

BEFORE THE
STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

In the Matter of
Corning Natural Gas Corporation

Case 16-G-0369

October 2016

Prepared Exhibits of:

GAS PROGRAMS AND SUPPLY PANEL

Michael Colby
Utility Engineer 3

Claude Semexant
Utility Engineer 1

Office of Electric, Gas & Water
State of New York

Department of Public Service
Three Empire State Plaza
Albany, New York 12223-1350

List of Exhibits

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Exhibit GPSP-1

Corning Natural Gas Responses to Staff Information Requests

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STAFF OF THE DEPARTMENT OF PUBLIC SERVICE
INTERROGATORY/DOCUMENT REQUEST

Corning Natural Gas Corporation
Case 16-G-0369
Gas Rates

Request No.: DPS-272
Requested By: Michael Colby
Information Requested of: Matt Cook
Date of Request: August 17, 2016
Response Due Date: August 31, 2016
Subject: Workforce Plan

1. Please provide all formal and informal secession management plans for the Company's field staff, engineers and management.

Response:

A written succession plan does not exist. However, with regard to Corning's Union Field Staff, typically the Company has filled all vacated positions and it intends to continue doing so for the near future. These positions are filled per the requirements outlined in the current bargaining unit contract. Engineers and Management, which are non-bargaining unit employees, are filled as needed through the Company HR Department.

2. Explain how the Company ensures that its direct employees have appropriate training, qualifications and certifications for the installation of natural gas infrastructure.

Response:

Direct Employees are trained by the Company Safety and Training Supervisor. Positions involved in infrastructure installation have specific training requirements listed by job classification. The Training Supervisor's task is to assure that each person is trained per the list for that job classification. Each employee is provided a picture ID with QRS code. This scanable QRS code provides a complete list of all passed tasks.

3. Explain how the Company verifies that its contractors have appropriate training, qualifications and certifications for the installation of natural gas infrastructure.

Response:

Corning requires that all of its contractors be OQ qualified by an outside third party per a Company supplied list of requirements by job classification. Additionally, all Company specific training requirements are provided by Corning's Training Staff. When a Contractor is awarded a project, the Company is provided the list of individuals who will be on-site. Those names are compared to the OQ database to confirm that each individual meets the requirements as specified in the job classification list. Each contract employee is provided a picture ID with QRS code. This scanable QRS code provides a complete list of all passed tasks.

Name of Respondent: Matt J. Cook
Position of Respondent: Vice President – Operations
Date of Response: August 31, 2016

STAFF OF THE DEPARTMENT OF PUBLIC SERVICE
INTERROGATORY/DOCUMENT REQUEST

Corning Natural Gas Corporation
Case 16-G-0369
Gas Rates

Request No.: DPS-321
Requested By: Michael Colby
Information Requested of: Russ Miller
Date of Request: September 13, 2016
Response Due Date: September 23, 2016
Subject: Compressed Natural Gas

Explain the experience that Corning has had regarding compressed natural gas (CNG) as a transportation fuel, including all requests by current or potential customers for CNG service and all activities initiated by the Company to examine or provide CNG service.

Response:

Corning currently provides gas supply to one CNG station which is owned and operated by the New York State Department of Transportation. The Company has limited experience with regard to CNG stations and has no plans to own or operate CNG stations. The Company will provide distribution service to entities that desire to own or operate CNG stations supplied through the Corning system. The Company has not initiated any processes to provide CNG service to customers. Corning's activities have been dictated by market demands. Currently, CNG is not competitive with diesel or gasoline as a motor fuel in the Company's area.

Name of Respondent: Russ Miller
Position of Respondent: VP – Energy Supply & Business Development
Date of Response: October 11, 2016



WORKFORCE DEVELOPMENT COMPENDIUM

2016-2017

A List of Training Resources Available to Members of the American Gas Association

DRAFT – June 7, 2016

American Gas Association
400 North Capitol St. NW Washington D.C 20001

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Antitrust Compliance Guidelines

AMERICAN GAS ASSOCIATION

Introduction

The American Gas Association and its member companies are committed to full compliance with all laws and regulations, and to maintaining the highest ethical standards in the way we conduct our operations and activities. Our commitment includes strict compliance with federal and state antitrust laws, which are designed to protect this country's free competitive economy.

Responsibility for Antitrust Compliance

Compliance with the antitrust laws is a serious business. Antitrust violations may result in heavy fines for corporations, and in fines and even imprisonment for individuals. While the General Counsel's Office provides guidance on antitrust matters, you bear the ultimate responsibility for assuring that your actions and the actions of any of those under your direction comply with the antitrust laws.

Antitrust Guidelines

In all AGA operations and activities, you must avoid any discussions or conduct that might violate the antitrust laws or even raise an appearance of impropriety. The following guidelines will help you do that:

- **Do** consult counsel about any documents that touch on sensitive antitrust subjects such as pricing, market allocations, refusals to deal with any company, and the like.
- **Do** consult with counsel on any non-routine correspondence that requests an AGA member company to participate in projects or programs, submit data for such activities, or otherwise join other member companies in AGA actions.
- **Do** use an agenda and take accurate minutes at every meeting. Have counsel review the agenda and minutes before they are put into final form and circulated and request counsel to attend meetings where sensitive antitrust subjects may arise.

- **Do** provide these guidelines to all meeting participants.
- **Do not, without prior review by counsel,** have discussions with other member companies about:
 - ◆ your company's prices for products, assets or services, or prices charged by your competitors
 - ◆ costs, discounts, terms of sale, profit margins or anything else that might affect those prices
 - ◆ the resale prices your customers should charge for products or assets you sell them
 - ◆ allocating markets, customers, territories products or assets with your competitors
 - ◆ limiting production
 - ◆ whether or not to deal with any other company
 - ◆ any competitively sensitive information concerning your own company or a competitor's.
- **Do not** stay at a meeting, or any other gathering, if those kinds of discussions are taking place.
- **Do not** discuss any other sensitive antitrust subjects (such as price discrimination, reciprocal dealing, or exclusive dealing agreements) without first consulting counsel.
- **Do not** create any documents or other records that might be misinterpreted to suggest that AGA condones or is involved in anticompetitive behavior.

We're Here to Help

Whenever you have any question about whether particular AGA activities might raise antitrust concerns, contact the General Counsel's Office, Ph: (202) 824-7072; E-mail: GCO@aga.org, or your legal counsel.

American Gas Association

Office of General Counsel

Issued: December 1997

About American Gas Association

The American Gas Association, founded in 1918, represents more than 200 local energy companies that deliver clean natural gas throughout the United States. There are more than 72 million residential, commercial and industrial natural gas customers in the U.S., of which 94 percent — over 68 million customers — receive their gas from AGA members. Today, natural gas meets more than one-fourth of the United States' energy needs.

Vision Statement

AGA's vision is to provide clear value to our membership and serve as the indispensable voice, and facilitator, on its behalf in promoting the safe, reliable and cost effective delivery of natural gas to the more than 64 million customers in the American homes and businesses that our membership serves.

Mission Statement

The American Gas Association represents companies delivering natural gas to customers to help meet their energy needs. AGA members are committed to delivering natural gas safely, reliably, cost-effectively and in an environmentally responsible way. AGA advocates the interests of its members and their customers, and provides information and services promoting efficient demand and supply growth, and operational excellence, in the safe, reliable and efficient delivery of natural gas.

To further this mission, AGA:

1. Focuses on the advocacy of natural gas issues that are priorities for the membership and that are achievable in a cost-effective way;
2. Promotes growth in the efficient use of natural gas on behalf of natural gas utilities, and the customers the industry serves, by emphasizing before a variety of audiences the attributes of natural gas as a clean, abundant, efficient and secure energy source that is recognized as part of the solution to the nation's environmental and energy efficiency goals;
3. Encourages, facilitates and assists members in sharing information designed to achieve operational excellence by improving their safety, security, reliability, efficiency, environmental and other performance metrics;
4. Assists members in managing and responding to customer energy needs, regulatory trends, natural gas markets, capital markets and emerging technologies; facilitates the identification of, and advocates for, regulatory constructs and business models that provide members the opportunity to remain financially viable, while allowing them to grow;
5. Collects, analyzes and disseminates information on a timely basis to opinion leaders, policy makers and the public about the benefits provided by energy utilities and the natural gas industry;
6. Encourages the identification, development, commercialization, demonstration and regulatory acceptance of end-use technologies that will allow natural gas applications to successfully compete in the marketplace; and
7. Delivers measurable value to AGA members.

Natural Gas Industry Workforce Profile and Statistics

Workforce planning is a critical element of strategic planning, both at the corporate and business unit level. Having the right number of employees with the right skills when they are needed is a key component to the viability and profitability of a corporation.

Job Category	Potential Retirements 2015- 2019		Potential Retirements 2020 - 2024	
	Potential Retirement	Estimated Number of Retirements	Potential Retirement	Estimated Number of Retirements
Lineworkers	19%	14,000	11%	9,000
Technicians	28%	21,000	13%	9,000
Plant Operators	24%	8,000	11%	4,000
Engineers	26%	7,000	11%	3,000
Total Key Jobs	24%	49,000	12%	24,000

Figure 1 – CEWD projected retirement rates for the United States utility workforce¹

The Center for Energy Workforce Development (CEWD) conducts biannual workforce demand surveys of its industry members, who represent over 90% of the energy industry workforce. In its first survey, conducted in 2007, CEWD projected that approximately 52% of the utility technician workforce would need to be replaced by 2012 due to retirement and normal workforce attrition. While the picture in 2007 was dire, as is now evident, many employees elected to continue working past their originally planned retirement age due to the United States economic recession of 2008. The economic downturn worked in the industry's favor, enabling utilities and their partners to implement workforce development solutions that improved the talent pipeline.

CEWD's most recent survey, conducted in 2015, predicts that 28% of utility technicians will retire between 2015 and 2019 (**figure 1**). Individuals retiring from AGA member companies take vast amounts of experience and knowledge with them. CEWD cites "natural gas technician" as one of the top four critical positions that are facing higher than normal attrition. CEWD members describe many of these positions as requiring some postsecondary education or extensive on the job training.

Natural gas operators are having difficulty attracting applicants who can pass the background checks, drug screenings, and pre-employment tests required for employment in the natural gas industry. Secondary education reports approximately three million high school drop-outs each year, and 46 percent of those who enter a post-secondary program fail to graduate within six years. With the largest percentage of new hires for natural gas operators falling between the ages of 18 and 26, these educational challenges make it extremely difficult for AGA members to identify and hire qualified, diverse applicants.

Current Natural Gas Industry Workforce Development Assessment

Overview

AGA has begun to address workforce development challenges with a three pronged approach:

1. **Career awareness** – helping operators increase their qualified applicant pools from which they may hire.
2. **Employee Training** – providing operators third party resources they may use to train and develop their newer and mid-level employees.
3. **Professional Development** – providing operators third party programs to develop future and current utility leadership.

Career Awareness

One of CEWD's initial findings when it was formed in 2006 was an extremely low level of awareness among high school students of possible energy careers and even of the industry itself. Today, significant resources are available to raise awareness of careers in the natural gas industry. Despite these resources, many students, parents, educators, and non-traditional workers are unaware of the need for a capable and skilled energy workforce and of the possibilities for career and salary growth.

Organizations and programs exist that serve to promote energy careers. This compendium highlights opportunities offered by community colleges, non-profit associations, and other third parties to prepare applicants for possible careers in the utility industry. Many of these organizations cater to non-traditional applicant pools such as women, youth, minorities, and veterans. Additionally, a number of partnerships between operators and educators are raising awareness of the industry among students in STEM and technical areas of study. The ultimate goal of raising awareness is to increase the number of qualified applicants available for hire by the natural gas industry.

Employee Training

Many operators are hiring new employees at an elevated rate to address high retirement rates. Operators may choose to utilize third party programs for newer and mid-level employees' training. An increasing number of training programs with a variety of operational topics are available to operators. These programs may prove to be particularly useful for employees expected to perform more specialized functions (metering and regulator instrumentation, corrosion control, etc). The necessary frequency of training in these areas for some operators is often too low to justify development and maintenance of in-house training programs. Therefore, companies look to outside programs to complement their in-house training programs.

Professional Development

Experienced employees moving into leadership positions or different operational areas benefit from additional training and development. A number of programs exist that allow operators to invest in their future leaders by taking advantage of broader subject areas such as management strategies and communications skills. This allows operators to have clear succession plans that provide qualified and prepared candidates to fill vacated leadership roles. The professional development category also includes training programs for construction inspectors and auditors.

Organization of This Document

AGA has assembled this compendium in order to provide an extensive list of available workforce development opportunities as of **June 2016**. The document is organized into three sections based on the three previously mentioned areas of workforce development:

1. Natural gas industry career awareness
2. Employee training for newer and mid-level hires
3. Professional development opportunities

Subsequent catalog pages collect six pieces of information. They are explained in the table below:

Information	Description
Category	Resource type or area of usefulness (i.e., corrosion, transmission pipeline operations, community college programs). These categories are sorted alphabetically within the three primary sections of the document.
Organization	Organization(s) offering or sponsoring the resource or training program.
Event/Resource Title	Title of the event/resource.
Description	Overview of the event/resource listed including intended purpose, scope, and benefit.
Date/Location	If applicable, the date scheduled for the resource. Some resources (i.e., online programs, onsite training, etc.) are “on-demand” and therefore may have “ongoing” noted in this section.
Contact	Point of contact name and contact method.

This document will be updated annually to reflect changes in available workforce development opportunities.



CAREER AWARENESS

PART 1

American Gas Association
400 North Capitol St. NW
Washington D.C 20001


Career Awareness
 Updated May 2016

Category	Organization	Event/Resource	Description	Date/Location	Contact
Applicant Pool Augmentation	American Society of Mechanical Engineers	Engineering Opportunities in the Energy Industry	The energy industry is developing new technologies all the time and thrives on innovation. Because of the broad scope and global nature of the industry, engineers who pursue an energy career have a wide variety of locations and job functions to choose from, and the opportunities it presents are some of the most exciting and challenging you will ever find. The course is designed for individuals that are considering a career in the energy industry.	Ongoing	202-682-8019
	Center For Energy Workforce Development	Natural Gas Technician Bootcamp	The natural gas boot camp consists of a ten-week program that incorporates the Energy Industry Fundamentals, resume and interviewing skills, and natural gas technician specific skills such as safety, piping, valves, excavation, customer service, and corrosion. The program is an introductory course for individuals who are interested in the natural gas industry, but have limited knowledge of the work. The program will provide students with an understanding of the principles of natural gas, how to use natural gas in a manner that is safe for the public, and the types of tools and equipment used in the industry.	Online	Valerie Taylor valerie@cewd.org
		State Energy Workforce Consortia	CEWD has helped to launch over 25 energy state consortia, with the number growing each quarter.	Ongoing	Valerie Taylor valerie@cewd.org
		National Energy Education Network (NEEN) Program	The National Energy Education Network (NEEN) is an assembled group of educators that work with CEWD member companies to enable their energy talent pipeline solutions. NEEN members are granted membership based on CEWD utility member sponsorship and have full access to CEWD content.	Ongoing	Valerie Taylor valerie@cewd.org
		Veterans-only Career Information Day Toolkit	The Veterans-Only Career Information Day is a one day event held at National Grid to attract more veterans to the energy industry and more specifically to their company. The purpose of the day is to introduce the veterans to the energy industry, provide them with a tour and to help them understand the different types of jobs that are available in their company.	Online	Valerie Taylor valerie@cewd.org

Career Awareness
Updated May 2016

Category	Organization	Event/Resource	Description	Date/Location	Contact
	Center For Energy Workforce Development	SkillsUSA Career Expo Toolkit	A great way to get the word out about energy jobs is to get involved in the SkillsUSA competition in your state. The Georgia Energy and Industrial Construction Consortium have hosted an energy and construction career expo. They have donated several items that will help your energy company to get the planning started. Thank you to Georgia Power and all of their partners!	Online	Valerie Taylor valerie@cewd.org
		Women in Sustainable Employment (WISE) Pathways Career Exploration Workshop	Developed in partnership with Hard Hatted Women (HHW), WISE Pathways(TM) is a comprehensive program that includes a forty-hour career exploration workshop, leadership development training, and assessments that direct participants to further portable, stackable credentials and training in targeted fields.	Online	Valerie Taylor valerie@cewd.org
		Troops to Energy Jobs National Template	While our nation's utility companies are looking for new workers, the other reality is that Veterans returning from active duty are having trouble finding jobs. Many are returning home without a clear path toward a job, or the ability to apply the skills they learned in the Armed Services. According to the U.S. Department of Veterans Affairs, approximately 190,000 to 200,000 active-duty personnel will separate from the military annually over the next quarter-century. The need for a quality, high-skilled energy workforce coupled with a pipeline of qualified veterans looking for employment creates the perfect storm of opportunity.	Online	Valerie Taylor valerie@cewd.org
		Troops to Energy Jobs Work Ready Bootcamp	The Troops to Energy Jobs Work Ready Bootcamp program is designed to help those who have recently left the military make a smooth transition to the civilian work world, with the goal of them gaining employment in the energy industry.	TBD	Valerie Taylor valerie@cewd.org
		Energy Fundamentals Certificate Program	The purpose of the Energy Industry Fundamentals Certificate is to ensure that potential workers gain an understanding of the energy industry as a prerequisite to occupation-specific training. It also ensures that they gain an understanding of the careers available in the energy industry, as well as the education and training to enter and advance in those careers.	Online	Valerie Taylor valerie@cewd.org

Career Awareness
Updated May 2016

Category	Organization	Event/Resource	Description	Date/Location	Contact
Helmets to Hardhats		Military Career to Construction Job Transitional Program	Helmets to Hardhats is a national, nonprofit program that connects National Guard, Reserve, retired and transitioning active-duty military service members with skilled training and quality career opportunities in the construction industry. The program is designed to help military service members successfully transition back into civilian life by offering them the means to secure a quality career in the construction industry.	Ongoing	866-741-6210
		Wounded Warrior Positions	Helmets to Hardhats recognizes the supreme sacrifice that our Veterans have made for this country. The Wounded Warrior program supports disabled Veterans by providing the tools, information and community that will help Veterans gain careers in the Building and Construction Trades. Disabled Veterans may apply for and demonstrate their ability to perform any job listed on the Helmets to Hardhats website. However, the Wounded Warrior program lists construction careers that employers have specifically identified as potentially suitable for disabled veterans.	Ongoing	866-741-6210
		Veterans in Piping	Participants enroll in accelerated 18-week courses in welding and/or HVACR service, both fields experiencing an increased demand for skilled workers. They also earn industry-recognized certifications as a part of their education. Upon graduation, VIPs gain direct entry into UA apprenticeship, leading to lifelong career opportunities. All training is paid for entirely by the UA and its industry partners at NO cost to participants.	Ongoing	866-741-6210
South Jersey Gas		Operator Technician Program	Graduates of the Operator Technician program will be qualified to perform a variety of gas pipeline construction activities. The goal of this program is to “build a pipeline of qualified applicants for construction type positions in the natural gas industry.” SJG is a regulated business that calls for strict qualification guidelines. Students will be trained to meet many of these qualifications. Students who successfully complete the program will receive a program certificate and industry credentials from the Northeast Gas Association and will have job search assistance for employment at area pipeline installation employers.	Ongoing Folsom, NJ	609-561-9000


Career Awareness
 Updated May 2016

Category	Organization	Event/Resource	Description	Date/Location	Contact
Applicant Screening Resources	Center For Energy Workforce Development	Get into Energy Math & Test Prep Workshop	The Get Into Energy Math and Test Prep Workshop is structured to be taught in a 5 day period with the final day designated as Test Preparation. However, the program is modularized and can be taught in sections and spread over time. There are two components to the Workshop, an applied math section and a pre-employment test prep section. Each section can also be taught independently. The workshop consists of an instructor guide, a student guide, practice problems, exercises, and quizzes. All quizzes cover competencies included in the Energy Competency Model such as math, mechanical concepts, spatial reasoning, tables and graphs, and reading comprehension.	TBD	Valerie Taylor valerie@cewd.org
		EI Construction & Skilled Trades Practice Test Toolkit	The Construction and Skilled Trades Selection System is a battery of skill and ability tests designed and validated to aid in the selection of candidates across a variety of construction and skilled trades occupations. The test battery measure skills and abilities that are critical for effective job performance. The test covers for areas: Graphic Arithmetic, Mathematical Usage, Mechanical Concepts and Reading for Information.	Online	Valerie Taylor valerie@cewd.org
		Contextualized Math Guides	The contextualized math guides pair real world work scenarios with basic math concepts. These are the concepts that are typically covered by pre-employment testing.	Online	Valerie Taylor valerie@cewd.org
		Employability & Skills Workshop	The awareness about the importance of employability skills, including workplace behaviors, is growing. This Employability Skills toolkit provides materials for an energy company to host a one-day interactive workshop on this topic. There are exercises and case studies specific to situations in a utility, providing participants the opportunity to experience first-hand what is expected of future employees.	TBD	Valerie Taylor valerie@cewd.org
Career Mentoring Tools	Center for Energy Workforce Development	Energy Careers Roadmaps	The Get Into Energy Career Pathways Roadmap provides a career pathway and detailed information for each of the energy positions.	Online	Valerie Taylor valerie@cewd.org
		Energy Industry Competency Model	The Competency Model consists of stacked tiers increasing in specificity and specialization as the pyramid ascends. Each tier is divided into blocks representing content or the skills, knowledge, abilities and other factors that are essential to successful performance in the industry.	Online	Valerie Taylor valerie@cewd.org

Career Awareness
 Updated May 2016


Category	Organization	Event/Resource	Description	Date/Location	Contact
	Center for Energy Workforce Development	Mentoring toolkit	The Center for Energy Workforce Development (CEWD) and SkillsUSA have developed this extensive toolkit in an effort to support the “grow your own” concept for filling the energy careers pipeline. Students who are part of the SkillsUSA competitions, specifically within the Architecture & Construction, Manufacturing, and STEM career clusters, already have an interest in careers that may be available within an energy company. The fact that the shortage of energy workers is expected to reach nearly 50% over the next five years means that now is the time to put a mentoring program in place! An energy company/SkillsUSA mentoring partnership at a local level is a win-win proposition for both energy companies and SkillsUSA students.	Online	Valerie Taylor valerie@cewd.org
		Internships and Coops toolkit	The purpose of the Internship and Co-ops toolkit is to provide the tools to enable members to launch a new internship program or improve upon one already in place. This toolkit can be used for high school, community college or four-year college students.	Online	Valerie Taylor valerie@cewd.org
College Talent Development Programs	Alamo Colleges	Certificate Program	Includes 40 hour program and refresher courses.	Ongoing Southwestern, TX	Dan Melgoza dmelgoz@alamo.edu
		Oil & Gas Technician Program	This Statewide accepted Process and Production Technology programs of study meets the industry’s needs to increase the availability of process technicians in the oil and gas industry that is expanding in south Texas. This entry-level certificate allows students to gain employment while continuing through the program.	Ongoing Southwestern, TX	Dan Melgoza dmelgoz@alamo.edu
	Atlantic Cap Community College	Operations Technician Training	<p>Topics include:</p> <ul style="list-style-type: none"> •New Construction Operator Technician Classroom Training: plastic pipe fusion and installation, inspection of pipes, regulation of gas meters, understanding the gas industry, location markings, accident awareness and prevention • Hands-On Instruction: leak detection, pipe inspection, gas indicator reading, diagnostic voltage, current, resistance, skills in pipe fitting, reading pipeline drawings, inspection of pressure gauges, installing meters and regulators, safety techniques •Introduction to Word/Resume Writing, Job Preparation and Work Readiness, Communication and Teambuilding, and Heartsaver CPR/AED/First Aid 	TBD May's Landing, NJ	http://www.atlantic.edu


Career Awareness
 Updated May 2016

Category	Organization	Event/Resource	Description	Date/Location	Contact
	Barton Community College	Natural Gas Transmission and Distribution (35 Credit Hours)	A degree from Barton Community College gives the individual the skills necessary for employment with minimal "on the job training" by the company. Technicians are needed for corrosion control, gas measurement, instrumentation and electrical controls, pipeline construction, and programmable logic controller (PLC) programming.	Ongoing Great Bend, KS	800-748-7594
		Gas Measurement (30 credit hours)	See Above	Ongoing Great Bend, KS	800-748-7595
		Natural Gas Transmission and Distribution (64 Credit Hours)	See Above	Ongoing Great Bend, KS	800-748-7596
	Lackawanna College	Petroleum and Natural Gas Measurement	See website (http://www.lackawanna.edu/)	Fall 2016 Scranton, PA	Barrettj@lackawanna.edu
		Natural Gas Compression Technology	See website (http://www.lackawanna.edu/)	Fall 2016 Scranton, PA	Barrettj@lackawanna.edu
		Petroleum and Natural Gas Business Administration	See website (http://www.lackawanna.edu/)	Fall 2016 Scranton, PA	Barrettj@lackawanna.edu
		Petroleum and Natural Gas Technology	See website (http://www.lackawanna.edu/)	Fall 2016 Scranton, PA	Barrettj@lackawanna.edu
	Marshalltown Community College	Utility Technician Program	<p>Training Gas Technicians and Electric Lineman. A two year program. The first year is 80% classroom and 20% hands-on training. The first year is dedicated to learning the industry standards, industry regulations, safety practices and requirements. With some exposure to OSHA standards that apply to the industry.</p> <p>The second year of the program is 80% hands-on training and 20% classroom. The second year is dedicated to applying the practices and procedures learned in the first year. A strong emphasis on safety. Both construction practices are applied and the operations, maintenance and trouble- shooting principles. The Natural Gas Technicians will be exposed to all applicable Operator Qualification requirements both hands-on and written.</p>	Ongoing Marshalltown, IA	Tyler Slagle Tyler.Slagle@iavalley.edu


Career Awareness
 Updated May 2016

Category	Organization	Event/Resource	Description	Date/Location	Contact
	Minnesota State Community and Technical College	Gas Utility Construction and Service Program	At M State, you will be trained to install, maintain and operate the high- and low-pressure natural gas distribution systems that supply residential, commercial and industrial customers. The 32-credit diploma program, offered on our Wadena campus, was created in 2015 in response to strong industry demand for trained gas technicians throughout the region.	Ongoing Wadena, MN	Randy Baker 218-631-7833
	Northeast Wisconsin Technical College	Gas Utility Construction and Service – Technical Diploma Program	Highly skilled professionals in the utilities industry are needed to install, maintain, and operate natural and propane gas distribution systems used to supply residential, commercial, and industrial customers. Typical careers in this field include gas distribution worker, gas service person, gas meter and regulation mechanic, gas clerk-estimator, gas inspector, gas appliance repair mechanic, underground facilities locator, pipeline welder, pipe layer, PE pipe fusion, and equipment operator.	Summer 2017 Green Bay, WI	Gale A Pagel 920-498-6903
	Oakland Community College	Gas Utility Worker	This 6 week program will expose students to the fundamentals of natural gas line work. This will include knowledge of the industry, distribution, safety, environment, meter reading and general procedures. Physical fitness, commercial driving licensing and assessments will be built in throughout.	Ongoing Royal Oak, MI	https://www.oaklandcc.edu/
	Pacific Gas & Electric	PG&E PowerPathway™ Programs	PG&E collaborates with a network of educational partners to cultivate industry-informed career pathways designed to help prepare for jobs in the energy and utility industry.	Ongoing	http://careers.pge.com/career-training-development/?WT.mc_id=Vanity_powerpathway
	San Juan College	Industrial Process Operations Program	The Industrial Process Operators Program (IPOP) is designed to prepare students for entry level positions as entry level operators of power plants, natural gas processing, refineries, mining, semiconductor, pharmaceutical and many more processes. With more than \$1.2 M worth of process equipment, the hands-on approach of the Industrial Process Operator Program guarantees that students learn both the theoretical and practical aspects of process operations and are well-prepared for entry-level positions in various industries. Many of our former students work at power plants and gas processing facilities.	Ongoing Framington, NM	505-566-3890

Career Awareness
 Updated May 2016


Category	Organization	Event/Resource	Description	Date/Location	Contact
	San Juan College	Industrial Maintenance Mechanic	The Industrial Maintenance Mechanic program (MECH) is designed to prepare students for positions as maintenance mechanics, maintenance technicians, and operations technicians of power generation, mining, natural gas, refinery, semiconductor, photochemical, and pharmaceutical processes. With more than \$2 million worth of process and maintenance equipment, the program gives students excellent hands-on experiences.	Ongoing Framington, NM	505-566-3890
	Seward County Community College/Area Technical School	Natural Gas Compression Technology	<ul style="list-style-type: none"> • Accelerated program earning a certificate in 12 months or an AS in two years • Developed in cooperation with regional gas production, transport and service companies • Industry-driven, hands-on program and curriculum • Paid internships to strengthen learning and provide opportunities for employment upon successful completion of program • Analytically diagnoses, services and maintains gas compression equipment using recommended procedures, special tools, and service information 	Ongoing Liberal, KS	Dave Ratzlaff dave.ratzlaff@scc.edu
	SUNY Orange	New Construction Gas Operator Program	<p>New Construction Operator Technician Classroom Training: Plastic pipe fusion and installation, inspection of pipes, regulation of gas meters, understanding the gas industry, location markings, and accident awareness and prevention</p> <p>Hands-On Instruction: Leak detection, pipe inspection, gas indicator reading, diagnostic-voltage, current, resistance, skills in pipe fitting, reading pipeline drawings, inspection of pressure gauges, installing meters and regulator, and safety techniques</p> <p>Soft Skills Training: Workplace competencies, business fundamentals, communication & teamwork skills, planning/organizing/scheduling, problem solving/decision making, introduction to resume writing, job search strategies and career readiness</p>	Ongoing Middletown, NY	Patricia Kelly patriciakelly@sunyorange.edu
	Zane State College	Oil & Gas Engineering Technology	The two-year associate degree program offers students a comprehensive look at the oil and gas industry, with the opportunity to augment their skills by adding short-term certification programs to their studies.	Ongoing Zanesville, OH	https://www.zane.state.edu/programs/oil-gas-engineering-technology-0


Career Awareness
 Updated May 2016

Category	Organization	Event/Resource	Description	Date/Location	Contact
Education Outreach	Center For Energy Workforce Development	Get into Energy/Get into STEM First Robotics Sponsorship	CEWD's FIRST sponsorship program provides funding at the national, regional, and local levels to include onsite robot doctors and charging stations during the national and super regional competitions, as well as registration fees for more than 180 new FIRST Tech teams.	Ongoing	Valerie Taylor valerie@cewd.org
		Green Energy Summer Camp Toolkit	This toolkit will help your energy company to host a <i>Green Energy Summer Camp</i> for middle and/or high school students. This camp is designed to be one-week in length with hands-on science and math activities, a company tour, and the opportunity to talk to your employees about their jobs. The goals for the camp are to learn about green energy, get excited about what happens at energy companies, and find out about available careers.	Online	Valerie Taylor valerie@cewd.org
		Middle and High School Girls Women in the trades Career Fair	A middle and high school girls <i>Women in Trades Career Fair</i> is a one-day event designed to educate and inspire girls to explore career options in the trades. These careers include non-traditional energy jobs (ones where women comprise 25 percent or less of total employment), such as technicians and welders, but also expand to other trades in construction, manufacturing, and transportation. The Career Fair is based on a successful model used by the Oregon Tradeswomen in Portland, Oregon for the past 20 years.	Ongoing	Valerie Taylor valerie@cewd.org
		Educators Communication Toolkit	The audience for the Educator Communications Kit is secondary school teachers and guidance counselors. The kit provides several items that help to build awareness of high-growth jobs in the energy industry as well as high quality STEM lesson plans from the National Energy Education Development (NEED) Project.	Online	Valerie Taylor valerie@cewd.org
		Scholarships toolkit	Looking for another way to market your company to future applicants while also helping to entice students to pursue a career in energy? Why not sponsor a scholarship fund? This toolkit outlines all you need to know about how to establish and market a scholarship program, including everything from an initial task list to information about pertinent IRS rules and other laws and even a sample application form.	Online	Valerie Taylor valerie@cewd.org
General	Center For Energy Workforce Development	CEWD Annual Summit	The Summit focuses on providing its members with workable solutions that align with each of the four strategic pillars: Career Awareness, Workforce Development and Education, Workforce Planning, and Structure and Support. At each Summit, members learn about the wealth of toolkits, resources, and best practice available at their fingertips.	Nov 2, 2016 Arlington VA	Valerie Taylor valerie@cewd.org


Career Awareness
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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Center for Energy Workforce Development	Gaps in the Energy Workforce Pipeline Member Survey	In 2015, CEWD conducted the sixth "Gaps in the Energy Workforce Pipeline" Survey focused on the four key job categories that are considered critical to the industry: lineworkers, technicians, plant operators, and engineers. Overall, the Electric and Natural Gas Utility workforce is getting younger, with lineworkers, engineers, and nuclear operations being the youngest of the surveyed jobs. Hiring has increased, particularly in the 23-38 age group, and a little over half of the hires reported were in Key Jobs, with almost 20% of all hires in the lineworker category.	Online	Valerie Taylor valerie@cewd.org
		Demand Reports	The Energy Workforce Demand reports exhibit data on the present and future demand of specific energy careers in the electric and natural gas utilities in the U.S. The goal of the reports is provide CEWD members with critical information on energy workforce characteristics, which can be used for workforce planning efforts.	Online	Valerie Taylor valerie@cewd.org
		Regional Meetings	The purpose of the meeting is for educators, industry and government representatives to discuss workforce development issues and concerns and to share solutions to these issues. The meeting is geared toward human resources, technical training, operations, community relations, workforce planning and workforce development professionals.	Online	Valerie Taylor valerie@cewd.org
		Monthly Newsletter	Highlights CEWD programs and best practices.	Online	Valerie Taylor valerie@cewd.org
	Western Energy Institute	Talent Management	Energy companies face core challenges to recruit, retain, develop and train their workforce. With changing demographics and a need to identify and develop talent from within, successful organizations are careful to invest in proven development programs for individual contributors and managers. This forum brings together employee development and training experts to share case studies and proven best practices.	April 27-28 + Fall 2016 Tempe, Arizona	Kara Wolfe 503-688-2794 wolfe@westernenergy.org



EMPLOYEE TRAINING

PART 2

American Gas Association
400 North Capitol St. NW
Washington D.C 20001

Employee Training
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Category	Organization	Event/Resource	Description	Date/Location	Contact
Compliance	Gas Technology Institute	Regulatory Audits	This module focuses on the development and implementation of an internal audit program and required follow-up to assist with regulatory compliance. It covers the characteristics of federal and state regulatory inspections and how to prepare for a pipeline safety inspection. Included are Quality Assurance/Quality Control programs and an understanding of the political environment that impacts regulation. Trainees learn how to respond to a Notice of Probable Violation.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Recognize and React to Abnormal Operating Conditions	This module defines abnormal operating conditions and presents examples of the effect they have on work-related covered tasks. The trainee will learn how to recognize and react to various abnormal operating conditions they may encounter while performing field tasks.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Investigate and Report an Incident	This module focuses on the regulatory and reporting requirements for incident investigation. Response protocol, explosion attributes, and application of a root analysis approach are included. The major causes of leaks are described. The module features a brief video of a gas explosion.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Pipeline Safety Regulatory Compliance	In recent years, we've seen an unprecedented level of pipeline safety regulatory compliance activity: Transmission Integrity Management (TIMP), Distribution Integrity Management (DIMP), and Control Room Management (CRM). Add new incident and annual reporting requirements, and it's hard to keep track of it all. During the four and a half-day workshop, get an understanding of these and any upcoming regulations through engaging presentations and hands-on exercises. Find out what's required for the design, construction, operation, and maintenance of all natural gas pipelines—interstate, intrastate, and distribution.	June 13-17, 2016 Chicago, IL	Vanessa Oneil Vanessa.oneil@gastechnology.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Midwest Energy Association	Introduction to Operator Qualification	This module identifies the elements needed to develop an OQ program. It defines the regulatory requirements and emphasizes the importance of qualified personnel who perform covered tasks. Qualification indicates that an individual has been evaluated and can recognize and react to abnormal operating conditions described in the module. Also included are examples of disasters that could have been prevented and OQ Protocols.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		192 Natural Gas Library (72 courses)	For all aspects of natural gas worker Operator Qualification. MEA's EnergyU is the leading OQ training and qualification system in the US, used by over 1,000 companies.	Online	John Gann johng@midwestenergy.org
		American Society of Mechanical Engineers (ASME) Library, B31Q (144 courses)	While not yet incorporated by DOT reference, B31Q provides excellent gas and liquids training and testing for gas and liquids workers.	Online	John Gann johng@midwestenergy.org
	Northeast Gas Association	Qualification Services	NGA experienced evaluators and proctors conduct knowledge and skill evaluations at a customer's facility per NGA's Operator Qualification, Plastic Pipe Joining and Welding Programs.	Ongoing	S. Henry shenry@northeastgas.org
	Southern Gas Association	DOT Compliance Workshop for Natural Gas Pipeline Operators	This workshop provides attendees an opportunity to learn from subject matter experts in the industry with the instructors, but also allows them the opportunity to network with one another and develop connections to reach out to upon your return to your office. This workshop will guide attendees through the code and focus on the regulations that have been found to be highly debated sections of the code for operators. Some time will also be spent reviewing and understanding how to access and read the code interpretations that are publicly available for all to access.	May 25-27, 2016 Dallas, TX	Gary Hines ghines@southern-gas.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Southern Gas Association	(PHMSA) T&Q Regulations & Code Compliance Seminar	<p>This seminar will cover issues on the following:</p> <ul style="list-style-type: none"> · Out of Service or abandoned pipelines · O&M Specificity · Failure investigation · Odorization issues · Construction Issues 	July 20-21, 2016 Little Rock, AR	Veronica Garza vgarza@southern gas.org
Construction	American Society of Mechanical Engineers	EL515 - Principles of Welding	This course provides an introduction to the principles of welding technology. The course describes the process of welding and how it affects welded materials and structures. It describes the electric circuits that are used to generate welding arcs, material properties, and the metallurgical and dimensional effects of welding on structures. The course also provides an overview of weld design concepts including efficient weld sizing and communication of weld and welding information through weld symbols on drawings.	Ongoing	202-682-8024
	Gas Technology Institute	Perform Construction Practices	This module presents various aspects of pipeline construction activities, from survey and route selection through restoration cleanup. Right-of-way and permitting; site preparation; material handling; pipeline marking and patrolling; and miscellaneous construction considerations are explained. The module concludes with a section on recognizing and responding to abnormal operating conditions.	Online	Vanessa Oneil Vanessa.oneil@ga stechnology.org
	Gas Technology Institute	Perform Horizontal Directional Drilling	This module introduces the underground method of pipe installation, including cautionary considerations. A video and an animation are included to show the process and emphasize safety-related issues. Trainees are asked to consider how to respond to an abnormal operating condition.	Online	Vanessa Oneil Vanessa.oneil@ga stechnology.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Gas Technology Institute	Attach a Wire Using a Thermite Weld	This module explains the purpose of the thermite welding process and the equipment required. Trainees learn to perform the thermite welding procedure. Precautions and procedural steps are covered for typical installations (for example, anode wire connection), and the thermite procedure as performed in keyhole excavations is described. Trainees learn to recognize and respond to abnormal operating conditions.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Inspect Condition of Pipe	This module covers two areas of pipe inspection: Exposed pipe and new piping prior to installation. Assessing the condition of pipe is very important to the safe operation of the pipeline system. The task of inspecting buried pipe, once exposed, involves visual examination to determine corrosion and the evaluation of coating integrity. Prior to installation, it is important to identify and assess piping for defects and damage that could result in problems in the future. Trainees learn about these activities and how to recognize and respond to abnormal conditions.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Install Steel Pipe	This module describes the procedures for proper handling, inspection, and installation of steel pipe. Trainees learn field bending methods and the regulatory requirements for steel pipe installation. Specific topics include stringing pipe, trench padding, and backfilling. Also covered is recognizing and responding to abnormal conditions.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Install Polyethylene Pipe	This module covers the requirements for storing, handling, inspecting, and installing polyethylene pipe, including installation methods for both direct burial and insertion of polyethylene pipe. Trainees learn the differences between these methods and the regulatory requirements for proper installation of PE pipe. They also learn to recognize and respond to abnormal operating conditions.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Gas Technology Institute	Install Tracer Wire	This module covers the installation and connection of tracer wire for the purpose of locating polyethylene pipe that is installed by direct burial. Continuity testing protocol is included to ensure the signal integrity of the tracer wire installation. Trainees learn to recognize and respond to abnormal operating conditions.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Join Polyethylene Pipe: Stab Fittings	This module describes the procedure for joining polyethylene pipe with stab fittings, with examples by two manufacturers: Continental and Perfection. The module includes two videos to demonstrate the installation procedural steps. Trainees learn to perform the joining procedure based on the manufacturer's installation requirements and to recognize and respond to abnormal operating conditions.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Join Pipe: Compression Couplings	This module focuses on the procedure for joining polyethylene, steel, and cast iron pipe with various types of compression fittings. Joining includes bottom-out and non-bottom-out fittings. (Dresser and Perfection are the manufacturers highlighted.) Trainees learn the why, how, and when of using compression fittings.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Join Polyethylene Pipe: Butt Heat Fusion- Manual	This module covers joining of polyethylene pipe by butt heat fusion using mechanical fusion units (#14 and #2LC manual fusion units). It describes how to recognize and respond to abnormal conditions while performing this task.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Join Polyethylene Pipe: Butt Heat Fusion - Hydraulic Unit	This module covers joining of polyethylene pipe by butt heat fusion using a #28 hydraulic fusion unit. It includes shift sequence and setting drag pressure - essential components of hydraulic unit operation. Brief animations help to demonstrate unit operation.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Join Polyethylene Pipe: Sidewall Heat Fusion	This module focuses on heat fusion, specific to installing tapping tees and branch saddle fittings on polyethylene pipe (saddle/sidewall procedure). Procedures involve the McElroy Sidewinder Unit. The module includes a brief animation clip on the process, and identifies visual acceptability of the fusion joints.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Gas Technology Institute	Join Polyethylene Pipe: Electrofusion	This module covers the joining of polyethylene pipe by the electrofusion process. Included are the bar code and self-regulating procedures, along with a brief section on visual acceptability. An animation clip and video assist in demonstrating the best practice procedure for the electrofusion bar code method. Possible abnormal operating conditions are explored.	Online	Vanessa Oneil Vanessa.oneil@ga stechnology.org
		Join Polyethylene Pipe: Socket Fusion	This module focuses on the equipment and procedure required to perform socket heat fusion. Although the process is not used too often in the industry, some companies still maintain it as a joining method for polyethylene gas services. The module covers pipe preparation, fusion in an explosive atmosphere, heating, and the importance of accurate visual inspection. Possible abnormal operating conditions are explored.	Online	Vanessa Oneil Vanessa.oneil@ga stechnology.org
		Inspect a Polyethylene Pipe Fusion Joint	This module identifies the requirements for visually inspecting and evaluating polyethylene heat fusion and electrofusion joints. Trainees learn the difference between acceptable and unacceptable fusion through visual inspection with the aid of the module's pictorial examples of acceptable and unacceptable fusion joints. The module also covers thermal expansion and contraction and possible abnormal operating conditions.	Online	Vanessa Oneil Vanessa.oneil@ga stechnology.org
		Weld Steel Pipe	This module focuses on the safety- and procedural-related issues that welders may encounter on a job. Various welding processes and procedures are discussed; they are not a substitute for on-the-job-training. Regulatory requirements, fire hazards, protective equipment, excavation safety, and types of defects are among the topics covered.	Online	Vanessa Oneil Vanessa.oneil@ga stechnology.org
		Conduct a Pressure Test	This module covers pressure testing requirements for new and replaced pipeline mains and services. Performing pressure testing correctly and safely is emphasized. Hydrostatic testing and documentation requirements are also covered.	Online	Vanessa Oneil Vanessa.oneil@ga stechnology.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Gas Technology Institute	Abandon a Pipeline Facility	This module explains how to safely and effectively deactivate and/or abandon main and service pipes in accordance with regulatory requirements including the difference between service abandonment and service deactivation.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Install a Meter and Regulator	This module covers the general requirements for location, protection considerations, and installation of meters and regulators. The code requirements for inside and outside installation are explained for the meter, meter sets, and regulator venting. Trainees learn to recognize and respond to abnormal operating conditions.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Test Customer Piping	This module focuses on the proper testing requirements for new and existing customer house piping. It includes identifying the testing methods performed for existing and new customer house piping and understanding what actions to take if a leak is found. Trainees learn to recognize and respond to abnormal operating conditions.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
	National Association of Corrosion Engineers	Pipeline Coating Applicator Training	This five-day course helps contractors and inspectors understand the proper procedure for coating application on pipeline projects. Through the use of daily in-class presentations and videos followed immediately by hands-on demonstrations and training in field conditions, students develop and practice the skills required to properly apply the specified field applied coatings under expected pipeline construction conditions.	October 17-21, 2016 Edmonton, Canada	(281) 228-6200 firstservice@nace.org
	Northeast Iowa Community College	Gas Utility Construction and Service	The Gas Utility Construction and Service program prepares students to install, maintain and operate both high and low-pressure natural gas distribution systems used to supply residential, commercial and industrial companies. Program graduates will be qualified to enter one of the most technologically intensive industries in today's economy with potential careers in gas construction mechanics, gas meter mechanics, gas service mechanics, gas clerk estimation, gas regulator maintenance mechanics, gas appliance repair and underground facilities location. When students enter into the industry, they will be subject to a drug screening per federal guidelines.	Fall Peosta, IA	inquire@nicc.edu

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Western Energy Institute	Procurement Management	Successful supply chain management relies on a well-developed infrastructure, appropriate tactical resources, and thorough analysis. This process is multi-faceted and involves solid relationships within the utility, as well as strategic relationships with vendors to mitigate risk to the overall supply chain. This forum offers an opportunity for supply chain procurement managers and specialists to come together with their industry partners and suppliers for roundtable discussions and expert presentations. Topics include KPIs, supplier relationship management, sustainability, and best practices in purchasing and contracting. CEHs are offered for CPSMs through the Institute for Supply Management.	August 24-26, 2016 Boise, Idaho	Beverly Jones Woolf (503) 688-2790 joneswoolf@westernenergy.org
		Supply Chain	Supply chains are increasingly complex and challenging to manage, yet are essential for maintaining compliance, incident preparedness and major project timelines. Focusing on the role of the utility supply chain executive, this forum provides an exclusive environment for leaders with the comprehensive supply chain management responsibility a unique opportunity to discuss, debate and exchange ideas on strategic issues with their peers. Topics include category management, strategic sourcing, building customer alignment, benchmarking and economic forecasting.	June 2016 Location TBD	Eric Christenson (971) 303-2118 christenson@westernenergy.org
		Integrated Resource Planning	An integrated resource plan (IRP) isn't just a plan; it's an involved process with multiple evaluation criteria that helps to determine both short and long term load growth. Through a broad analysis of supply-side and customer service options, an integrated resource plan comes into fruition. IRP professionals gather for peer support of this process, and to better understand the challenges facing electric and natural gas providers in the Western North America. Designed as a mix of interactive roundtable discussions and information-rich presentations, forum participants address topics such as resource management, data analysis and modeling, and stakeholder engagement.	Summer 2016 Location TBD	Christopher Lee (971) 255-4967 lee@westernenergy.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
Corrosion	American Petroleum Institute	Corrosion and Materials Professional	API welcomes highly specialized inspectors, corrosion engineers, chemical engineers and other professionals across the entire petrochemical industry to obtain the API 571 Corrosion and Materials certification as a validation of their profound knowledge of corrosion processes. The API 571 certification will add significant value to your professional credentials, demonstrating to your employers and clients that you have obtained a high level of proficiency and understanding in this important field. API 571 certification is valid for a three-year term.	Certification (Ongoing)	202-682-8005
	Gas Technology Institute	Measure Pipe to Soil Potential	This module explains measurement of the voltage difference between the pipe and the surrounding soil measurements used to determine whether cathodic protection levels are adequate or if a corrective action is required. Trainees learn to perform pipe-to-soil potential measurement accurately and to maintain test equipment and materials for proper operation. They also learn to recognize and respond to abnormal operating conditions.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Install and Test Insulators	This module describes the importance of electrical isolation and identifies the types of insulating devices used for isolation. Trainees learn how to install insulators and how to test the effectiveness of the isolation device for cathodic protection. They also learn to recognize and respond to abnormal operating conditions.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Conduct a Soil Resistivity Survey	This module defines soil resistivity and identifies the various methods used for soil resistivity testing, including the procedure for the Wenner four pin test method. Other methods described are single rod and soil box. Trainees learn to recognize and respond to abnormal operating conditions.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Test for an Clearing of Shorts	This module covers the test methods used to identify shorts on gas pipeline systems and describes casing/carrier piping, insulated isolation fittings, and the problems associated with meter shorts. It explains corrective actions needed to clear shorting issues to ensure adequate cathodic protection. Trainees also learn to recognize and respond to abnormal operating conditions.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Gas Technology Institute	Install an Anode and Test Station	This module explains the purpose of galvanic anodes and identifies guidelines for anode and test station installation. Test leads for external corrosion control and pipe-to-soil measurements are described. Trainees also learn to recognize and respond to abnormal operating conditions.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Inspect and Maintain a Rectifier	This module covers the operation of an impressed current system and identifies the components and controls of a rectifier for the inspection procedure. Trainees learn how to take rectifier voltage and current readings and find out how to recognize and respond to abnormal operating conditions.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Conduct Interference Testing	This module defines stray current interference and identifies its sources and types and the effect of stray current (static and dynamic types) on the pipeline system. The steps involved in conducting a stray current investigation, and the methods used to control/mitigate stray current interference are described. Trainees also learn to recognize and respond to abnormal operating conditions.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Inspect for Internal Corrosion	This module covers the types and causes of internal corrosion in pipeline systems and describes inspection monitoring methods used to detect this corrosion and mitigation methods. The module explains how smart pigging technology plays a significant role in pipe in-line inspection. An animation on launching and receiving demonstrates the process. Trainees also learn to recognize and respond to abnormal operating conditions.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Measure for Internal and External Corrosion	This module identifies various corrosion conditions found internally and externally in pipe. Measurement methods for assessment of coating thickness and corrosion defects are discussed, along with how smart pigs provide in-line inspection and measurement to assist with assessment and remediation. Trainees also learn to recognize and respond to abnormal operating conditions.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Gas Technology Institute	Apply External Pipe Coating	This module describes the various types of coatings (factory, specialty, and general field applied) for metallic pipe and fittings to prevent corrosion as well as coating application procedures and requirements. Included are holiday detection for coating inspections and recognition of coating damage/failures. Trainees learn to perform installation procedures safely and correctly for a specific coating material type.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Perform Indirect Inspection Techniques	This module describes the various indirect inspection techniques, including close interval survey (CIS), direct current voltage gradient (DCVG), alternating current voltage gradient (ACVG), and pipeline current mapper (PCM). It explains the purpose and limitations of indirect inspection procedures.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
	National Association of Corrosion Engineers	Internal Corrosion for Pipelines - Basic	This course was designed to provide students with the fundamentals of implementing, monitoring, and maintaining an internal corrosion control program as part of an overall Pipeline Integrity Management program. It is an introductory level course focusing on internal corrosion of liquid and natural gas pipelines used for transmissions, storage, and gathering systems. The course combines lecture, hands-on field testing and case studies.	Jul 18-22, 2016 Houston, TX	(281) 228-6200 firstservice@nace.org
		Internal Corrosion for Pipelines - Advanced	The Advanced Internal Corrosion for Pipelines course focuses on the monitoring techniques and mitigation strategies required to assess internal corrosion and develop and manage internal corrosion control programs. Data interpretation, analysis and integration, as well as criteria for determining corrective action for high-level internal corrosion problems within a pipeline system, will be covered in detail.	May 16-20, 2016 Houston, TX	(281) 228-6200 firstservice@nace.org
		Pipeline Corrosion Assessment Field Techniques	Pipeline Corrosion Assessment Field Techniques is "field level" focusing on remediation technology and field techniques for carrying out integrity assessments.	September 26-30, 2016 Houston, TX	281-228-6200 firstservice@nace.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
Emergency Response	Gas Technology Institute	Conduct an Inside Leak Investigation	This module focuses on the importance of safety in responding to an inside leak investigation safety requirements, types of equipment, and the procedural steps in responding to a gas leak or odor complaint investigation. The Smell of Danger video emphasizes the importance of proper investigative protocol. The video shows an incident in which the gas company responded twice to odor complaints, only hours before a home exploded.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Investigate and Classify an Outside Leak	This module focuses on the procedures and actions involved in investigating outside natural gas leaks including finding all gas leaks and assigning the proper classification grade to the leak for follow-up. It includes leak classification guidelines and a video (Smell of Danger) that demonstrates the importance of proper response to a gas leak investigation. The video depicts the events preceding a gas explosion that resulted in a fatality and the destruction of a home.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Investigate and Resolve a No Gas/Poor Supply Condition	This module identifies the causes of a no gas/poor supply condition associated with a customer's premise. The content provides a practical investigation protocol needed to resolve a condition including awareness, observation, asking the appropriate questions, and locating the specific cause of the no gas or poor supply problem. Trainees learn to recognize and respond to abnormal operating conditions.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Respond to an Emergency	This module identifies the levels of emergency and what they represent. It describes the elements of an incident command system, determines the first responder actions when responding to an emergency, and includes a sample thought process (the SAFER protocol) that can be followed for safe and effective emergency response.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Midwest Energy Association	Make Safe Library (12 scenarios)	MEA's immersive "Virtual Reality" training system for gas leak investigation. Users practice online similar to a high-quality video game before attempting a real world investigation.	Online	John Gann johng@midwestenergy.org
		Leak Detection	The seminar includes discussions, demonstrations, and case studies aimed at understanding field application of leak detection and investigation of leak complaints.	TBD	John Gann johng@midwestenergy.org
	Western Energy Institute	Utility ICS Training	This program is a partnership between WEI and Concordia University, and is the nation's first center to provide emergency management training and educational services designed specifically for utilities. The training center is located at Concordia University's Columbia River Campus, along with Concordia's Center for Homeland Security Studies and Homeland Security Simulation Center. The training offers utilities new training in incident management and emergency response practices, and helps strengthen the industry's sharing of instructional resources, best practices and mutual assistance.	Fall 2016 Location TBD	Kevin Sullivan (971) 255-4973 sullivan@westernenergy.org
		Western Region Mutual Assistance Agreement (WRMAA) Annual Meeting	Twelve years ago, the Western Region Mutual Assistance Agreement was signed as an effort for gas and electric utilities throughout Western North America to support one another in the event of an emergency affecting generation, transmission, distribution and/or services. Parties involved in the WRMAA convene each year to share best practices, discuss key emergency response issues, review the agreement itself and name the annual custodian. If your employer is a party to the WRMAA, take advantage of this opportunity to develop relationships and network with others involved in emergency response. Many participants also attend Emergency Response + Assistance Practices each spring.	October 2016 Location TBD	Kevin Sullivan (971) 255-4973 sullivan@westernenergy.org
End-Use Operations	Gas Technology Institute	Gas Technology Fundamentals	In this four-day course, learn about the gas technologies used by industrial and commercial end users. Understand today's gas end user technologies—burners, water heating, boilers, sizing of heating equipment, operation of HVAC in commercial buildings, venting systems, and interior gas piping. You'll leave the course equipped with the technical background to productively and confidently handle customers' requests and concerns. The course can be taken on its own or as part of GTI's CIGC (Chartered Industrial Gas Consultant) or RCGC (Registered Commercial Gas Consultant) certification programs.	TBD	Vanessa Oneil Vanessa.oneil@gastechnology.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Gas Technology Institute	Efficient Gas Technologies	This two-day course focuses on new and existing gas technologies from the perspective of efficiency. It covers high-efficiency boilers, process heaters, water heating systems, electric generation systems, and economic justification methods for high-efficiency gas equipment. Take this course on its own or as part of GTI's CIGC (Chartered Industrial Gas Consultant) or RCGC (Registered Commercial Gas Consultant) certification programs. Even if you're not seeking a certificate, you will benefit from this course.	July 27-29, 2016 Chicago, IL	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Industrial Steam Systems	Steam generation remains the major use of natural gas for industrial customers. This 2-day course covers the essential understanding of complex industrial steam generation and in-plant distribution at a level that allows you to comprehend and participate in solving customer steam system issues. It can be taken on its own or as part of GTI's CIGC (Chartered Industrial Gas Consultant) certification program. Even if you're not seeking a CIGC certificate, you will benefit from this course.	August 1-3, 2016 Chicago, IL	Vanessa Oneil Vanessa.oneil@gastechnology.org
	Stark State College	Industrial Process Operation Technology	The Industrial Process Operation Technology associate degree will prepare you for entry-level positions in natural gas, refining, power generation and various plant processes. You'll gain skills required to ensure maximum production and quality through the knowledge of blueprint reading, hydraulics/pneumatics, robotics, PLC controls, compression and flow dynamics, circuits, mechanical drives and industrial management.	The summer semester starts June 6, 1026. The fall semester begins on August 29, 2016.	Coordinator - Dan Schweitzer 330-494-6170 Ext. 5662 or dschweitzer@starkstate.edu. Case Manager - Jean Barbato 330-494-6170 Ext. 5194 or jbarbato@starkstate.edu.
		Petroleum Industrial Mechanics Technology	The petroleum industrial mechanics technology associate degree program gives you skills in diagnostics, machinery assembly, and installation and repair of commercial and industrial machinery. They're skills that will make you part of the trained workforce in-demand by the oil and gas industry, supporting petroleum refining, power generation, natural gas distribution and petrochemical manufacturing. The program will focus on blueprint reading, mechanical drives, HVAC, rigging, hydraulics/pneumatics and electrical control systems.	The summer semester starts June 6, 1026. The fall semester begins on August 29, 2016.	Coordinator - Dan Schweitzer 330-494-6170 Ext. 5662 or dschweitzer@starkstate.edu. Case Manager - Jean Barbato 330-494-6170 Ext. 5194 or jbarbato@starkstate.edu.

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Stark State College	Petroleum Technology - Instrumentation Electronics Technician	The Instrumentation Electronics Technician associate degree major will provide the learner with the knowledge to troubleshoot and maintain electronics, instruments, automation, and measurement equipment along with calibrating pressure gauges and metering equipment. Instrumentation electronics technicians are employed throughout the oil and gas industry with emphasis at well pads, pipeline and meter sales points. The program was designed to meet the instrumentation electronics needs encountered when dealing with oil and gas monitoring and sales equipment.	The summer semester starts June 6, 2016. The fall semester begins on August 29, 2016.	Coordinator - Dan Schweitzer 330-494-6170 Ext. 5662 or dschweitzer@starkstate.edu. Case Manager - Jean Barbato 330-494-6170 Ext. 5194 or jbarbato@starkstate.edu.
		Petroleum Technology - Pipeline Technician	The petroleum technology – pipeline technician associate degree major program is designed to prepare students for entry-level positions in natural gas, refining, power generation and various plant processes where there is an emphasis on pipeline transportation. The program will provide a basic understanding of the petroleum industry and the skill set essential for pipeline operations with emphasis on safety, efficiency and productivity. Key technical processes of gas compression, troubleshooting, maintenance, management operations, corrosion and petroleum instrumentation will enable the student to ensure maximum production and quality while improving performance and cost efficiency.	The summer semester starts June 6, 2016. The fall semester begins on August 29, 2016.	Coordinator - Dan Schweitzer 330-494-6170 Ext. 5662 or dschweitzer@starkstate.edu. Case Manager - Jean Barbato 330-494-6170 Ext. 5194 or jbarbato@starkstate.edu.
Engineering	American Society of Mechanical Engineers	Financial Resource Management For Engineers	This self-study course is designed to be taken at your convenience, and on your own schedule. You have 90 days to finish the course from the time of purchase. This course describes the fundamental terminology, processes, and strategies of business finance and accounting. It covers business plan fundamentals and key components, available and alternative funding sources, engineering economic analysis techniques such as NPV and ROI, and contract preparation, interpretation and management.	Ongoing	202-682-8027

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Gas Technology Institute	Transmission Pipeline Design and Construction Practices	As part of this four and a half-day course, let seasoned design experts will take you through the operational needs and design solutions in these areas: pressure and control regulation; requirements for uprating systems to meet flow changes; system metering for optimal accuracy; and system protection through measurement and regulation applications. Examine issues that need attention when revising, retrofitting, or replacing the facilities or altering their operation and maintenance—with an emphasis on economy and safety.	October 3-7, 2016 Chicago, IL	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Measurement & Regulator Station Design (Distribution & Transmission)	As part of this four and a half-day course, let seasoned design experts will take you through the operational needs and design solutions in these areas: pressure and control regulation; requirements for uprating systems to meet flow changes; system metering for optimal accuracy; and system protection through measurement and regulation applications. Examine issues that need attention when revising, retrofitting, or replacing the facilities or altering their operation and maintenance—with an emphasis on economy and safety.	November 14-18, 2016 Orlando, FL	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Gas Distribution Engineering (Part 1)	Gas Distribution Engineering has played an essential role in the training of thousands of distribution engineers for 70 years. This comprehensive course consists of two 4½-day weeks. You may register for both weeks (at a discounted fee) or you may register for only one of the weeks, either Week 1, Piping Systems and Materials, or Week 2, System Planning. (If you are taking this course as part of the Registered Gas Distribution Professional, or RGDP, certificate program, you must complete both weeks, although not necessarily in the same year.) In Week 1, Piping Systems and Materials, you'll get an understanding of the properties and design of piping systems—steel and plastic pipe (and cast iron, where appropriate)—and explore incident investigation, leakage control, repair/replace decisions, corrosion and cathodic protection, route selection criteria, and more. Total Training Hours: 33 hours 45 minutes	August 1-5, 2016 Chicago, IL	Vanessa Oneil Vanessa.oneil@gastechnology.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Gas Technology Institute	Gas Distribution Engineering (Part 2)	In Week 2, System Planning, you'll learn measurement principles; meter fundamentals; pressure regulation principles; overpressure protection; gas supply planning; gas control operations; system design principles and considerations; load estimating; gas flow principles and equations; system modeling; and enhancing pressure by redirecting flow. Total Training Hours: 33 hours 45 minutes	August 8 -12, 2016 Chicago, IL	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Compressor Station Design	Build the practical skills you need to design a single-unit compressor station during this 4.5 day program. This course enhances your understanding of the main systems in a single-unit compressor station and gives you the confidence to make effective design decisions. You will have experience laying out major interconnecting piping and performing calculations to size equipment.	August 8-12, 2016 Chicago, IL	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Measurement & Regulator Station Design (Distribution & Transmission)	As part of this four and a half-day course, let seasoned design experts will take you through the operational needs and design solutions in these areas: pressure and control regulation; requirements for uprating systems to meet flow changes; system metering for optimal accuracy; and system protection through measurement and regulation applications. Examine issues that need attention when revising, retrofitting, or replacing the facilities or altering their operation and maintenance—with an emphasis on economy and safety.	June 27-July 1 Chicago IL	Vanessa Oneil Vanessa.oneil@gastechnology.org
	Southern Gas Association	Pipeline Design Workshop	This workshop takes you through the advanced design process for specific topics as addressed in the list included on the workshops main web pages. Attendees will gain an in-depth understanding of all elements related to the design of these specific components and the process associated with planning and performing the actual tasks during construction.	August 23-26, 2016 Houston, TX October 11-14, 2016 Charlotte, NC	Gary Hines ghines@southern gas.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
Environmental	Southern Gas Association	Engine Emissions Stack Testing & Analyzer Workshop	<p>This popular workshop provides an understanding a of the following critical issues:</p> <ul style="list-style-type: none"> • The processes and equipment for EPA stack testing methods and protocols; • Function and design of portable analyzer equipment • Factors affecting accuracy and outcome of testing and other calculations and flow measurements required • State and federal requirements in lieu of Title V enhanced monitoring and record keeping and reporting requirements • Evaluation of emissions reduction technology for internal combustion and turbine engines. 	October 19-21, 2016 Oklahoma City, OK	Gary Hines ghines@southern gas.org
	Western Energy Institute	Environmental Strategies	<p>In the ever-changing landscape of climate change legislation, rapidly aging infrastructure, advancing technologies, renewable standards and the increased dependency on natural gas – environmental issues remain on the forefront of many organization’s missions and objectives. This forum provides environmental management professionals, environmental engineers and project and program managers the opportunity to focus on challenges and successes through a combination of interactive discussions, formal presentations, and tours designed with an operational emphasis. Attendees will broaden their perspectives and further increase their ability to address the strategic environmental needs of their organizations. The group meets once in autumn, and once at the WEI Operations Conference.</p>	September 15-16, 2016 Los Angeles, California	Anna Sanger Reed (503) 688-2795 sangerreed@westernenergy.org
Finance	Western Energy Institute	Key Accounts	<p>Utilities proactively partner with key accounts in their service territories to better understand customer needs, improve services and maintain competitive edge. Join key accounts directors and managers to share best practices, and develop creative solutions to current challenges. General session presentations from industry leaders include ample Q&A to offer insightful and relevant conversation, and concurrent breakout sessions for Key Account Team Directors/Managers and for Account Managers/Reps provide for a more intimate and focused conversation with peers. Overall program content covers a wide range of topics, including: alternative energy; customer appreciation and education; organizational approaches and metrics for managing KA departments; setting goals; business and economic development and succession planning.</p>	Fall 2016 Location TBD	Meryl Collins (971) 255-4964 collins@westernenergy.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Western Energy Institute	Business Analytics	Utilities find themselves inundated with a huge diversity of data across all lines of their business. Business analytics professionals are a critical link to analyze and interpret information to improve systems and operations, maintain organizational health and ultimately improve the bottom line. These professionals gather semi-annually to discuss asset management, business intelligence, call center metrics and dashboard insights, enterprise risk management, key metrics, pricing and rate strategies for leveraging smart grid investments, and project management best practices.	Fall 2016 Location TBD	Anna Sanger Reed (503) 688-2795 sangerreed@westernenergy.org
Miscellaneous	American Petroleum Institute	Qualification of Ultrasonic Testing Examiners (Detection)	<p>The availability of high quality and accurate Ultrasonic Testing (UT) data is often the cornerstone for FFS and RBI decisions, and it is becoming increasingly important for those applications. Therefore in the industry's best interest, API implemented a Qualification of Ultrasonic Testing Examiners certification program to assist in defining the minimum criteria for assessing the performance of UT technicians.</p> <p>Exams for these programs are administered differently than other ICP certifications. They utilize the hands-on, performance demonstration testing method.</p> <p>Certifications included in this program are:</p> <ul style="list-style-type: none"> • QUTE (Detection) • QUPA (Phased Array) • QUSE (Sizing) <p>API Ultrasonic Testing Examiners certifications are valid for three-year terms.</p>	Certification (Ongoing)	202-682-8010
General Information	Gas Technology Institute	Overview of the Gas Industry	This module describes how using natural gas as a fuel has evolved throughout history and the development of the industry. The stages of natural gas from the wellhead to the user are described: exploration, production, transmission, storage, and distribution. The history of regulations and statistics of gas consumption and load fluctuations are covered.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Gas Technology Institute	Identify the Properties and Characteristics of Natural Gas	This module focuses on the composition and physical properties of natural gas, including its flammable characteristics (lower and upper explosive limits), measurement, temperature, and effects of carbon monoxide. Also included are the importance of odorization and the equipment used to verify a gas leak. The module features a brief video of a gas explosion.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
	National Center for Construction Education and Research	Gas Pipelines Operations	It could be said that petroleum products keep America running. Petroleum products, like oil and natural gas, are the principal sources of energy in the United States and are used in many manufacturing and chemical processes. Petroleum products are primarily transported by pipeline. There are more than a million miles of liquid and natural gas pipeline in the United States, ranging in diameter from two inches to four feet. These pipelines bring crude oil and natural gas from production fields to processing plants and refineries – and ultimately to the consumer. The Gas Pipeline Operations curriculum is a part of NCCER's Pipeline Training and Assessment Program (PTAP) and covers topics such as Basic Pipeline Pneumatics and Equipment, Routine Control Center Operations, and Quality Control and Management.	Ongoing	http://www.nccer.org/gas-pipeline-operations
	Northeast Gas Association	Fall Operations Conference	Annual conference addressing current industry issues, best practices and new technologies.	October 6-7, 2016 Saratoga, NY	Dan Dessanti ddessanti@northeastgas.org
		Technical Training Services	Using GTI's Field Operations Training Curriculum, NGA's experienced trainers conduct classroom and hands-on training at a customer's facility.	Ongoing	S. Henry shenry@northeastgas.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Western Energy Institute	Emergency Response + Assistance Practices	Emergency preparedness and business continuity planning is crucial to a timely response in the event of a disaster. This forum allows for open discussion on pressing topics surrounding utility emergency planning and operations. There is also ample time for networking to develop relationships that will prove beneficial to members in an emergency. Many participants of this meeting also attend the Western Region Mutual Assistance Agreement (WRMAA) each fall.	Spring 2017 Location TBD	Kevin Sullivan (971) 255-4973 sullivan@westernenergy.org
		Operations Conference	This program unites over 400 electric and natural gas energy operations managers, supervisors and front line employees for three days of education and networking across twelve different tracks: Natural Gas Transmission; Pipeline Safety – Integrity Management; Natural Gas Distribution Operations Excellence; Safety; Natural Gas Distribution – Emergency Response + Field Services; Electric Operational Excellence; Operational Leadership; Electric Substations; Asset Management; Operational Risk Environmental; Electric Transmission Design, Construction + Maintenance; and Our Customer’s New Grid. Engaging workshops and breakout sessions are complemented by thought-provoking general sessions that get the team talking. This conference is a must for any upper-level manager, and many choose to bring their direct reports for team and skill-building. Vendors encouraged to display.	Spring 2017 Location TBD	Diana Zoren (971) 255-4965 zoren@westernenergy.org
	Midwest Energy Association	Understanding Gas and Electric (UGE), Basic Training Library (17 courses)	A broad library, with courses on non-OQ aspects of utility work, including in-home jobs like pilot lights, venting. Also control room management fatigue prevention and prevention of utility cross-bores.	Online	John Gann johng@midwestenergy.org
Integrity Management	American Society of Mechanical Engineers	MC 142 - Integrity Management of Natural Gas Pipelines using the ASME B31.8S Standard	This two-day MasterClass provides the requirements for developing an integrity management program for gas pipelines using ASME B31.8S, which is the most widely used Code for managing pipeline integrity. The course explains how to develop and execute an Integrity Management Program (IMP). It discusses the best practices for risk management systems, reviews integrity assessments and responses to integrity assessments, and the priority for repairs. It provides details and examples of alternative integrity assessment methods, as well as preventive and mitigation measures.	Certification (Ongoing)	202-682-8021

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	American Society of Mechanical Engineers	PD 370 - B31.8 Gas Transmission & Distribution Piping Systems	ASME B31.8 is the most widely used Code for the design, operation, maintenance, and repair of natural gas distribution and transmission pipelines. This 2-½ day course explains the present-day piping Code provisions, the principal intentions of the Code, and how the Code should be used. The emphasis is on transmission pipelines. Each participant will receive a copy of the most recent edition of the ASME Code book, B31.8 Gas Transmission and Distribution.	Certification (Ongoing)	202-682-8022
		In-Line Inspection	This course provides a broad overview of in-line inspection (ILI) technologies. Starting with the API 1163 In-line Inspection Systems Qualification Standard, attendees learn the basic steps to take before, during, and after the inspection. Capabilities and limitations of the most common technologies used on smart pigs are covered, as well as planning and conducting post-inspection verification programs. Finally, the course addresses how to deal with discrepancies between reported and actual defects and anomalies. After taking the course, engineers should understand how and why inspection technologies are selected and used in typical applications.	Certification (Ongoing)	202-682-8025
		PD706 - Integrity Management	This course provides a basic introduction to integrity management programs (IMPs) for pipelines. Federal regulations for gas and liquid pipelines are summarized, and the implications of recent regulatory modifications and proposed rules are addressed. Examples from several case studies are presented to help attendees understand strengths and weaknesses of typical IMPs. The course covers the impact of recent incidents and future trends.	Certification (Ongoing)	202-682-8026

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	American Society of Mechanical Engineers	Pipeline Defect Assessment	<p>This two-day MasterClass provides a broad overview of analysis methods for defects in pipeline. The course begins with a summary of important material properties and a review of integrity assessment methods for pipeline defects. Analysis methods for corrosion are covered, including each of the methods cited in the most recent version of ASME B31G - Manual for Determining the Remaining Strength of Corroded Pipelines. A discussion on analysis methods for mechanical damage is also included.</p> <p>Analysis methods for cracks are covered in the second day, which begins with a basic introduction to fracture mechanics. Attendees learn about the methods of measuring toughness associated with linearly elastic and elastic-plastic behavior. Next, the use of failure assessment diagrams and the development of the log-secant equation are discussed, followed by J-integral based assessments. Finally, both propagating fractures and fatigue are evaluated.</p>	Certification (Ongoing)	202-682-8028
		Pipeline Stress Corrosion Cracking Management	<p>This two-day MasterClass provides a comprehensive overview of the varied activities that are involved in designing and constructing onshore pipeline infrastructure to transport hydrocarbons in a cost effective manner. The material is presented in a logical sequence of five blocks covering facilities planning, hydraulic design, mechanical/geotechnical design, materials selection and construction. Practical examples are used throughout and the lectures are supplemented by video presentations. This course is a great source of reference for any engineer working in the onshore pipeline industry.</p>	Certification (Ongoing)	202-682-8029
	Gas Technology Institute	Distribution Integrity Management Program (DIMP)	<p>This module defines the regulatory requirements of DIMP, the areas of focus, and the essential elements of an integrity management plan that includes reporting requirements to the Department of Transportation. Excavation damage, excess flow valves, and reporting requirements, and how to measure and monitor performance are among the topics covered.</p>	Online	Vanessa Oneil Vanessa.oneil@ga stechnology.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Gas Technology Institute	Distribution Integrity Management Program (DIMP)	There have been many new developments since the DIMP Final Rule was released. The course will include discussion of these important changes—including the results and findings of operator audits conducted since the August 2, 2011, implementation date. Also included are updates on the Congressional Pipeline Safety Reauthorization and current developments in the Advance Notice of Proposed Rulemaking (ANPRM) for the Transmission Integrity Management Program (TIMP) regulation. Our instructors for this workshop were involved in the rule-making process, so you'll get first-hand information. New material is added to the course contents as it becomes available.	September 19-23, 2016 Chicago, IL	Vanessa Oneil Vanessa.oneil@gastechnology.org
	National Association of Corrosion Engineers	Direct Assessment	The Direct Assessment course will concentrate on internal, external and stress corrosion cracking direct assessment along with pre and post assessment, quality assurance, data analysis and integration, and remediation and mitigation activities. The course will also cover the benefits and limitations of Direct Assessment, its relationship to an overall integrity assessment program and industry standards, regulations and best practices.	August 15-19, 2016 Houston, TX	281-228-6200 firstservice@nace.org
		In Line Inspection	The In-Line Inspection course covers the benefits of utilizing In-Line Inspection, selection of technologies related to operational parameters, operational issues, and evaluating data relevant to assessing fitness for service. The course also covers the benefits and limitations of In-line Inspection, its relationship to an overall integrity assessment program and industry standards, regulations, and best practices.	August 1-5, 2016 Houston, TX	281-228-6200 firstservice@nace.org
		Pipeline Corrosion Integrity Management	The Pipeline Corrosion Integrity Management (PCIM) course serves as the key engineering training track for the PCIM Engineer, who is expected to focus on the implementation and management of an integrity program for a pipeline system. The course provides comprehensive, up-to-date coverage of the various aspects of time-dependent deterioration threats to liquid and gas pipeline systems. Students should become familiar with standards discussed in the class which include: The Code of Federal Regulations, ASME B31.8S and API 1160.	September 19-23, 2016 Houston, TX	281-228-6200 firstservice@nace.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Southern Gas Association	Advanced Inline Inspection Workshop	This workshop provides operations and maintenance engineers in pipeline companies with the knowledge to establish and manage an intelligent pigging program that contributes optimum value toward improved pipeline integrity.	May 24-26, 2016 Dublin, OH	Fraser Farmer ffarmer@southern-gas.org
		Integrity Management for Gas Pipelines	This workshop goes beyond understanding U.S. PHMSA IMP regulations and ASME B31.8S, Managing the Integrity of Gas Pipelines, and focuses on the future of IMP. Workshop instructors will provide an overview of IMP basics as well as regulatory requirements and processes. Instructors will then look specifically at the impact of IMP regulations that are on the horizon. This workshop also includes an interactive discussion centered on learning from past history and looking beyond.	June 8-10, 2016 Houston, TX	Fraser Farmer ffarmer@southern-gas.org
LNG	Gas Technology Institute	Small Scale LNG	<p>This two-day course provides an introduction to small scale LNG design and operation. Key Topics include:</p> <ul style="list-style-type: none"> • Sources and nature of LNG supply • Acquire in depth knowledge of the elements in the LNG Chain and understand the technical aspects of operations such as LNG Peak Shaving • Develop and deep understanding of small scale liquefaction cycles • Recognize how small scale shipping differs from larger operations • Understand the different market segments for small scale LNG including marine, road, exploration and power • Learn how to cultivate a small scale LNG business safely and the commercial promise of the LNG business. <p>This class is designed for all LNG professionals who come from a various ranges of operational, technical, commercial and management backgrounds.</p>	June 7-8, 2016 Jacksonville, FL	Vanessa Oneil Vanessa.oneil@gastechnology.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Gas Technology Institute	Introduction to LNG as Marine Fuel	Learn the basics of using low-flashpoint fuels like LNG in marine propulsion. Understand the bunkering process for LNG vessels and explore the current and planned infrastructure, the properties of LNG as a marine fuel, responding to a release, and the types of bunkering technologies and their operations. Find out about current rules and regulations, LNG fuel transfer operations, fire prevention, and emergency operations.	June 9, 2016 Jacksonville, FL	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Understanding Terminals and Terminal Operations: A Critical Link in the LNG Chain	Understand terminal operations in the context of the global LNG industry. Begin with an overview of the industry and examine the basics—thermodynamics, flashing, boil-off. Find out what’s involved in transforming a terminal concept into a plan and the parameters for designing and building an LNG terminal. Explore LNG storage, safety and security, and quality assurance and inspection, LNG shipping, and LNG trucking.	September 13-15, 2016 Jacksonville, FL	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Fundamentals of Baseload LNG Markets, Technology, Economics	Learn what’s new in markets, pricing, contracts, supply sources, liquefaction and regasification technologies, and more. Explore the design and construction of LNG terminals and liquefaction plants, LNG storage, offshore LNG, and interchangeability. Get answers to these and other questions: What’s the status of existing and proposed receiving terminals? Are offshore facilities a viable alternative to land-based plants? Hear an expert perspective on commercial and technical issues related to LNG shipping, including project economics and financing.	November 14-17, 2016 Shanghai, China	Vanessa Oneil Vanessa.oneil@gastechnology.org
		LNG Plant Operator Training and Certification	Module 1 (LNG Fundamentals; Gas Processing; Liquefaction) Module 2 (Codes & Standards; Materials; Welding and Corrosion; Storage Tank Operations and Dynamics; Tank Overview and Design) Module 3 (Piping Valves; Pumps, Compressors, and Vaporizers; Instrumentation Fundamentals; Control Fundamentals) Module 4 (Safety Basics; Hazardous Situations; Safety Equipment and Procedures; Operations and Security) Module 5 (Utility and Support Systems; LNG Trucking; Other LNG Applications)	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Gas Technology Institute	LNG Shipping and Cargo Handling	<p>LNG shipping plays a critical role in the ongoing expansion of the global LNG industry. This course provides an understanding of what's involved in loading, docking, and unloading a ship carrying LNG. Security and safety are emphasized. The seven parts of the course are:</p> <ul style="list-style-type: none"> • Introduction and Overview: • The Import Terminal • LNG Ships • The Dock • Cargo Unloading Operation • Maintenance and Training • Security Requirements <p>Each part contains many topics and is followed by a Knowledge Check, with feedback to see if you have retained the information. The course is followed by a 50-question final exam. You will receive a certificate of completion if you get a score of 80% or higher on the exam</p>	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		LNG Plant Safety	<p>The course comprises four parts:</p> <ol style="list-style-type: none"> 1. Safety issues related to storage and handling of LNG 2. Hazardous situations 3. Hazard detection and emergency response 4. A day in the life of an LNG technician <p>Each part features a scenario: You are presented with specific conditions and asked to consider what might be happening. It provides the opportunity to think about it for a while before the answers are revealed.</p>	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		How an LNG Plant Operates: Import, Storage, and Vaporization	<p>Highlights of each narration appear on the screen, and a transcript is available with one click. Steve Vitale provides a basic plant concept layout, with tanks, condensers, vaporizers, pumps, and other equipment and explains the purpose for each component. .</p> <p>The course comprises three parts:</p> <p>Part 1: Import Terminal Operations</p> <p>Part 2: Process Flow Diagrams (Tank Connections; BOG Compressors; Ship Unloading)</p> <p>Part 3: The Desuperheating Process (Riding the Pump Curves; Pumping vs. Compression; Miscellaneous Plant Components)</p>	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Northeast Gas Association	LNG Safety and Emergency Response Training	Partnering with the Massachusetts Fire Academy, NGA offers a two day classroom and hands-on training on LNG properties, handling, storage and emergency response.	September 7-8, 2016 Stow, MA	Eileen Sitte esitte@northeastgas.org
	The University of Texas at Austin Petroleum Extension	LNG: Basics of Liquefied Natural Gas	Overview of the LNG industry Baseload liquefaction plant Receiving terminal LNG shipping industry LNG project development Major equipment and supporting functional units in LNG plants Safety, security, and environmental issues Offshore LNG LNG industry in other countries LNG as transportation fuel Special topics: non-conventional LNG and risk management	July 27-29, 2016 Houston, TX	petex@www.utexas.edu
Maintenance	Gas Technology Institute	Inspect for Atmospheric Corrosion	This module shows trainees what to look for when conducting an atmospheric inspection. The factors and corrosion-related conditions that affect aboveground pipe facilities are identified and detailed. Trainees also learn to recognize and respond to abnormal operating conditions.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Inspect Operate and Maintain a Valve	This module describes the various types of valves, their operating characteristics, and explains the tasks required to safely complete a valve inspection. It also covers valve maintenance.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Gas Technology Institute	Repair Cast Iron Pipe Joints	This module describes the various methods used to repair cast iron bell and spigot joints. Procedural methods include anaerobic sealant, encapsulants, and mechanical repair clamps. Trainees also learn to inspect the visual condition of the pipe/joint to determine whether to repair or replace the section.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Install Mechanical Clamps and Repair Sleeves	This module describes repair methods used for temporary and permanent pipe repair with the use of mechanical fittings and repair sleeves. It includes the installation procedure for these repair methods.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Stop Flow in a Pipeline Under Pressure	This module covers the equipment and procedures used to stop gas flow safely in pressurized pipelines, including the line stop process and low-pressure bag and stopper installation. Videos and animations enhance understanding by demonstrating concepts.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Squeeze off a pipeline	This module illustrates the mechanical and hydraulic squeeze tool procedures for polyethylene and steel pipe. Trainees learn to recognize and control static electricity on PE pipe; perform the squeeze-off procedure properly and safely on both PE and steel pipe. To address safety, the module includes an understanding of static electricity and the measures required to control detrimental effects to the workers and the public.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Operate and Maintain an Odorizer	This module covers the regulatory requirements for maintaining the correct concentration of odorant for natural gas odorization and includes odorant properties, safety measures required during handling, and the transfer process procedure.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Monitor Odorization by Periodic Sampling	This module describes the regulatory requirements for proper natural gas odorization, odorant testing guidelines, and the procedures for conducting odor level tests by sampling with an air dilution instrument. Trainees learn how to perform a sniff test with an air dilution instrument.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Gas Technology Institute	Conduct a Walking Leak Survey	This module defines the types of surveys conducted, as required by regulatory code. It describes the operation and use of the flame ionization (FI) instrument and walking leak survey search patterns that ensure a thorough investigation for possible gas leaks. Also described are the factors that can affect the leak survey.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Perform a Mobile Leak Survey	This module describes the procedural steps in conducting a mobile gas leak survey with an optical methane detector (OMD), and with a flame ionization (FI) unit; including defining specific OMD and FI operational differences. It also covers regulatory requirements, aerial surveys, OMD display modes, and CGI gas scales.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Repair/Tie-in Polyethylene Pipe	This module describe various tie-in methods used to connect polyethylene pipe and fittings and explains how to evaluate and determine the extent of polyethylene pipe/fitting damage and the proper method for repair or replacement. It covers heat fusion, electrofusion, mechanical fittings, and repair sleeves and the connection methods for final tie-in	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Repair/Tie-in Steel Pipe	This module describes various defects in steel pipe/welds and presents the proper way to inspect the visual condition of steel pipe to determine repair or replacement. Included are the procedures for controlling gas flow during a typical tie-in process and applications of fittings and equipment associated with the tie-in process.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Repair/Tie-in Cast Iron Pipe	This module explains how to inspect the visual condition of cast iron pipe to determine repair or replacement. It describes the tie-in procedures for cast iron to steel or polyethylene pipe connections and presents repair methods for cast iron pipe.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Inspect and Maintain a Regulator Vault	This module covers the basic steps for inspection and maintenance of regulator stations/vaults, including ventilation equipment, vault cover, and structural integrity. It includes an explanation of the regulator bypass procedure and two videos, Internal Inspection of a Regulator, and Bypassing and Testing Monitor and Control Regulators. Trainees learn to recognize and respond to abnormal operating conditions.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Gas Technology Institute	Activate/Terminate a Gas Service	This module covers the procedures for establishing gas service and discontinuing gas service for a customer - commonly referred to as performing a turn on or turn off procedure. Also covered are the preliminary inspection, purging, the importance of customer safety, and the prevention of unauthorized use of gas. Trainees learn to recognize and respond to abnormal operating conditions.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Maintain a Pipeline Compressor Station	This module explains basic compressor station maintenance requirements and identifies the governing regulatory codes. Module topics include engine and compressor mechanical inspections; compressor gas path integrity check; emergency shutdown system; gas detection systems and alarms; and compressor repair. Trainees learn to recognize and respond to abnormal operating conditions.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
	The University of Texas at Austin Petroleum Extension	Valves and Actuators- Operation and Maintenance	For liquid pipeline operations and maintenance personnel, this course provides basic instruction for the most common valves and actuators used on pipelines. Participants visit manufacturing facilities to see firsthand how valves and actuators are made. Field trips teach assembly and disassembly of valves and actuators.	October 3-5, 2016 Houston, TX	petex@www.utexas.edu
		ValvePro Certified Valve Maintenance Technicians	PETEX and Sealweld Corporation have joined forces to provide valve maintenance training in a blended learning format. Based largely on the popular Valve Maintenance Safety Training Seminar, ValvePro® offers practical and relevant information from troubleshooting thousands of valve maintenance problems and teaches field personnel to: Safely service and maintain every type of ball, gate, and plug valve Identify hazardous valve fittings, their use, function and safely install fittings and adapters, Operate and maintain all makes and types of high-pressure guns and pumps, Assess the function and sealing attributes of lubricated valves commonly found in pipelines, plants, and offshore facilities.	Ongoing Houston, TX	petex@www.utexas.edu
Marketing	Gas Technology Institute	Marketing Fundamentals for the Energy Industry	During the four and a half-day session, get a solid introduction to the industrial and commercial market segments and the ways to develop and maintain good customer relationships. Participate in group problem-solving to reinforce the topics. This course can be taken on its own or as part of GTI's CIGC (Chartered Industrial Gas Consultant) or RCGC (Registered Commercial Gas Consultant) certification programs.	TBD	Vanessa Oneil Vanessa.oneil@gastechnology.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Gas Technology Institute	Advanced Marketing for the Energy Industry	Delve deeper into what you need to know to market and sell energy to industrial and commercial end users during this two-day event. Course topics cover social issues affecting modern gas marketing, including energy deregulation and deregulated energy contracting, current environmental issues, utility economic development programs, and industry ethics. Take this course on its own or as part of GTI's CIGC (Chartered Industrial Gas Consultant) or RCGC (Registered Commercial Gas Consultant) certification programs. Even if you're not seeking certification, you will benefit from the timely information and tips in this course.	July 25-27, 2016 Chicago, IL	Vanessa Oneil Vanessa.oneil@gastechnology.org
	Northeast Gas Association	Annual Sales and Marketing Conference	Annual conference addressing current sales & marketing industry issues, best practices and new technologies.	March 23-24, 2016 Groton, CT	Dan Dessanti ddessanti@northeastgas.org
		Regional Market Trends Forum	Annual one-day event that addresses current supply and policy issues impacting the Northeast market.	April 20, 2017 Hartford, CT	Steve Leahy leahy@northeastgas.org
Measurement	American School of Gas Measurement Technology	Annual School	The School is comprised of a two and one-half day series of 1 hour lecture and hands-on classes, plant tours, and exhibits by 108 exhibitors. Exhibitors are requested to teach application and performance capabilities of their equipment and refrain from sales activities during the School. At the time of registration, the registrants receive a CD copy of the "Proceedings" of the American School of Gas Measurement Technology containing the technical papers to be presented in the various lectures which comprise the current program.	September 19-22, 2016 Houston, TX	registration@asgmt.com

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Appalachian Gas Measurement Short Course	Annual School	This even is held the first week of August at Robert Morris University just outside of Pittsburgh, PA. There are thirteen lecture sections and 22 Hands-On sections held over 8 class periods from Tuesday to Thursday for a total of 200 classes offered.	August 1-4, 2016 Pittsburgh, PA	Pat Donnelly pdonnel@nisource.com
	Canadian School of Hydrocarbon Measurement	Annual School	It is the purpose of the School, the sponsoring associations, and the operating and manufacturing companies within the petroleum and natural gas industry, to provide instruction on technical subjects for people in the industry. In this way, proper facility design, installation, operation and maintenance of measurement and regulation equipment, and the handling of natural gas is presented and studied. Accurate and useful information is also developed and published for the benefit of the industry and the general public.	TBD	admin@cshm.ca
	Corpus Christi Area Measurement Society	Biannual School	The school will consist of more than 60 lecture and hands-on classes with over 70 hours of instruction dealing specifically with natural gas, refined products, crude oil measurement, and product quality testing. The classes will include fundamental measurement and quality principles as well as more advanced classes	Corpus Christi, TX	Joyce Boyce ccams2013@yahoo.com
	International School of Hydrocarbon Measurement	Annual School	THE 91ST INTERNATIONAL SCHOOL OF HYDROCARBON MEASUREMENTS offers you the opportunity to keep current on the latest changes and developments in the field of hydrocarbon measurement. The 2016 school will offer over 260 technical classes that include fundamental classes and special hands-on workshops covering a wide range of Gas and Liquid Measurement/Flow topics as well as an extensive educational exhibit area presented by leading manufacturers in the measurement industry.	May 16-18, 2017 Oklahoma City, OK	Leon Crowley lcrowley@ou.edu
	Midwest Energy Association	Measurement Excellence	This training course provides a basic fundamental overview of the principles of natural gas measurement. This course is intended as a fundamental and basic instruction in measurement or as a prerequisite for manufacturer's hands-on training school. It includes extensive hands-on experience.	TBD	John Gann johng@midwestenergy.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	The University of Texas at Austin Petroleum Extension	Natural Gas Measurement-Fundamentals and Meter Station Design/Application/Inspection	Covers the basics of physical and chemical makeup of gas mixtures and how they are affected by temperature and pressure. Covers the fundamentals of flow measurement of natural gas and how to obtain, analyze, and determine sound measurement. Covers the basics of natural gas meter station designs, applications of volume-determining meters including the flow-conditioning requirements for orifice meters, gas turbine meters, and ultrasonic meters. Provides hands-on practice in inspecting dual-chamber orifice meter runs.	December 6-9, 2016 Houston, TX	petex@www.utexas.edu
		Intermediate Petroleum Measurement	Expands in more depth on topics in first level (Fundamentals) Properties of petroleum—Chemical Composition, test methods, and impact on petroleum measurement Static measurement—Tank calibration (ORLM and TSRLM methods); liquid level innage and ullage (manual and automatic); cone and floating roof tanks; static sampling; calculation of tank measured quantities; and tank measurement error sources. Dynamic measurement—Theory, selection, design, operations, performance, and application of different types of meters and provers and samplers; calculation of meter factors multigrade and measurement tickets; proving Coriolis in mass or volume mode; introduction to meter performance and control charts. Oil loss analysis in two-region scenarios.	September 26-30, 2016 Houston, TX	petex@www.utexas.edu
		Advanced Petroleum Measurement	Expands in more depth on each of the topics in Fundamentals of and Intermediate Petroleum Measurement Properties of petroleum—Physical properties, S&W analytical testing, crude oil assays, multiple analysis, and analytical quality tests for refined products Static Measurement—ATG by radar, servo gauge, hybrid system, HTG, and mass systems; tank calibration by MTSM, ORLM, OTM, EODR, and TSRLM Dynamic measurement systems: troubleshooting, meter prover design and performance issues; calibration of meter provers, metering systems for marine terminals and load racks; automatic sampling systems, performance verification Oil loss analysis in three-region scenarios; use of control charts and other performance tools; system trouble-shooting techniques Introduction to mass measurement	October 3-7, 2016 Houston, TX	petex@www.utexas.edu

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	The University of Texas at Austin Petroleum Extension	Mass Measurement of Hydrocarbon Fluids	<ul style="list-style-type: none"> • Fundamentals of measurement • Static and dynamic measurement • Proving a flow meter in high vapor pressure liquids • Proving a density meter high vapor pressure liquids • Flow meter prover calibration by waterdraw or gravimetric methods • Pycnometer calibration by the water weigh method • Mass measurement by turbine meter and densitometer or by Coriolis flow meter • Sampling and sample analysis • Calculations for volume at base conditions from mass quantities and analysis of composite sample 	June 27 - July 1, 2016 Houston, TX	petex@www.utexas.edu
		Natural Gas Measurement-Electronic Flow Measurement	Covers the basics of electronic flow measurement including the installation and calibration of electronic flow devices. Provides an overview of basic electrical/electronic theory and instruction on installation, operation, and calibration of electronic transmitters with practical lab exercises.	December 12-14, 2016 Houston, TX	petex@www.utexas.edu
		Natural Gas Measurement- Sampling and Analysis	<ul style="list-style-type: none"> • Gas chromatographs: types and theory of operation, calibration, and analysis report • Sampling and sample-handling basics: manual sampling for spot sample, automatic sampling for composite sample, and automatic sampling for flow weighted on-line analysis • Safety while transporting sampling • Odorant injection and detection systems; selection, operation, monitoring, testing, and maintenance issues • H2S analyzers: description and comparison of the theory and operation of the various H2S measurement techniques 	December 15-16, 2016 Houston, TX	petex@www.utexas.edu
	Western Gas Measurement Short Course	Annual Short Course	The Western Gas Measurement Short Course is a non-profit corporation 501-3(c) dedicated to the education of natural gas industry personnel in the areas of measurement, pressure & flow control. It is administered by its officers and board of directors. All are employees of Western United States and Canadian natural gas utilities and transportation companies.	April 10-13, 2017 Anaheim, CA	webmaster@wgmsc.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
Miscellaneous	American Petroleum Institute	Qualification of Ultrasonic Testing Examiners (Phased Array)	<p>The availability of high quality and accurate Ultrasonic Testing (UT) data is often the cornerstone for FFS and RBI decisions, and it is becoming increasingly important for those applications. Therefore in the industry’s best interest, API implemented a Qualification of Ultrasonic Testing Examiners certification program to assist in defining the minimum criteria for assessing the performance of UT technicians.</p> <p>Exams for these programs are administered differently than other ICP certifications. They utilize the hands-on, performance demonstration testing method.</p> <p>Certifications included in this program are: QUTE (Detection) QUPA (Phased Array) QUSE (Sizing)</p> <p>API Ultrasonic Testing Examiners certifications are valid for three-year terms.</p>	Ongoing	202-682-8011
		Qualification of Ultrasonic Testing Examiners (Sizing)	<p>The availability of high quality and accurate Ultrasonic Testing (UT) data is often the cornerstone for FFS and RBI decisions, and it is becoming increasingly important for those applications. Therefore in the industry’s best interest, API implemented a Qualification of Ultrasonic Testing Examiners certification program to assist in defining the minimum criteria for assessing the performance of UT technicians.</p> <p>Exams for these programs are administered differently than other ICP certifications. They utilize the hands-on, performance demonstration testing method.</p> <p>Certifications included in this program are: QUTE (Detection) QUPA (Phased Array) QUSE (Sizing)</p> <p>API Ultrasonic Testing Examiners certifications are valid for three-year terms.</p>	Ongoing	202-682-8012

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Gas Technology Institute	Emerging Industrial Gas Technologies	In two-days, learn what you need to know about gas technologies that pose the best opportunity for developing the future of the gas market. The emerging industrial gas technologies studied include high-efficiency boilers, distributed generation and cogeneration, natural gas vehicles, gas/oxygen combustion processes, and new gas technologies for the key steel and plastics industries. The course can be taken on its own or as part of GTI's CIGC (Chartered Industrial Gas Consultant) certification program. Even if you're not seeking a certificate, you will benefit from this course.	August 3-5, 2016 Chicago, IL	Vanessa Oneil Vanessa.oneil@gastechnology.org
	Western Energy Institute	Fleet Management	This program provides fleet leadership professionals an opportunity to discuss best practices, and share new processes and technologies. Participants work collaboratively to select topics that are relevant to all organizations with vehicle and equipment fleets. Addressed are strategic questions surrounding staff management, alternative fuel technology, vehicle replacement policy, the role of fleet within an organization, and tactical solutions for managing ever-changing fleet operations and administrative functions.	August 2016 Location TBD	Anna Sanger Reed (503) 688-2795 sangerreed@westernenergy.org
		Natural Gas Vehicles + Fueling Infrastructure	Tasked with understanding the evolutionary path of natural gas vehicle (NGV) technology for commercial and residential consumers, senior leaders from natural gas utilities who are involved in the advancement of vehicles and fuel infrastructure meet to discuss challenges and opportunities related to various infrastructure models, including rate-base and unregulated, infrastructure needs and potential opportunities to align shared interests. Recent topics include codes and standards, utility models, OEM equipment vs. conversion kits for light-duty to heavy-duty vehicles, identifying which markets are primed for CNG, and how utilities should be involved in the growth of the natural gas vehicles sector. Opportunities for both LNG and CNG will be discussed.	June 20-21, 2016 Portland, Oregon	Christopher Lee (971) 255-4967 lee@westernenergy.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Western Energy Institute	Energy Management	Professionals in natural gas energy supply, transportation and storage gather for presentations and roundtable discussions focused on Western North America's demand outlook and factors expected to influence the cost of delivering natural gas. This collaborative atmosphere, combined with the attendee's high level of expertise, leads to complex and analytical discussions regarding long-term forecasts, international energy demand, LNG updates, the price of carbon, renewable developments, electric/gas convergence issues, and the influence of storage and infrastructure projects.	April 27-29 + Fall 2016 Vancouver, British Columbia	Christopher Lee (971) 255-4967 lee@westernenergy.org
		Joint Use	As new technology, new regulations and aging infrastructure continue to change the landscape of joint use, it becomes increasingly important for key stakeholders to foster open dialogue and collaborate to solve shared problems, focus on safety goals, and ensure the equitability of poles and other utility assets. Considered the premier joint use conference, content is designed for representatives from utility, telecomm, wireless and broadband companies; as well as consultants and service companies who deal with joint use, pole ownership and attachments. The conference format provides a unique mix of presentations, dynamic power table topics, vendor displays and networking opportunities to exchange information and best practices.	September 2016 Location TBD	Christopher Lee (971) 255-4967 lee@westernenergy.org
Operations	Connecticut State Colleges and Universities	Introduction to Natural Gas Distribution	This course introduces fundamentals of the natural gas industry and operations of a natural gas distribution system. Participants will work through modules that provide a basic understanding of natural gas distribution, including: a history and structure of the natural gas industry; structure of utility companies; properties of natural gas; fundamentals of natural gas pipelines and their construction; how natural gas distribution systems are operated and maintained; quality and safety in the industry; and careers in the natural gas industry.	Ongoing Online	860-723-0000

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Gas Technology Institute	Uprate the Pressure on a Pipeline System	This module describes the process of uprating a segment of a pipeline to operate at a higher maximum allowable operating pressure (MAOP). Topics include uprating rationale, factors, regulations, and the importance of having an uprating plan and documentation. Trainees learn to recognize and respond to abnormal operating conditions.	Online	Vanessa Oneil Vanessa.oneil@ga stechnology.org
		Control/Monitor Gas Pressure and Flow	This module defines the procedures and responsibilities of gas control room operations and management, including SCADA system operation and gas measurement equipment. Trainees learn about monitoring flow and pressure indicators; responding to alarms; ensuring adequate pressures throughout the distribution system; and remote opening/closing of valves. Regulatory requirements for control room operations are included. Trainees also learn to recognize and respond to abnormal operating conditions.	Online	Vanessa Oneil Vanessa.oneil@ga stechnology.org
		Operate a Pipeline Compressor Station	This module describes the operational startup and shutdown methods of a compressor station, including modes of operation, levels of safety protection, and regulatory and operational requirements. Specific topics include unit and pressurization permissives, set points, speed controls, and communication links. Trainees also learn to recognize and respond to abnormal operating conditions.	Online	Vanessa Oneil Vanessa.oneil@ga stechnology.org
		Gas Controller Training for Distribution/Transmission	<p>The Final Rule for Control Room Management, effective February 1, 2010, is an amendment to the Federal pipeline safety regulations to address human factors associated with control room operations. It also requires operators to establish a training program for controllers to carry out their roles and responsibilities, recognize and respond to abnormal operations, and understand the operation of the pipeline system.</p> <p>During this four-day course, get a fundamental understanding of natural gas equipment, how it operates, and how it impacts the pressure and flow of gas. This is an interactive workshop with both computer simulations to demonstrate basic gas hydraulics and scenarios of abnormal operating conditions that controllers must recognize and respond to. The simulations are supported by DNV GL Pipeline Simulation software developed by GL Noble Denton.</p>	TBD Chicago, IL	Vanessa Oneil Vanessa.oneil@ga stechnology.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Gas Technology Institute	Gas Distribution Operations	During the four and a half-day course, become a more productive employee by upgrading your skills and knowledge in gas distribution operations. Build or expand your knowledge base in the construction, operation, and maintenance of modern gas distribution systems. New topics are added and existing topics revised each time this course is offered to provide the most current industry information. Class exercises reinforce the information and promote problem-solving skills. Economic and safety issues are emphasized throughout the discussions.	July 25-29 , 2016 Pittsburgh, PA October 31- November 4, 2016 Chicago IL	Vanessa Oneil Vanessa.oneil@ga stechnology.org
		Gas Transmission Operations	During this four and a half-day course, expand your knowledge of transmission systems and important related issues through interactive case studies and expert guidance. Get a comprehensive overview of transmission systems when you explore the operations and design fundamentals of the main segments of a transmission system—pipeline, compressor, measurement, and regulation. Safety, codes and standards, and economic considerations are an integral part of every step of the training process. This course is the foundation for GTI's certification program, Certified Gas Transmission Professional (CGTP).	August 15-19, 2016 Chicago, IL	Vanessa Oneil Vanessa.oneil@ga stechnology.org
		Excavate Near a Gas Pipeline	This module focuses on performing safe excavation practices to protect company facilities and all other utilities from damage. It stresses the importance of safeguarding company workers and the general public as well as property. Topics also include locates, one-call centers, excavation guidelines, and tolerance zones. Trainees are asked to consider how to respond to an abnormal operating condition.	Online	Vanessa Oneil Vanessa.oneil@ga stechnology.org
		Perform Vacuum Excavation	This module defines the soil extraction methods (air and hydro) used in damage prevention, including equipment, techniques, and safety requirements. The procedural guidelines are from a CGA best practice perspective. The module also features a brief video on equipotential safety. Trainees are asked to consider how to respond to an abnormal operating condition.	Online	Vanessa Oneil Vanessa.oneil@ga stechnology.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Gas Technology Institute	Perform Keyhole Technology	This module describes the benefits and safety implications of keyhole technology in performing excavation. The six-step process is introduced, and various above-ground procedural activities using this technology are identified. The module features a brief keyhole technology video. Trainees are asked to consider how to respond to an abnormal operating condition.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Backfill an Excavation	This module covers the need for proper backfill and compaction procedures in damage prevention. It includes the importance of protecting and supporting pipeline facilities as well as Dynamic Cone Penetrometer (DCP) testing for soil compaction verification. Trainees are asked to consider how to respond to an abnormal operating condition.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
	Northeast Gas Association	Annual Gas Operations School	NGA's Annual Gas Operations School is held each June for the past 60 years. The school, held at Bryant University in Rhode Island, provides education, hands-on-training, a major vendor exhibit, and industry networking. A week long program offering over 80 training courses in customer service, engineering design, pressure regulation, distribution facilities operations and maintenance, safety and gas supply.	June 7-10, 2016 Smithfield, RI	Eileen Sitte esitte@northeastgas.org
		NGA Contractor Conference	Annual utility and contractor management conference. The conference provides a forum to identify and address challenges faced by pipeline installation and maintenance contractors.	April 6, 2016 Stamford, CT	Eileen Sitte esitte@northeastgas.org
	Stark State College	Industrial Process Operation Technology	The one-year certificate in Industrial Process Operation Technology can prepare you to enter the workforce in natural gas, refining, power generation and various plant processes. You'll learn skill sets essential for industrial plant operations with emphasis on safety, efficiency and productivity. And, you'll acquire the necessary skills hydraulics/pneumatics, robotics, PLC controls, compression & flow dynamics, circuits, mechanical drives, blueprint reading and industrial management.	The summer semester starts June 6, 1026. The fall semester begins on August 29, 2016.	Coordinator - Dan Schweitzer 330-494-6170 Ext. 5662 or dschweitzer@starkstate.edu. Case Manager - Jean Barbato 330-494-6170 Ext. 5194 or jbarbato@starkstate.edu.

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Stark State College	Instrumentation Electronics Technician	The Instrumentation and Electronics one-year certificate is designed to provide the student the basic understanding of Supervisory Control and Data Acquisition systems utilized by the petroleum industry. Various forms of instrumentation will be covered including sensors and program logic controllers. Troubleshooting and maintenance will be covered.	The summer semester starts June 6, 1026. The fall semester begins on August 29, 2016.	Coordinator - Dan Schweitzer 330-494-6170 Ext. 5662 or dschweitzer@starkstate.edu. Case Manager - Jean Barbato 330-494-6170 Ext. 5194 or jbarbato@starkstate.edu.
		Petroleum Industrial Mechanics Technology	Stark State offers a one-year technical certificate in petroleum industrial mechanics technology for the individual who is interested in blueprint reading, mechanical drives, HVAC, rigging, hydraulics/pneumatics and electrical control systems. It's a stackable certificate to the associate of applied science degree.	The summer semester starts June 6, 1026. The fall semester begins on August 29, 2016.	Coordinator - Dan Schweitzer 330-494-6170 Ext. 5662 or dschweitzer@starkstate.edu. Case Manager - Jean Barbato 330-494-6170 Ext. 5194 or jbarbato@starkstate.edu.
		Pipeline Technician	The College also offers the ShaleNET pipeline technician one-year certificate. The certificate will provide the learner with the basic understanding of pipeline economic importance, quality control, design, troubleshooting, maintenance, instrumentation and management operations. Job responsibilities may include: locating pipelines, oversee maintenance, gauging pressures, checking safety valves and monitoring pipeline surface network operations for safety and environmental issues such as leaks, spills, erosion and sedimentation problems.	The summer semester starts June 6, 1026. The fall semester begins on August 29, 2016.	Coordinator - Dan Schweitzer 330-494-6170 Ext. 5662 or dschweitzer@starkstate.edu. Case Manager - Jean Barbato 330-494-6170 Ext. 5194 or jbarbato@starkstate.edu.
		Automation and Robotics	Robotics and automation is a growing career field full of choices. The skills are in demand everywhere in America's manufacturing, and expanding into nontraditional markets, like hospitals and health care. Other opportunities include building, farming, food processing, homeland security and the military. And then there's the future, with new jobs that don't even exist today, but requiring advanced skill sets. Stark State's automation and robotics associate degree associate program will give you the high-value skills for career success through hands-on training. You'll train on Allen/Bradley family PLCs and Fanuc robots learning; AutoCad, visual basic programming, PC repair and maintenance, common industrial controls, industrial sensor and instrumentation, programming and troubleshooting PLCs, and setup and programming industrial robotics.	The summer semester starts June 6, 1026. The fall semester begins on August 29, 2016.	Department Chair of Industrial Technologies - Paul Hickman - 330-494-6170 ext. 5308 or phickman@starkstate.edu

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Stark State College	Computer Numerical Control (CNC)	This one-year state-accredited technical certificate is designed to prepare the student with the appropriate skills needed to work in today's world of computer numeric controlled precision machining. This program is designed for both the individual returning to add to their existing skills and those entering the CNC precision machining field for the first time. Upon successful completion of the CNC one-year technical certificate program, the individual will have approximately one half the necessary credits towards an associate of applied science in applied industrial technology.	The summer semester starts June 6, 1026. The fall semester begins on August 29, 2016.	Department Chair of Industrial Technologies - Paul Hickman - 330-494-6170 ext. 5308 or phickman@starkstate.edu
		Predictive and Preventive Maintenance	This one-year technical certificate, approved by the Ohio Board of Regents, has been prepared for the individual who is interested in the field of preventative and predictive maintenance. This certificate will cover non-destructive methods of evaluating manufacturing and plant equipment. Program will introduce the individual to infrared scanning, ultrasonic analysis, oil/lubrication testing, and vibration analysis.	The summer semester starts June 6, 1026. The fall semester begins on August 29, 2016.	Department Chair of Industrial Technologies - Paul Hickman - 330-494-6170 ext. 5308 or phickman@starkstate.edu
	Western Energy Institute	Gas Utility + Contractor	WEI and the Distribution Contractors Association (DCA) have teamed together to provide a workshop for natural gas utilities and their contractors. Discussions include: operator qualification, portability and training; shared mechanisms to communicate procedural changes; effective approaches to collaborating on safety, quality and training; joint practices on monitoring quality and establishing a fair and useful quality assurance program; practices to reduce excavation damages due to first and second parties.	May 24-25, 2016 Las Vegas, Nevada	Kara Wolfe (503) 688-2794 wolfe@westernenergy.org
Petroleum	Stark State College	Petroleum Technology - Production Technician	The petroleum technology-production technician associate degree major will provide the learner with the knowledge to troubleshoot and perform preventative maintenance on producing well sites. Students will obtain knowledge of production equipment, recovery techniques, surface handling of produced fluids, instrumentation found at well sites and environmental responsibility, regulations and safety.	The summer semester starts June 6, 1026. The fall semester begins on August 29, 2016.	Coordinator - Dan Schweitzer 330-494-6170 Ext. 5662 or dschweitzer@starkstate.edu. Case Manager - Jean Barbato 330-494-6170 Ext. 5194 or jbarbato@starkstate.edu.

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Category	Organization	Event/Resource	Description	Date/Location	Contact	
	The University of Texas at Austin Petroleum Extension		Static measurement <ul style="list-style-type: none"> Types of tanks Fundamentals of tank calibration by the manual strapping methods Lease tanks: level gauging, temperature determination, free water determination, and manual sampling 	August 1-5, 2016		
		Fundamentals of Petroleum Measurement	Properties of petroleum <ul style="list-style-type: none"> Density and gravity determination S&W determination by centrifuge Lease tank run ticket calculation 	Houston, TX	petex@www.utexas.edu	
			Dynamic measurement <ul style="list-style-type: none"> Overview of LACT/ACT installation Introduction to automatic sampling; the flow metering theory; the operation of PD, turbine, Coriolis and ultrasonic meters; meter provers, meter proving, and prover calibration; and the calculations of meter factors and tickets 	September 19-23, 2016	Houston, TX	
		Petroleum Fundamentals	Oil loss control <ul style="list-style-type: none"> Introduction to basic principles Petroleum geology and exploration Aspects of leasing Drilling rig components and personnel Routine and non-routine drilling operations Well control Production operations Petroleum transportation offshore and onshore Refining and processing Macroeconomic outlook of the upstream oil and gas business 	June 13-17, 2016	Houston, TX	petex@www.utexas.edu
		The Rig School- Introduction to Offshore Operations	Provides the basics of offshore drilling operations. Explains the environment, logistics, equipment, procedures, safety requirements, emergency response, and regulations unique to petroleum exploration, drilling, and production activities offshore. Includes an overview of petroleum economics and investment decision-making specific to the offshore industry.	July 18-22, 2016	Houston, TX	petex@www.utexas.edu
				October 17-21, 2016	Houston, TX	

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Category	Organization	Event/Resource	Description	Date/Location	Contact
Public Safety	Gas Technology Institute	Install Shoring in an Excavation	This module covers shoring protective system requirements for aluminum hydraulic shoring and timber shoring. Topics include soil classification, shoring equipment, and installation steps as well as the shoring removal process. The module features a brief video demonstrating the installation of aluminum vertical hydraulic shoring.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Locate Underground Pipelines	This module promotes an understanding of locator best practices and responsibilities, including the One-Call Center, use of information sources, and marking requirements. It shows trainees how to perform locator responsibilities in accordance with applicable state code requirements and company operations and maintenance procedures. Locate equipment and conductive and inductive locate methodologies are explained.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Patrol and Maintain a Pipeline Right-of-Way	This module covers the patrol and inspection requirements for buried and above-ground pipe facilities, including identification of any safety-related conditions along the pipeline right-of-way and ensuring that proper marking requirements are in place.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
		Communicate Public Awareness	This module identifies the regulatory requirements for pipeline operator public awareness programs. Public education and damage prevention are vital to safety. API RP 1162 is reviewed, along with message delivery methods and communication components.	Online	Vanessa Oneil Vanessa.oneil@gastechnology.org
	Southern Gas Association	Pipeline Safety Management Systems Deep Dive Workshop & Roundtable	Intended for operating company employees only, this afternoon roundtable session will be focused on two elements within the API RP 1173 document. This time together will require attendees to come prepared with their own internal gap analysis and be prepared to discuss their potential shortcomings and how the industry can learn from one another for common practices and learn from others that have already developed changes within their organization to close gaps associated with the elements.	July 27, 2016 Houston, TX	Gary Hines ghines@southern gas.org

Employee Training
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Category	Organization	Event/Resource	Description	Date/Location	Contact
Pipeline Safety	Southern Gas Association	Pipeline Safety Management Systems Workshop	If you want to better understand each element within RP 1173, and how to implement those elements into your operating procedures, the Pipeline Safety Management Workshop is your workshop.	September 14-15, 2016 Atlanta, GA	Gary Hines ghines@southern gas.org
		Hazardous Liquid Pipeline Safety Regulations for Gas Operators Workshop	As our industry continues to experience a revelation from the shale hydraulic fracturing, more and more companies are finding creative ways to utilize existing pipeline infrastructure. One such way is to convert assets to liquid transportation from gas only transportation. Regardless of installing new facilities to transport liquids or converting existing facilities, those that have historically had a background of regulations for gas pipelines (49 CFR Parts 190, 191, and 192) are now being asked to understand and work under regulations for hazardous liquids (49 CFR Part 195).	September 15-16, 2016 Houston, TX	Gary Hines ghines@southern gas.org
Regulation	Gas Technology Institute	Regulator Operation and Fundamentals	This module describes the essential elements associated with a self-operated regulator and promotes a basic understanding of the operational characteristics of a gas service regulator. It includes several elements: restricting, measuring, and loading and the performance factors associated with a self-operated regulator, with an emphasis on system safety.	Online	Vanessa Oneil Vanessa.oneil@ga stechnology.org
		Operate and Test Overprotection Equipment	This module focuses on the various methods of overpressure protection, including relief valves, wide-open monitoring, working monitor, series regulation, and slam shut devices. Trainees learn the advantages and disadvantages of overprotection operation and how to perform operational tests on overprotection devices. The module also covers operational testing steps to check equipment integrity. Abnormal operations and the proper responses are covered.	Online	Vanessa Oneil Vanessa.oneil@ga stechnology.org



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Category	Organization	Event/Resource	Description	Date/Location	Contact
Worker Safety	Western Energy Institute	Safety Summit	Safety is a paramount issue within the utility industry. Safety professionals work tirelessly to manage risk, avoid incidents and ensure safety through a variety of programs and initiatives geared toward employees and consumers. This summit is designed for gas and electric utility safety professionals, and spans across three unique, topical tracks: Safety Strategy and Policy, Electric Safety Work Methods and Gas Safety Work Methods. Content is designed to promote safety culture through discussions related to the education and training that can influence utility operations, as well as address some of the challenges and successes associated with developing strategy.	August 30-1, 2016 San Francisco, California	Beverly Jones Woolf (503) 688-2790 joneswoolf@westernenergy.org
	Midwest Energy Association	Occupational Health and Safety Administration (OSHA) Library (16 courses)	16 OSHA-focused courses covering hazardous materials, tool safety, ergonomics, HDD, and more	Online	John Gann johng@midwestenergy.org



PROFESSIONAL DEVELOPMENT

Part 3

American Gas Association
400 North Capitol St. NW
Washington D.C 20001

Professional Development
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Category	Organization	Event/Resource	Description	Date/Location	Contact
Compliance	Midwest Energy Association	Train The Evaluator	The Train the Evaluator one day course provides individuals with the requirements needed to become an MEA OQ Certified Evaluator. The course includes extensive training of the OQ Rule, simulation exercises, and a review of the tools, skills and processes needed to serve as an evaluator.	September 27, 2016 Green Bay, WI	John Gann johng@midwestenergy.org
	American Petroleum Institute	Risk Based Inspection Professional	API welcomes highly specialized inspectors, engineers, other professionals across the entire petrochemical industry to obtain the API 580 Risk Based Inspection certification as a validation of their profound knowledge of Risked Based Inspection (RBI). RBI has quickly become one of the industry's premiere instruments and preferred methods of inspection. The API 580 certification will add significant value to your professional credentials, demonstrating to your employers and clients that you have obtained a high level of proficiency and understanding in this very important field. API 580 certification is valid for a three-year term.	Ongoing	202-682-8006
		Internal Auditor Q1	These auditor certifications allow both company personnel and self-employed individuals to apply for, train, test, and become certified in various quality management related certification programs by an independent body - API. Certified individuals will obtain recognition both within their own company and within the oil and gas industry. Given API's history, brand and expertise in the quality management certification space, such a certification is extremely valuable to substantiate the auditor position within the oil and gas industry as a properly recognized and credentialed auditing professional. The API Auditor Certifications are valid for three years. Exams begin March 2016.	Ongoing	202-682-8013

Professional Development
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Category	Organization	Event/Resource	Description	Date/Location	Contact
	American Petroleum Institute	Internal Auditor Q2	<p>These auditor certifications allow both company personnel and self-employed individuals to apply for, train, test, and become certified in various quality management related certification programs by an independent body - API. Certified individuals will obtain recognition both within their own company and within the oil and gas industry. Given API's history, brand and expertise in the quality management certification space, such a certification is extremely valuable to substantiate the auditor position within the oil and gas industry as a properly recognized and credentialed auditing professional.</p> <p>The API Auditor Certifications are valid for three years. Exams begin March 2016.</p>	Ongoing	202-682-8014
		Auditor Q1	<p>These auditor certifications allow both company personnel and self-employed individuals to apply for, train, test, and become certified in various quality management related certification programs by an independent body - API. Certified individuals will obtain recognition both within their own company and within the oil and gas industry. Given API's history, brand and expertise in the quality management certification space, such a certification is extremely valuable to substantiate the auditor position within the oil and gas industry as a properly recognized and credentialed auditing professional.</p> <p>The API Auditor Certifications are valid for three years. Exams begin March 2016.</p>	Ongoing	202-682-8015
		Auditor Q2	<p>These auditor certifications allow both company personnel and self-employed individuals to apply for, train, test, and become certified in various quality management related certification programs by an independent body - API. Certified individuals will obtain recognition both within their own company and within the oil and gas industry. Given API's history, brand and expertise in the quality management certification space, such a certification is extremely valuable to substantiate the auditor position within the oil and gas industry as a properly recognized and credentialed auditing professional.</p> <p>The API Auditor Certifications are valid for three years. Exams begin March 2016.</p>	Ongoing	202-682-8016

Professional Development
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Category	Organization	Event/Resource	Description	Date/Location	Contact
	American Petroleum Institute	Lead Auditor Q1	<p>These auditor certifications allow both company personnel and self-employed individuals to apply for, train, test, and become certified in various quality management related certification programs by an independent body - API. Certified individuals will obtain recognition both within their own company and within the oil and gas industry. Given API's history, brand and expertise in the quality management certification space, such a certification is extremely valuable to substantiate the auditor position within the oil and gas industry as a properly recognized and credentialed auditing professional.</p> <p>The API Auditor Certifications are valid for three years. Exams begin March 2016.</p>	Ongoing	202-682-8017
		Lead Auditor Q2	<p>These auditor certifications allow both company personnel and self-employed individuals to apply for, train, test, and become certified in various quality management related certification programs by an independent body - API. Certified individuals will obtain recognition both within their own company and within the oil and gas industry. Given API's history, brand and expertise in the quality management certification space, such a certification is extremely valuable to substantiate the auditor position within the oil and gas industry as a properly recognized and credentialed auditing professional.</p> <p>The API Auditor Certifications are valid for three years. Exams begin March 2016.</p>	Ongoing	202-682-8018
	American Association of Pipeline Inspectors	Pipeline Inspector Training Course	<p>Instructor-led classroom training modules with study of API and ASME Codes. Review of typical pipeline issues and possible solutions. Hands on training to gain skills in as-built drawings and report writing techniques. Pre-examination training to help prepare qualified candidates for the API-ICP program as an Internationally recognized Pipeline Construction Inspector.</p>	Ongoing	202-682-8032

Professional Development
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Category	Organization	Event/Resource	Description	Date/Location	Contact
General	Western Energy Institute	Women in Leadership - Mentoring + Development	The utility energy workforce is typically only about 25 percent women, as compared to the general population where women make up roughly half of the total workforce. Organizational efficiency is characterized by a balanced workforce both in terms of skill sets and perspectives. This mentorship program addresses some of the opportunities and challenges that women face working in the energy industry, advocates for workplace inclusion and teamwork, and discusses critical issues related to attracting and maintaining a diverse workforce. Formal opportunities for mentorship provide women in the industry with support for increased retention and satisfaction. Mentors and mentees are matched up across utilities, and then connect over a six month period with two in-person meetings, once at an executive forum in June and once at the WEI Annual Meeting in September.	May 25-26, 2016 Portland, OR	Anna Sanger Reed (503) 688-2795 sangerreed@westernenergy.org
	American Petroleum Institute	Refractory Personnel	The API 936 Refractory Personnel certification is designed to identify candidates possessing the knowledge of API STD 936 Refractory Installation Quality Control Guidelines. These are guidelines for the installation quality control of monolithic refractory linings and may be used to supplement owner specifications. API 936 certification raises the bar of competence for qualified personnel, who must have knowledge of installation, inspection, testing and repair of refractory linings. It provides the industry with a prequalified set of individuals prepared for the job and readily identifies those who are qualified to do the job. API 936 certification is valid for a three-year term.	Certification (Ongoing)	202-682-8007
	Western Energy Institute	Annual Meeting	This three-day event brings together the West's natural gas and electric utility executive community together to encourage discussion and foster new opportunities. Learn from subject matter experts regarding imminent opportunities and the challenges pressing utilities to adapt and flex in uncharted territories for best-in-class utility management. Topics covered in recent years include customer relations, global economic insights, new business models for utilities in a carbon constrained world, opportunities and challenges of big data, energy supply and demand forecasting, and visions for the utility of the future. This meeting coincides with the semi-annual WEI Board Meeting and the Business Acumen for Emerging Leaders team presentations.	September 18-20, 2016 Vancouver, British Columbia	Diana Zoren (971) 255-4965 zoren@westernenergy.org

Professional Development
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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Western Energy Institute	Business Acumen for Emerging Leaders	An intensive training for high potential managers and supervisors through exposure to broad perspectives of the utility business, its interrelationships and successful leadership strategies. This program is designed by a utility-driven Curriculum Development Team, and directed by facilitators, and executive and alumni mentors. Program sessions are hosted by member utilities and topics are presented by executives, subject matter experts and formal instructors. The first four sessions focus on leadership development, industry perspectives, customer connections, communications and strategic planning. The program includes a capstone project which is delivered to industry leaders at the WEI Annual Meeting. Participants build a broad peer network that continues well into their future careers.	Various 2016 Dates Various locations in the US + Canada	Kevin Sullivan (971) 255-4973 sullivan@westernenergy.org
		Human Resources	This semi-annual program provides a roundtable opportunity for human resource leadership to address contemporary, strategic issues for human resource management. Regardless of company size or structure, energy industry human resource professionals face complex challenges related to recruitment and retention, employee assessment and training, succession planning and maintaining safe and compliant business practices. The program considers strategic inclusions such as collective bargaining agreements, benefits, employee diversity, performance management, compensation policies and change management.	May 3-4, 2016 Los Angeles, California	Kara Wolfe (503) 688-2794 wolfe@westernenergy.org
		Operations Business Strategies - Natural Gas	Designed for natural gas utility executives, participants engage in discussion addressing operational best practices and contemporary experiences surrounding changes in regulation and safety, with emphasis on challenges related to transmission and distribution pipeline integrity. Recent topics discussed include: automated dispatching, centralized work planning and scheduling, control room management, personnel safety programs, leadership and management training, research and development, quality management systems and lessons learned from TIMP and DIMP.	Fall 2016 Location TBD	Eric Christenson (971) 303-2118 christenson@westernenergy.org
Inspection	Midwest Energy Association	Construction Inspectors	The Construction Inspector course is a 2 ½ day training program that provides the individual with the basic requirements to serve as a Construction Inspector. The course includes a review of safety, with a focus on excavation, engineering, real estate (ROW), purging; hands-on opportunities are provided with tapping, welding and plastic joining, with a review of the defects associated with these joining processes.	TBD	John Gann johng@midwesternenergy.org

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	American Petroleum Institute		Certified API 510 Pressure Vessel inspectors must have a broad knowledge base relating to maintenance, inspection, repair, and alteration of pressure vessels. The API 510 examination is designed to determine if individuals have such knowledge.		
		Pressure Vessel Inspector	<p>This certification program benefits employers and the industry as a whole by helping to:</p> <ul style="list-style-type: none"> • Improve management control of process unit operation, repair, and maintenance • Reduce the potential for inspection delays • Provide a continued high level of safety through the use of highly specialized and experienced inspectors <p>API 510 certification is valid for a three-year term.</p>	Ongoing	202-682-8000
		Piping Inspector	The qualification requirements for the API 1169 Pipeline Inspector Certification Program are based on a combination of the number of years of experience acquired within the last 10 years, plus education, and in some cases, other certifications.	Ongoing	202-682-8001
		Aboveground Storage Tanks Inspector	The American Petroleum Institute initiated an API 653 Aboveground Storage Tank Inspector Certification Program with the participation of storage tank owners and users. It establishes a uniform national program that assists state and local governments in aboveground storage tank regulations.	Ongoing	202-682-8002

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	American Petroleum Institute	Tank Entry Supervisor	<p>API certified TES Tank Entry Supervisors must have knowledge of above ground petroleum storage tanks and their construction. They will also have the knowledge to plan, prepare for and address potential hazards during the tank entry, ventilation and entire job process of tank cleaning and maintenance. Scope of knowledge for the TES certification consists of:</p> <ul style="list-style-type: none"> • Tank decommissioning isolation • Ventilation • Atmospheric testing and analysis • Work permitting • OSHA Confined Space regulatory requirements • Emergency response • Tank recommissioning • API TES certification is valid for a three-year term. 	Ongoing	202-682-8003
		Pipeline Inspector	<p>The API 1169 Pipeline Inspector certification program was developed in cooperation with industry experts in order to establish an industry-wide credential for the inspection of new construction of on-shore pipelines. This certification is open to qualified applicants who are seeking to become certified inspectors in API-1169: Recommended Practice for Basic Inspection.</p>	Ongoing	202-682-8004
		Source Inspector Fixed Equipment	<p>The API Source Inspector certification program was developed in cooperation with industry experts. It qualifies individuals (employees of end-users and individual contractors) who perform the important task of supplier quality surveillance. The Source Inspector has been defined as the individual responsible for: Examining fabricated and manufactured equipment and materials at a supplier's facility, and confirming that the supplier's quality management system is being utilized effectively. SIFE - Source Inspector Fixed Equipment focuses primarily on pressure containing equipment and structural equipment, including: vessels, columns/towers, heat exchangers, piping, valves, pressure relief devices, tubulars, and associated structural fabrications. The API SIFE certification is valid for a three-year term.</p>	Ongoing	202-682-8008

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Category	Organization	Event/Resource	Description	Date/Location	Contact
	American Petroleum Institute	Source Inspector Rotating Equipment	API SIRE - Source Inspector Rotating Equipment is the newest Source Inspector certification to be developed in cooperation with industry experts. This certification will focus primarily on Rotating Equipment, including but not limited to: pumps, gears, compressors, turbines and associated appurtenances. The API Source Inspector programs qualify individuals who perform the important task of quality surveillance of materials, equipment and fabrications at the supplier/vendor level in the oil, petrochemical and gas industries.	Ongoing	202-682-8009
Leadership	Midwest Energy Association	Field Leader Training	This course provides for the specialty training needs of the energy industry field team leader by focusing on how to effectively direct the activities of their crew and communicate with management.	TBD	John Gann johng@midwesternenergy.org
	Northeast Gas Association	Leadership in Tomorrow's Utility	This program consists of four quarterly two-day workshops. Targets mid- to upper-level management who are looking to become more effective leaders. Featuring industry executives, college professors and management consultants, the workshops offer a variety of sessions that seek to impart essential leadership skills and diverse industry knowledge.	September 2016 Various Locations	Steve Leahy leahy@northeastgas.org
	Western Energy Institute	Chief Information Officer	CIOs navigate everyday challenges related to smart grid implementation, cybersecurity and data integrity. In addition to the natural leadership pressures of any executive position, CIOs also lead the charge for building visionary plans to embrace emerging technology, oversee policy development and direct the implementation of systems and processes for the control and exchange of information. As such, CIOs increasingly seek novel approaches to enhance efficiency, responsiveness, innovation and adaptability. This forum provides a unique opportunity for utility CIOs to come together in an exclusive peer environment to address these challenges.	September 20-21, 2016 Vancouver, British Columbia	Kara Wolfe (503) 688-2794 wolfe@westernenergy.org


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Category	Organization	Event/Resource	Description	Date/Location	Contact
	American Gas Association	Executive Leadership Development Program	Learn how to successfully navigate the political and regulatory maze of Washington D.C. from true experts from Capitol Hill, the White House and a variety of government agencies. Explore the workings of federal agencies and how they can impact your business. Examine federal policy and gas utility case studies. Actively participate in developing and executing a legislative regulatory and media strategy. Develop and enhance leadership skills to take your organization to a higher level of accomplishment.	June 2017 Washington D.C	Lisa Davenport ldavenport@aga.org
		Next Level leadership – Women’s Program	AGA’s Next Level Leadership Women’s Program was developed to complement current AGA member company programs to provide a leadership development opportunity for women. This industry-wide program is limited to 35 women whose positions are currently below the vice president level and are ready to assume leadership roles.	March 2017 Washington D.C	Lisa Davenport ldavenport@aga.org
Miscellaneous	Western Energy Institute	Claims + Damage Recovery	This program focuses on sharing best practices and building relationships with other leaders in claims and collection management, and offers insights from guest speakers who have been expert witnesses in claims investigations. Discussions address a wide variety of issues around balancing the need to protect utility assets with the ever-increasing priorities of providing an excellent customer experience. Participants learn from industry professionals who provide services to our members, and discuss issues common to Western utilities such as fire and storm recoveries, inverse condemnation, settlement and negotiations and proper record keeping.	Spring 2017 Location TBD	Anna Sanger Reed (503) 688-2795 sangerreed@westernenergy.org
		Corporate Performance Management	Today's energy businesses are facing increasing competition and the need to constantly improve their operational excellence and efficiency. Corporate Performance Management participants are leaders in the strategic planning of performance metrics and long-term performance improvement. Discussions are at the strategic level and focus on development of benchmarking and key performance indicators, as well as managing cross-functional corporate initiatives, and developing and sustaining a performance culture.	October 2016 Location TBD	Anna Sanger Reed (503) 688-2795 sangerreed@westernenergy.org



Professional Development
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Category	Organization	Event/Resource	Description	Date/Location	Contact
	Western Energy Institute	Customer Connections	Customer-focused utility executives gather annually to discuss current topics and best practices surrounding pressing issues in their departments. Roundtable topics from recent offerings include CIS implementations, satisfaction surveys, customer experience, multi-generational workforce, migration to online self-serve options, outage restoration communications, outsourcing call center care, social media strategies, and employee safety and comfort.	January 2017 Location TBD	Diana Zoren (971) 255-4965 zoren@westernenergy.org