by 2011 because of the new construction. Pay is inching up and hours are increasing for workers who are certified craftsmen. Fluor says skilled workers at the Oak Grove coal project are putting in 60-hour weeks instead of the well-into-overtime 50-hour weeks that had been planned.

Looking ahead, the nuclear industry views itself as especially vulnerable to the skilled-labor shortage. It hasn't had to recruit for decades. Not only were no nuke plants getting built, but workers in the 104 atomic facilities already in operation tended to stay in their well-paid jobs for years. But in the next five years, just as the industry hopes to launch a renaissance, up to 19,600 nuclear workers—35 percent of the workforce—will reach retirement age.

"The shortage of skilled labor and the rising average age of workers in the electric industry are a growing concern," likely to push up the cost of nuclear power plant construction, said Standard & Poor's Rating Services in a recent report.

The nuclear industry faces a different world compared with when it last was hiring three decades ago. "Parents, guidance counselors, and society in general push high school students to complete their secondary education with the intention of then attending a four-year college program," concludes a recent white paper on the Southeast workforce issues prepared by the [Nuclear Energy Institute](#). "High-paying skilled labor jobs, once considered excellent career options, are now perceived as second class."

Carol Berrigan, senior director for industry infrastructure at NEI, says that the industry needs to do more to get the word out that the jobs actually require substantial training and offer a good quality of life. The median salary for an electrical technician is \$67,500; for a senior reactor operator, \$85,400. "And the other thing that's nice about these jobs," Berrigan says, "is they are not going to go offshore."

Sheila Brey, a project manager at Entergy's James Fitzpatrick nuclear power plant near Oswego, N.Y., has loved working in the industry for 24 years, but she's quick to add that it isn't for everybody. "Handling nuclear technology is special," she says. "You have to be totally respectful of the technology. You have to have a high level of comprehension of that and a willingness to constantly improve and to take safety into consideration every step of the way."

Brey started out as one of those highly sought skilled workers—an instrument and control technician—in 1984. Now, she's taking classes, all with the help of education reimbursement from Entergy, toward her bachelor's degree in engineering. With colleagues retiring and high hopes in the industry for a new generation of nuclear plants, Brey says she sees the need for a new generation of workers: "This is the time the knowledge transfer has to occur."