

# **Coal Workforce Development Workshop**

**April 29, 2004**

**Mountaineer Conference Center**

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- **A Study of The Coal Industry's Future Labor Force Needs**
- **Prepared in cooperation with the West Virginia Coal Association**
- **Researchers: Paul D. Melton, Sandra E. Shaw, and Paula J. Melton**
- **December, 2001**
- **Updated with anecdotal data spring, 2004**
- **Study funded by Tech's EDA University Center, US Department of Commerce**

# Survey Participants

- Steering committee of Human Resource Directors from the Coal Industry, Leadership from the West Virginia Coal Association, Faculty and Administrators from colleges and universities in southern West Virginia.
- Survey questionnaires were sent to 71 Coal Company Presidents with a cover letter from Mr. William B. Rainey, Association President—15 were returned and 11 were used in the Findings, Conclusions, and Recommendations—18%.
- The Findings, Conclusions, and Recommendations were reviewed in spring, 2004, and checked against anecdotal information from participants in the planning of this workshop.

# Executive Summary

- Skill level requirements have increased
- Educational programs have decreased
- Enrollment has decreased
- The workforce is aging
- A generation of experienced workers lost
- More coal produced with fewer workers
- Post-high school education not needed to operate equipment

# Executive Summary

- Technological advances = safety & efficiency
- Coal industry struggles with regulations, public opinion, and profit margins
- Coal mining is not valued as a viable career
- Opportunities exist for the coal industry and higher education to develop cooperative programs to meet future workforce needs.

# Findings

## ■ The Lost Generation:

- “Fewer young professionals are seeking mining as a career.”
- “We have lost a whole generation due to press and government being negative toward coal.”
- “More mines are opening and the demand for quality people has become higher. We as an industry have lost a generation of coal miners because of market conditions; no one could afford to train people.”
- “People feel coal mining is a dying industry and are looking for better careers.”

# The Lost Generation

- 44.5% of the workforce surveyed is 41 and 50
- 23.64% are between 51 and 60
- 8 respondents reported that the 41 to 50 age group constituted a majority of employees
- 1 reported that 70% were in the 51-60 age group
- Only 25.04% is between 21 & 40

# The Lost Generation

- One company President reported that the company's ability to attract and retain employees had not changed much, but his was because

**“We have increased wages and benefits to attract employees. Most of our new employees have relocated from other mining operations with lower pay, benefits, working conditions, etc.”**

Notably, this company reported that 65% of its workforces was between 21-40. To attract the younger worker and to insure adequate human resources, a company must invest adequate financial resources.

# The Lost Generation

- Many respondents, nearly half, reported that they will have to hire more people due to the lack of skilled workers in the 21-40 age group
- “Experienced workers will retire, young workers will lack experience and more will be needed.”  
The problems created by the loss of experience held by retirees and the lack of experience in newer, younger workers were repeatedly mentioned by these company Presidents.

# Growing Needs of a Growing Industry

- All respondents expected the demand for coal to increase of the next 10 years.
- The average estimate reported was 18%
- All respondents cautioned, however, that the coal industry can changes quickly depending on political, legal, and economic factors beyond the control of the industry
- All respondents predicted growth in key categories of employment

# Growing Needs of the Industry

## Key Employment Categories

- 8 predicted growth in underground mining
- 3 predicted growth in surface mining
- Projected employment growth:

Middle management

Coal removal and transportation: 32.33%

Skilled heavy equipment operators: 32.1%

Skilled, technical employees

# Growing Industry Needs: “Skilled” is the Key Word

- All respondents noted that required skill levels for all workers are increasing

- Current average skill levels:

Professional 9.73%

Technical: 8.73%

Highly Skilled: 40.30%

Skilled: 32.27%

Unskilled: 7.64%

# Growing Needs of the Industry: Industry Estimates

- Mining Engineering: increase of 20.2%
- Electrical and mechanical skills: increase of 25.3%
- Environmental skills: increase of 20.5%
  - Water Treatment: 11.86%
  - Reclamation: 12.25%
- And in general: “higher skills needed due to an increase in automation”

# Growing Industry Needs: Training and Education

- Several respondents stated that training, rather than either recruitment or retention, would be the most pressing human resource issue in the next 10 years
- “Market conditions have forced companies to become more competitive to survive in a depressed market; therefore, skilled employees have become much more burdened by day to day administrative functions and have not had as much time or inclination to train or educate the next generation of skilled employees”
- Greatest Challenge: “to address [the] challenge of transition from older/experienced workforce to younger, better educated, but inexperienced workforce.”

# Growing Industry Needs: Types of Education Cited

- Of 22 skills listed, respondents were asked to rank from 1 (little or no importance) to 10 (absolutely essential). 7 received the most responses for high need and relevancy:

Basic Mathematics

Electrical Circuits

Safety

Heavy Equipment

Business Management

Communication skills

Supervisory skills

# Growing Industry Need: Suggested Solutions

- Overall, increases in production and skill levels with simultaneous decreases in interest and skill acquisition among younger workers is causing a shortage of trained, loyal employees in many coal companies. Respondents reported that “an average of 72.73% of their employees have no education beyond a high school diploma”

# **Recommendation:**

## **Dialogue on Specific Solutions**

- Marketing the Coal Industry as a viable career alternative, with career path opportunities delineated
- Providing both basic education and specific skill sets
- Providing professional education in mining engineering and business management
- Providing a coordinated system of training and educational programs involving high schools, vocational technical schools, community colleges, and colleges and universities.
- Coal Industry attracting young workers with competitive pay and benefits
- Coal Industry investing in an educational program for employees