



# Workforce Challenges for Natural Gas Field Operations

## *Developing Effective Training to Fill the Gap*

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# The Gas Technology Institute: 75-year History of Energy Solutions & Effective Training



# GTI Education Programs

## Training the next generation workforce

- Over 40 courses offered annually
- Over 70,000 industry professionals trained
- Open enrollment and onsite courses around the globe with students representing 20+ countries

### Topic areas:

- > Gas distribution & transmission
- > Gas utilization & marketing
- > LNG
- > E&P
- > ***Workforce Development***

### Delivery options:

- > Classroom courses or open enrollment
- > Onsite for energy industry customers
- > Online & self-guided programs



## NATURAL GAS FIELD SKILLS TRAINING PROGRAM

77 instructor-led courses now available for the classroom or online



# Training Program Context

Appalachia's

## Major Employment Challenges

- > Since 2011, over 23,000 coal jobs lost
- > Economic challenges in Appalachia span from Alabama to New York

The Natural Gas Industry's

## Workforce Gap

- > Major distribution and pipeline upgrades and build-outs
- > Many new hires needed – workforce gap

Training Program

## Solutions

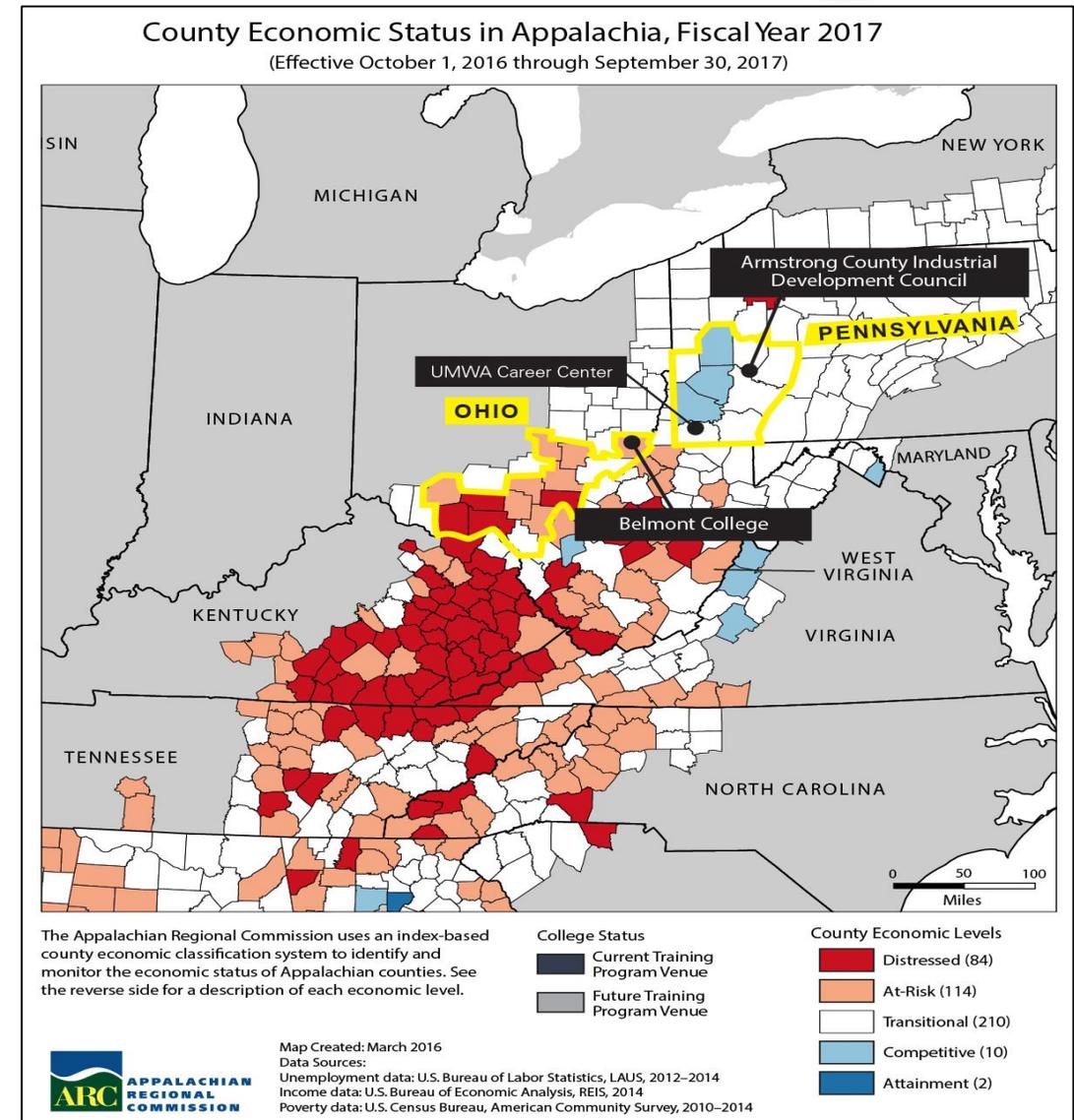
- > The Appalachian Regional Commission (ARC) funds training programs that strengthen the economy
- > GTI builds education content and team collaboration to deliver effective training programs



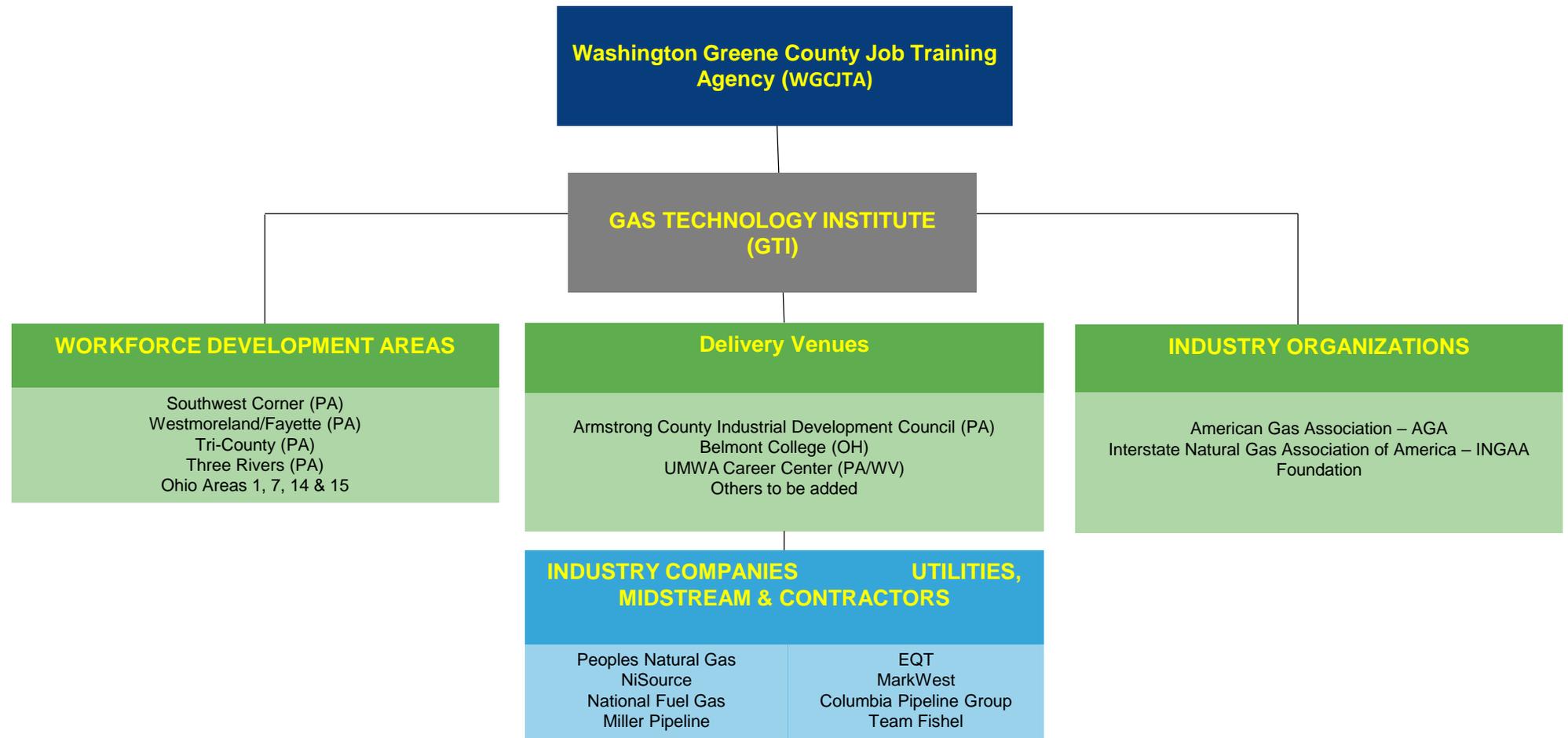
# The Program

## The numbers:

- Training program fully-funded by Appalachia Regional Commission
- 156 hour, pre-employment 4-week training program
- 23 counties in SW Pennsylvania & SE Ohio
- Multiple training venues
- 100 students to be trained
- 10 – 15 students per class
- 20+ organizations comprise the team



# The Program Team



# Industry Engagement is Key

## Supported by Industry:



# Curriculum Components

- Introduction to Natural Gas
- Employability Skills, Customer Service, & Interaction Skills
- OSHA 10
- Fire Safety
- Utility Specified Field Equipment Overview
- Basic & Industry Specific Construction Tools & Equipment
- Tools, Instruments & Measures
- Underground Pipeline Locating
- Leak Survey
- Heavy Equipment Operator
- Excavation Safety Training
- Excavation Near a Gas Pipeline
- Vacuum Excavation
- Keyhole Technology
- Horizontal Directional Drilling
- Pipeline Installation & Maintenance (37 modules)
- Field Experiences
- Safe Driving Course
- Traffic Control Flagger, Hauler Safety & Cargo Securement

# The Jobs

## Potential jobs with natural gas utility, pipeline and contractor companies

- > Pipeline Construction Crew
- > Pipeline Operation & Maintenance Crew
- > Pipeline Welders
- > Equipment Operators
- > Other field construction, operation & maintenance support including truck drivers, inspectors, mechanics, pavers, landscapers, etc.
- > Compressor Station Maintenance & Repairman
- > Leak Survey Technician
- > Line Locator Technician
- > Corrosion Control Specialist
- > Gas Measurement Specialist
- > Gas Pressure Regulation Specialist
- > Meter Readers
- > Gas Control Room Operators
- > Field Customer Service Representative (Emergency First Responders)

## Class Attributes

- *Diverse experience/background* – coal, pipeline, welding, farming, veteran, computers, surveying, nursing care, paving, lawn care, home care and facilities management
- *Met qualifications* – drug test, background check, H.S. diploma, and driver's license requirements
- *Commitment and work ethic* – showed up for classes, actively engaged in class, jumped-in for hands-on portions, asked good questions and approached class as active learners

# Training Program Components

- Funding
- Program Team
- Contracts
- Venue
- Curriculum
- Instructors
- Industry/Company Support
- Field Trips / Hands-on
- Marketing Collateral
- Recruiting/Marketing/Media



# Training Program Components

- Applicant Management
- Student Selection Criteria
- Qualifications
  - Drug Test
  - Criminal Background Check
- Communication
- Graduation Day Job Fair
- Job Search Support
- Pictures / Videos
- Surveys



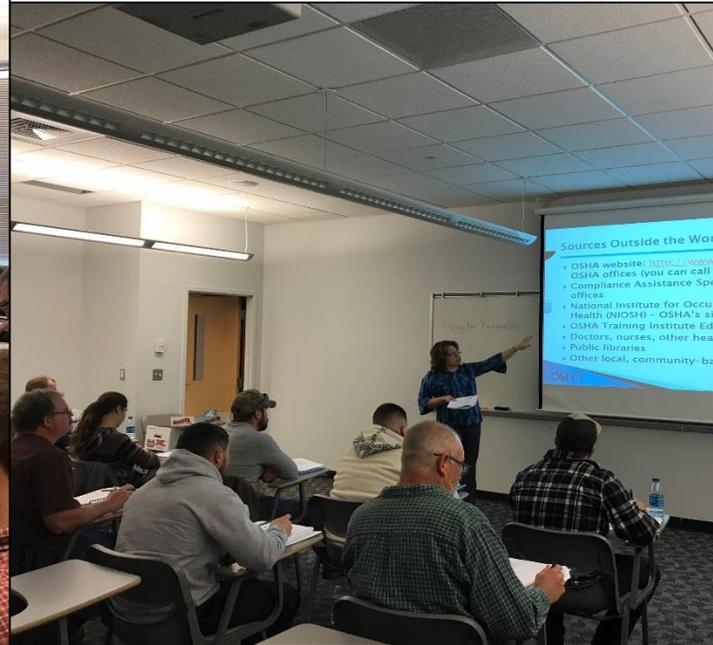
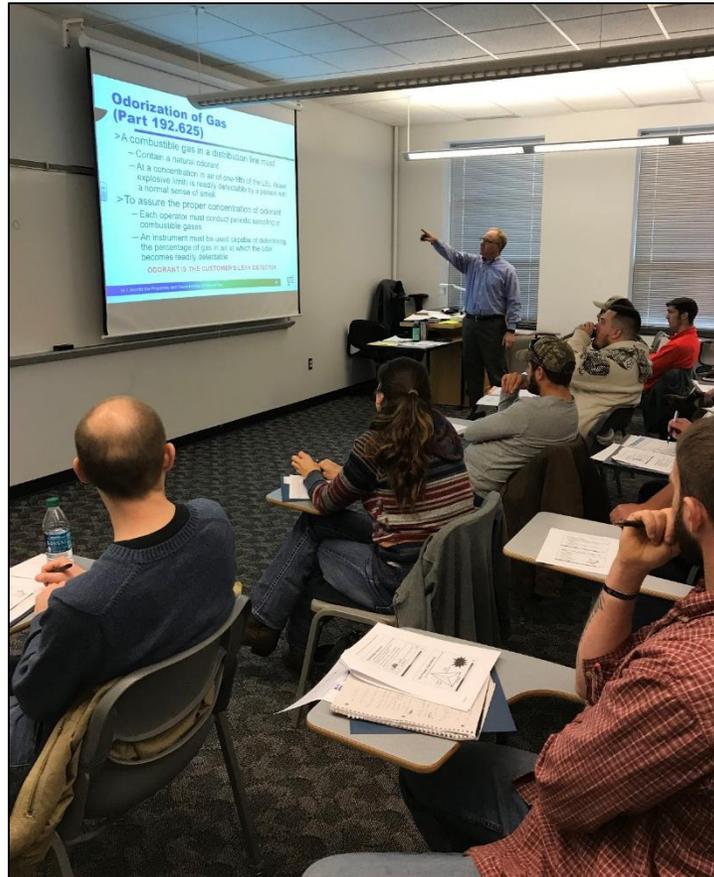
## Lessons Learned

- You must build awareness of industry, career path.
- Local, regional media exposure is BIG (articles, postings/feeds, interviews, pics) for driving awareness.
- Recruiting is critical and one of the biggest challenges.
- Expert, effective instructors are essential.
- The program needs to have as much hands-on and field trips as possible.

## Lessons Learned

- Improving employability skills (interpersonal skills, priorities, resumes) is very valuable.
- Mobility of workforce can be limiting, so proximity to venue and employer can be an issue.
- Potential employer (industry / company) support is essential.
- Curriculum must be informed by industry and companies need to be involved in field trips and job fair.

# Classroom



# Training Facilities Tours



# Natural Gas Fire Safety Demonstrations



# First Class



## What's Next for the Program

- Track participants to employers
- Broaden participation and area
- Grow the team and delivery venues
- Pursue additional funding and support
- Generate more impact

# What's Next for the Graduates



***JOBS !***

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