

Safety Overview

A safe work environment is essential to providing efficient, reliable, and safe energy services to the public. Electricity and gas have become an integral part of our everyday lives. We take for granted the vital presence of energy in our daily lives until there is some type of interruption in service that makes our modern-day conveniences not so convenient.

It is the obligation of the government and the utility companies to provide efficient, reliable, and safe service to the public, and to maintain a safe workplace for their employees as well. Effective local, state, and national regulations promote and enforce safe and secure operations for the protection of people, data, the environment, property, and institutions.

The Importance of Safety Awareness

- Electrical hazards cause more than 300 deaths and 4,000 injuries in the workplace each year.
- Electrical accidents rank sixth among all causes of work-related deaths in the United States.
- The nonfatal workplace incidents that cause the highest number of days away from work include:
 - o Contact with an electrical current or a machine, tool, appliance, or light fixture (38 percent).
 - o Contact with wiring, transformers, or other electrical components (33 percent).
- Nonfatal electrical injury occurs most often to those who work with machines or tools and around electrical wiring other than power lines.
- Over the last 10 years, more than 46,000 workers were injured from on-the-job electrical hazards.
- During the work day, a worker is hurt every 30 minutes so severely from electricity that it requires time off the job.

-Electrical Safety Foundation International (ESFJ)

Table: Effects of Electrical Current

Current	Item/Tool	Reaction to Current
One ma (milliamp)	Watch battery	Tingling sensation
More than 3 ma	9-volt battery	Disturbing shock
More than 10 ma	Christmas tree light bulb	Sustained muscle contraction "no-let-go" danger
More than 50 ma	Small radio	Lung paralysis-usually temporary Possible ventricular fibrillation (heart dysfunction, respiratory arrest, usually fatal)
One hundred ma to 4 amps	Jig saw	Certain ventricular fibrillation, nerve damage, fatal
Over 4 amps	Circular saw	Heart paralysis, severe burns, fatal

Safety Regulation

In 1903, the U.S. Bureau of Labor began publishing studies of occupational fatalities and illnesses in certain trades, as well as other safety and health topics. During the 1960s, occupational injuries and illnesses were increasing in both number and severity. Disabling injuries increased 20 percent during the decade, and 14,000 workers were dying on the job each year.

After nearly a century of attempts by local and federal government to make the workplace safer, The Occupational Safety and Health Act (OSHA) was signed into law on December 29, 1970. Since the inception of OSHA, overall workplace fatalities have been cut by more than 60 percent, and incidence rates of occupational injury and illness have declined by 40 percent.

An Effective Workplace Safety and Health Program

- Improves employee morale and performance
- Enhances company profitability
- Reduces employee turnover
- Reduces the extent of work injuries
- Reduces workers' compensation costs

Training

Training should be provided:

- To all new employees before they begin working
- To all existing employees at least once a year
- When new equipment, materials, or processes are integrated
- When procedures have been updated or revised

Key Components of Employee Safety Training

- Mandatory attendance for all employees
- Addresses the safety and health responsibilities of all personnel
- Comprehensive to ensure coverage of all pertinent material
- Hands-on, pragmatic exercises to replicate authentic tasks and environments
- Ensure that all employees understand the hazards to which they may be exposed
- Ensure that all employees know how to prevent harm to themselves and others
- Training should include prevention, recognition, and correction of:
 - Housekeeping issues
 - Fall hazards
 - Electrical hazards
 - Chemical hazards
 - Mechanical hazards
 - Fire hazards
 - Duty-specific hazards
 - Additional health hazards

Forty percent of workers injured have been on the job less than one year.

The Bureau of Labor Statistics

Employer Responsibilities

Examples of standard employer responsibilities include:

- Ensure compliance with occupational safety and health standards and regulations
- Ensure that employees have the training, tools, and equipment needed to perform tasks safely
- Develop safety and health programs, policies, and procedures
- Conduct regular work observations and analysis
- Keep records of all monitoring data
- Ensure effective and timely resolution of safety and health issues
- Inform workers of their rights and responsibilities related to occupational safety and health
- Investigate and resolve all allegations of unsafe conduct or violations of policies and procedures
- Maintain confidentiality and privacy of employees
- Establish a company culture of safety by encouraging all employees to be safety specialists

Employee Responsibilities

Examples of standard employee responsibilities include:

- Follow safety rules, policies, and procedures to create a safe work environment
- Ask questions about any rules, policies, and procedures you do not understand
- Report any hazards, unsafe actions, or violations of safety policies or procedures
- Help co-workers recognize unsafe actions or conditions
- Stop the unsafe behavior of others
- If instructed to perform an unsafe act, notify a supervisor immediately
- Report all injuries and illnesses to your supervisor

As mandated by federal law, employees must comply with OSHA. In accordance with OSHA, employees who knowingly commit unsafe acts or create unsafe conditions, disregard the safety policy, or are repeat offenders **will be discharged**.

Grounds for Termination

Grounds for immediate termination at most companies include:

- Drinking alcohol and/or drug abuse prior to or during working hours
- Fighting
- Theft
- Willful damage to property
- Failure to wear eye/hearing protection, safety helmets, other required personal protective equipment (PPE)
- Failure to comply with appropriate tool and equipment operation policies
- Inappropriately altering safety guards, barriers, and/or guardrails
- Failure to follow recognized industry practices
- Engaging in dangerous horseplay
- Failure to notify the company of a hazardous situation
- Failure to notify the company of injuries at the time of occurrence
- Deliberately providing inaccurate information in safety/incident investigations

Drug-Free Lifestyle

Substance abuse places a major burden on the workplace. However, employers can work to protect their businesses from the negative impact of substance abuse by educating employees about its dangers and encouraging individuals with substance abuse problems to seek help. The effects of employee substance abuse extend beyond the individual employee. Drugs and alcohol can impair a worker's judgment and coordination, which can lead to an increased risk of accidents and injuries.

Co-workers can often be a powerful influence on those who are abusing drugs and/or alcohol. By knowing what to do and what not to do, co-workers can make the workplace safer and help their co-workers get the help they need. It is the responsibility of all workers, supervisors, and employers to be aware of their surroundings and to do what they can to make the work environments safe for everyone.

Workplace substance abuse is a serious problem, especially in environments where co-workers rely on each other for safety. All workers should take action and be willing to show concern for fellow employees, the workplace, and themselves. All employees should help co-workers get the assistance they need.

Safety Rights

- Right to a safe workplace free from recognized hazards
- Right to request information on safety and health hazards in the workplace, safety precautions to take and procedures to be followed if injury or exposure occurs
- Right to refuse a task that requires you to disobey safety rules standards
- Right to refuse a task that puts you or someone else in unnecessary danger
- Right to refuse a task for which you have not been trained to safely perform
- Right of freedom from retaliation for using safety rights

Safe Practices

All employees should be committed to working in compliance with all applicable environmental, health, and safety rules and established operating procedures. All workers should have the knowledge, skills, and abilities to carry out their work safely and efficiently. Employees should discuss safety and health questions or concerns with their employers, other workers, or union representatives (if available). Hazard assessments provide employers with the information they need to address and correct unsafe conditions and in turn provide employees with the information, training, and support they need to safely perform their jobs.

Personal Protective Equipment (PPE)

The following is a list of PPE commonly used in energy and utilities jobs:

- Safety glasses/face shields
- Hard hats
- Safety footwear
- Insulating gloves
- Insulating sleeve covers

- Flame-resistant clothing
- Fall protection equipment
- Respirators
- Cut-resistant chaps

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