

I ndustry Snapshots

- The Energy Industry incorporates a broad range of sectors, including: Petroleum and Natural Gas extraction, refining, and distribution; Electric Power Generation, distribution and Mining.
- Public utilities employed about 600,000 workers in 2002. Electric power generation, transmission, and distribution provided almost three in four jobs (436,000), while natural gas distribution (116,000) and other systems (48,000) provided the rest of the jobs (U.S. Bureau of Labor Statistics)
- The Gross Domestic Product (GDP) for the energy industry, including electric and gas utilities, nuclear power generation, mining (including coal and minerals), and oil and gas extraction in 2003 was \$352 billion, a 3.2% share of the national total. (U.S. Bureau of Economic Analysis)

High Growth INDUSTRY PROFILE

W orkforce Issues

Preparing for the Demographic

- Improving the energy industry's public image
- Increasing available labor pools
- Maintaining a stable labor supply

Education and Training Programs

- Developing new training programs
- Improving existing programs
- Expanding successful models

Skill Development

- Transferring knowledge from the aging workforce
- Preparing entry-level workers
- Developing competency models and career ladders

S kill Sets

(Source: U.S. Bureau of Labor Statistics)

- Workers can enter the Oil and Gas Extraction industry with a variety of educational backgrounds. The most common entry-level field jobs usually require little or no previous training or experience. Other entry-level positions, such as engineering technician, usually require at least a 2-year Associate degree in engineering technology. Professional jobs, such as geologist, geophysicist, or petroleum engineer, require at least a bachelor's degree, but many companies prefer to hire candidates with a master's degree, and may require a Ph.D. for those involved in petroleum research.
- Employers seek high school graduates for entry-level power plant operator, distributor, and dispatcher positions. Candidates with strong mathematics and science skills are preferred. College-level courses or prior experience in a mechanical or technical job may be helpful. With computers now used to keep records, generate reports, and track maintenance, employers are increasingly requiring computer proficiency.
- While most mining jobs can be entered directly from high school, the increasing sophistication of equipment and machinery requires a higher level of technical skill.

E TA in Action

DOL has sought to understand and implement industry identified strategies to confront critical workforce shortages. It has listened to employers, industry association representatives, and others associated with the energy industry regarding some of their efforts to identify challenges and implement effective workforce strategies. DOL's Employment and Training Administration is supporting comprehensive business, education, and workforce development partnerships that have developed innovative approaches that address the workforce needs of business while also effectively helping workers find good jobs with good wages and promising career pathways in the energy industry.

I nvestments

Total Industry Investment is \$3,659,590
Total Leveraged Resources are \$3,028,683

Oklahoma Department of Career and Technology Education (OK)

High Plains Technology Center—Strengthening the Oil and Gas Industry

Grant amount: \$1,546,463; Leveraged amount: \$528,683

The High Plains Technology Center, in consultation with partnering energy employers, will develop and provide at least 50 industry-driven courses for new and incumbent oil and gas workers in Northwest Oklahoma, Southwest Kansas and the Texas Panhandle. Courses will be developed and delivered in both English and Spanish to address the changing demographics of this workforce. In addition, High Plains Technology Center will serve in a consulting role to the region's oil and gas employers, better connecting them to existing workforce development resources and initiatives.

San Juan College Regional Training Center (NM)

Oil and Gas Industry Training Project

Grant amount: \$2,113,127; Leveraged Amount: \$2,500,000

With significant support from the industry, San Juan College is developing a centralized regional training center, located in New Mexico, to meet the training and human resource needs of the Rocky Mountain energy industry. One-Stop Career Centers across the four states will provide recruitment and assessment services to unemployed, dislocated, and incumbent workers. Participants will complete hands-on training at the regional training center in New Mexico. All training and training materials will be developed and delivered in Spanish and Navajo, and all course instructors will be bilingual. Mentors will support participants through their training and enhance participants' placement, retention, and advancement opportunities.

R esources

For additional background information about the industry and details on the grants, information about employment and training opportunities, and workforce development tools for employers, educators, and workforce professionals please refer to the following: www.doleta.gov/BRG, www.careervoyages.gov, www.careeronestop.org, and www.workforce3one.org.