

## Liberty University Energy Control Policy, Program & Energy Control Procedures (ECP's)



## **I. INTRODUCTION**

To assure that all employees and affected personnel are protected from the release of hazardous energy during maintenance and servicing of equipment or machinery in the workplace, OSHA (the Occupational Safety and Health Administration) has developed and promulgated an Energy Control Standard 29 CFR 1910.147

## **II. PURPOSE & SCOPE**

**Purpose:** The Liberty University Energy Control Policy/Program will provide a safe and healthful work environment, free from hazardous energy, for all Liberty University (LU) employees, students, volunteers, and contractors working under direct and indirect LU supervision. This Policy/Program will ensure that before any employee performs servicing or maintenance on machinery or equipment, where the unexpected energizing, start up, or release of any type of energy could cause potential injury, the machinery or equipment will be rendered safe to work on by employing the principles of Lock-out and Tag-out or LOTO.

**Scope:** This Policy/Program is provided by Liberty University to ensure that employees are properly trained on Energy Control Procedures (ECPs) and elements of the Program, including the Lock-out/Tag out of energy systems as well as preventing the release of potential stored energy. The Policy/Program employs practices and procedures to protect all employees and non-employees from the hazardous release of all forms of energy associated with maintaining and servicing of equipment and machinery.

Examples of Potential Hazardous Energy Sources may include, but may not be limited to:

- Electrical Circuits and Systems
- Hydraulic or Water (Fluid) Systems
- Pneumatic (Air) Systems
- Flammable Systems (i.e., Gasoline and other Flammable Liquids or Gases)
- Thermal Systems (Steam or other Heat Producing Systems)
- Kinetic or Gravity Systems
- Light Emitting (Laser) Systems
- Radiation Systems

The provisions of this Policy/Program apply to all personnel at Liberty University on all Liberty Properties or on any property on which work is being conducted by the University. It is the policy of Liberty University to take every reasonable precaution to provide a work environment free from recognized hazards for its employees in accordance with the General Duty Clause per the OSH act Public Law 91-596 Section 5(a)(1) and in accordance with specific OSHA standards.

The Environmental Health and Safety Department is responsible for establishing and maintaining the Energy Control Procedures and Lock-out/Tag Out Program. Appropriate Safety and Personal Protective Equipment (PPE) must be provided by the University when such equipment is necessary to protect the health and safety of the employee(s). The supervising department is responsible for acquiring such equipment from the Environmental Health and Safety Department or by purchasing through an outside vendor.

Refer to the LU [EHS website](#) under Policies, Programs & SOP's for more information on this Policy/Program and associated Procedures.

## Application

This policy/program and standard operating procedures apply to Energy Control Procedures (ECPs) and Lock-out/Tag out requirements for work on all Liberty University properties or work being performed by Liberty University employees regardless of jobsite location.

## **III. POLICY**

Liberty University is committed to providing a safe and healthful work environment for our LU community. All employees, students, volunteers, and contractors working under direct LU supervision shall comply with all elements of the LU Energy Control Program and with all Federal, State, and Local Regulations. Additionally, any contractors working independently or through a general contractor on LU properties must comply with the LU Contractor Safety Program found on the LU [EHS website](#) under LU Contractor Safety. .

## **Applicable Regulations & References**

OSHA – 29 CFR 1910.147 – Subpart J – Control of Hazardous Energy (Lock-out/Tag-out)

OSHA 29 CFR 1910.333 – Subpart S- Lock-out/Tag-out Electrical Safe Work Practice

OSHA- 29 CFR 1926-Subpart K- Electrical Construction

OSHA- 29 CFR 1926-Subpart Q- Concrete and Masonry Construction

OSHA- 29 CFR 1910.269- Subpart R- Electric Power, Transmission and Distribution

NFPA 70E- Article 110.5-Standard for Electrical Safety in the Workplace- Establishing an Electrically Safe Work Condition

## **IV. PROGRAM RESPONSIBILITIES**

### **A. Program Administrator**

Environmental Health and Safety Division (EHS) provides:

- Program oversight and consultation to LU departments.
- Provides training on the Energy Control Procedures or LOTO Training for all "Authorized Persons" and "Affected Persons" in the associated hazards, general safe work practices, and program requirements.
- Provides guidance on maintenance of applicable records.
- Performs program reviews and updates, as necessary.
- Provides recommendations for Energy Control mitigation during the building design process.
- Provide continual safety evaluations of work operations and enforcement of this policy. **\*\*\*\*\*EHS staff are authorized to halt any unsafe work practice that is not in accordance with this or any other LU Health and Safety Policy or Program where there is the potential for injury or death.**

## B. Departmental Management

Departments are responsible for providing a safe work environment for their staff by following health and safety policies and procedures. Department supervisors are responsible for identifying any existing energy hazards and for identifying which employees require training prior to working near hazardous energy. Departments are expected to maintain a safe and healthy living, learning, and working environment for faculty, staff, students, and visitors to our campus. Departments should designate responsible persons to coordinate the requirements of this policy/program with employees and ensure that adequate Lock-out devices are provided and used. Departments must ensure that all personnel performing Lock-out/Tag-out have attended necessary training and are familiar with the requirements of this policy/program and related programs, policies, and procedures.

## C. Supervisors

Supervisors must identify and provide the necessary Energy Control equipment and PPE (Personal Protective Equipment) to their employees for working on or near hazardous Energy. The Supervisor shall be a Competent person, as defined by OSHA, or assign someone to be the competent person for the work group. OSHA defines a Competent person as:

- A person who can identify existing and predictable hazards in the surroundings or identifying working conditions which are hazardous or dangerous to employees and who has authorization to take prompt corrective measures to eliminate them.

**Note:** It is the responsibility of Supervisors and Department Managers to assure that all employees under their direction, which have the potential to work on, or encounter, energized equipment, or where there is a potential for the release of stored energy, read and understand this document.

## D. Employees

Employees are expected to attend EHS Lock-out/Tag-out Authorized Person training and to use work practices developed in accordance with this policy/program to prevent injuries that could result from the unexpected start-up of equipment or the release of stored energy. Refresher training is required every five years, or due to an incident, an observation of unsafe work practices, or an update of requirements or changes to operating guidelines.

## E. Contractors

Contractors must comply with all local, state, and federal safety requirements, and assure that all their employees performing work on Liberty University properties have been suitably trained. If University employees will be present on the Contractor's worksite, and employees of either Liberty University and/or the Contractor will be performing work that requires the use of Lock-out/Tag-out devices, the work activities must be performed in accordance with the Liberty University Contractor Safety Program.

## V. Definitions

1. **Affected Employee:** An employee who is required to use machines or equipment on which servicing is performed under the Lock-out/Tag-out standard or who performs other job responsibilities in an area where such servicing is performed.
2. **Authorized Employee:** An employee who locks or tags machines or equipment to perform servicing or maintenance. This Employee is Authorized to control their own individual Lock-out/Tag-out Procedure but may or may not be the designated Person in Charge of a Group Lock-out/Tag-out Procedure.
3. **Person in Charge:** An Authorized Employee delegated responsibility to lead and control Group Lock-out/Tag-out Procedures due to knowledge of equipment under Energy Control. This may not necessarily be the most senior employee.
4. **Other Employees:** All employees who are or may be in an area where energy control procedures may be employed (i.e., Innocent Bystanders).
5. **Capable of being locked out:** An energy-isolating device is considered capable of being locked out if it:
  - a. Is designed with a hasp or other means of attachment to which a lock can be affixed.
  - b. Has a locking mechanism built in.
  - c. Can be locked without dismantling, rebuilding, or replacing the energy-isolating device or permanently altering its energy control capability.
6. **Energized:** Machines and equipment are energized when they are connected to an energy source, such as Kinetic, Electrical, Hydraulic energy, etc. or they contain any form of residual or stored energy.
7. **Energy-isolating device:** A mechanical device that physically prevents the transmission or release of energy, including but not limited to the following: A manually operated electrical circuit breaker; a disconnect switch; a manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors and, in addition, no pole can be operated independently; a line valve; a block; and any similar device used to block or isolate energy. Push buttons, selector switches and other control circuit type devices are not energy isolating devices.
8. **Energy source:** Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.
9. **Group Lock-out/Tag-out:** Where multiple Authorized and/or Affected employees need to Lock-out on the same piece or machinery or equipment, a group lock-out can be achieved by an Authorized Person in Charge who performs the main Lock-out/Tag-out procedures and then establishes a group lock-out point, normally a lockbox or multiple lock scissor-hasp, for placement of all affected employee's locks and tags.

10. **Lock-out:** The placement of a Lock-out device on an energy-isolating device, in accordance with an established procedure, ensuring that the energy-isolating device and the equipment being controlled cannot be operated until the Lock-out device is removed.
11. **Lock-out devices:** Any device that uses positive means, such as a lock, blank flanges, and bolted slip blinds, to hold an energy-isolating device in a safe position, thereby preventing the energizing of machinery or equipment.
12. **Normal production operations:** The utilization of a machine or equipment to perform its intended production function.
13. **Servicing and/or maintenance:** Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing machines or equipment. These activities include lubricating, cleaning or unjamming machines or equipment and making adjustments or tool changes where the employee may be exposed to the unexpected energization or startup of the equipment or release of hazardous energy.
14. **Setting up:** Any work performed to prepare a machine or equipment to perform its normal production operation.
15. **Tag-out:** The placement of a Tag-out device on an energy-isolating device, in accordance with an established procedure, to indicate that the energy-isolating device and the equipment being controlled may not be operated until the Tag-out device is removed. Tag-out alone without incorporation of a lock-out device is a very special condition or circumstance which requires procedural justification and authorization due to infeasibility of lock-out.
16. **Tag-out device:** A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy-isolating device in accordance with an established procedure, to indicate that the energy-isolating device and the equipment being controlled may not be operated until the Tag-out device is removed.

## **VI. ENERGY CONTROL PROCEDURES (ECPs) (APPLICATION & IMPLEMENTATION)**

### **General Requirements**

Employees are expected to use work practices developed in accordance with this policy/program to prevent injuries that could result from the unexpected start-up of equipment or the release of stored energy.

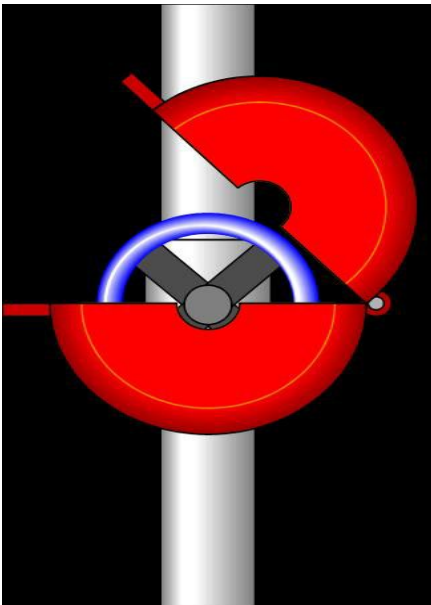
***Servicing and/or maintenance activities may only be performed by an "Authorized Employee" following the General Lock-out Procedure or written Energy Control Procedure, as applicable. Parts of machinery or processes not verified as deenergized using approved procedures must be treated as energized.***

Attendance records (e.g., sign-in sheets) for Lock-out Authorized Employee training provided by EHS will be maintained by EHS as is administratively necessary. EHS will provide Lock-out Authorized Employee cards to employees who complete the Lock-out Authorized Employee training.

Due to an incident observation of unsafe work practice(s), or an update of this program, or changes to operating guidelines, EHS may require refresher training for Lock-out Authorized Employees prior to the established refresher period of three years.

## Energy Isolating Devices

Energy isolation devices not installed directly on the machine or equipment or located such that the purpose is obvious must be labeled to indicate the machinery or equipment served. A lockable energy isolation device must be installed with equipment as part of a new installation, major replacement, repair, renovation, or modification. Departments must make the effort to retrofit machinery and equipment with lockable energy isolation devices.



Valve Cover

## Locks, Tags, and Lock-out Devices

Liberty University requires that both a Lock and a Tag be used for Lock-out activities to identify the lock for personnel protection, as well as to identify the person placing the lock on the equipment or system. Locks, tags, and Lock-out devices may not be used for any purpose other than Lock-out. Locks, tags, and Lock-out devices must be durable enough to withstand the environment in which they will be used. Locks, tags, and Lock-out devices must be provided by the department as needed for isolating, securing, blanking, or blinding machines, equipment, or processes from energy sources.

Locks must be assigned, issued, and individually keyed for each Lock-out Authorized Employee such that only the employee can install or remove their lock. Locks may be permanently assigned to an employee or locks may be generally available to employees provided the above conditions are met. Employees may use only their assigned lock(s). Locks and tags shall be applied to the disconnecting means by each person who will be working on the machine/system. Where this is not feasible, alternate written procedures must be approved by EHS to ensure effective protection. Locks, tags, and Lock-out devices must not be removed without permission from the Lock-out Authorized Employee who applied them and are not to be bypassed, ignored, or otherwise defeated. Doing so is grounds for disciplinary action.



Tags must be securely attached to the lock as a means of identification. Tags must be substantial enough to prevent accidental removal. The tag must show the name of the Lock-out Authorized Employee applying the device, the date and time that work began, and phone or radio contact information. Tags must warn about hazardous conditions that may result if the machine or equipment is energized and must include a legend such as: Do Not Start, Do Not Operate, Do Not Close, Do Not Energize, or Do Not Open. Tags must be legible and understandable.

*Each Lock should have a tag on it to identify the authorized person*

### **Shift or Personnel Changes**

When repair or maintenance work extends beyond one shift, Lock-out Authorized Employees entering the work area must affix their locks in place before departing employees remove their locks, or a comparable system of assuring the continuation of Lock-out conditions must be developed and used. Verification of the Lock-out must be performed on each shift before any Lock-out Authorized Employee begins work. This verification must be performed by a Primary Lock-out Authorized Employee for the oncoming shift. This does not reduce the right of any Lock-out Authorized Employee to verify.

### **Emergency Lock Removal (see also Emergency Lock Removal Procedure Pg. 11 below)**

A Lock-out Authorized Employee on campus or at the location where the lock is located retains the sole authority to remove his or her lock, tag, and any associated Lock-out devices. When an employee is unavailable to remove his or her lock and it is necessary to complete the Lock-out procedure and restart the machinery or equipment, the Lock-out Authorized Employee's supervisor has the authority to remove the Lock-out Authorized Employee's lock by following and completing the Emergency Lock Removal Form and Procedure below (available on the [EHS website](#) under forms). In the case of Group Lock-out situations, the



### **Group Lock-out/Tag-out Procedures**

When more than one Lock-out Authorized Employee must Lock-out more than one energy source, a group Lock-out procedure may be implemented under the direction of a Primary Lock-out Authorized Employee. The Primary Lock-out Authorized Employee will have responsibility for control of the group Lock-out procedure. Typically, the Primary Authorized Employee will place his/her lock on the Lock-out device first (and remove it last).

Each Lock-out Authorized Employee participating in a group Lock-out has the right to, and should, personally verify the effectiveness of the Lock-out procedure. A Lock-out Authorized Employee who opts to verify the Lock-out may perform this verification only after affixing his or her personal lock, before performing service/maintenance work, and after verifying that no other employees will be adversely affected by the verification process.



Primary Lock-out Authorized Employee (Person in Charge) must also participate in the Emergency Lock Removal Process.

The department shall develop an **Emergency Lock Removal Procedure** that identifies the supervisory Lock-out Authorized Employees who will implement the procedure, and whether locks will or will not be destroyed as part of the removal, and the use and control of second keys, if used.

The intent of the **Emergency Lock Removal Procedure** is to transfer responsibility of the Lock-out procedure to another Lock-out Authorized Employee. When the **Emergency Lock Removal Procedure** has been implemented, the completed form must be maintained by the department for five (5) years.

### **Annual Review Process**

EHS, in conjunction with supervisors will conduct an annual review of each work group that performs Lock-out/Tag-out activities within the scope of this program to correct any identified issues. Annual reviews shall be performed on written Energy Control Procedures for employees using such procedures during an annual review. EHS will retain information for reviews for five years.

### **General Lock-out/Tag-out Procedure**

Before work can begin on the actual system, the Lock-out/Tag-out Authorized Person must ensure that certain steps are completed.

- **Notify** all parties who will be affected by the shutdown or de-energization of the machine/equipment/system. Notification must include the purpose of the work, instruction for personnel in the area not to attempt to remove or bypass locks, tags, devices, and instruction not to attempt to restart the machine, equipment, or system.
- **Identify** all energy sources of the machine, equipment, or system prior to beginning work.
  - If electricity is the **only** energy source (including no stored energy) and the machine or equipment has a plug connection, the authorized person may proceed with servicing or maintenance activities provided that the machine/equipment is un-plugged, and the plug is under the exclusive control of the authorized person, or where a plug capture locking device is employed.
  - If there is more than one energy type (e.g., hydraulic, pneumatic, electrical, gravity, etc.) or form (e.g., active, stored), an Energy Control Procedure must be developed and used.
  - If work will be performed on or near energized electrical systems, additional protocols are required.
- **Shutdown** the machine/equipment according to the manufacturer's recommendations or safe, or properly de-energize the electrical system.

**Isolate** all energy sources at the disconnect switch, circuit breaker, or by using an appropriate blocking device. If the energy source cannot be isolated

#### **Step 1: Achieving a “zero energy state”**

- a) Notify all affected personnel that equipment is going to be de-energized and accessed.
- b) This can be done verbally, visually, or by hanging a warning tag on the control panel.

- c) Disconnect the main sources of power by breaking the primary power circuit, valve, pipe, etc. Locking out a low voltage control circuit is not considered breaking a main power source.
- d) Disconnect each separate power source of multiple power systems, e.g., air over hydraulic, electric over hydraulic, etc.
- e) Release all residual energy remaining behind the power source, e.g., hydraulic or air pressure, etc., or if the energy isolation device is not lockable, contact EHS for support.
- f) Secure all power sources in the de-energized position with a Lock-out device. Use multiple lock devices when more than one lock is required. Each person who is protected by the Lock-out:
  - Places a signed lock and tag on source location(s).
  - Keeps the key to his/her own lock.
  - Removes own lock (only exception: person not on site and person is contacted).
  - Works **only** on protected source(s).
  - Removes lock at completion for work shift or transfer.
- g) Block or blank any machinery, device, or piping system that can move on its own or deliver energy with or without the power source.
- h) **Verify** that the energy source(s) are actually isolated by attempting to start the machine, checking pressure gauges, using electrical testing equipment to prove the absence of voltage, or visually inspecting blocking devices). If the machine/equipment/system is still energized, do not begin work. Make sure that all steps have been performed correctly up to this point. If de-energization cannot be verified on the second attempt, assistance may be needed from an Electrical Qualified Person or other knowledgeable person. Notify your supervisor or EHS for support.
  - Note: If electrical conductors or circuit parts are being testing with a multi-meter to verify the absence of voltage, the person must be an Electrical Qualified Person, and wear appropriate personal protective equipment for the hazard class involved.
- **Perform** the servicing or maintenance activities once de-energization has been verified.
- **Remove** all materials, tools, equipment, locks, tags, and devices once the work has been completed.
  - Note: Each Lock-out device shall only be removed by the "Authorized Employee" who applied it. If this is infeasible, the below **Emergency Lock Removal Procedure** must be followed.
- **Notify** all affected parties that the Lock-out/Tag-out is complete and that startup will be attempted. Remove all unnecessary personnel from the immediate area. Ensure the area is "*all clear*".

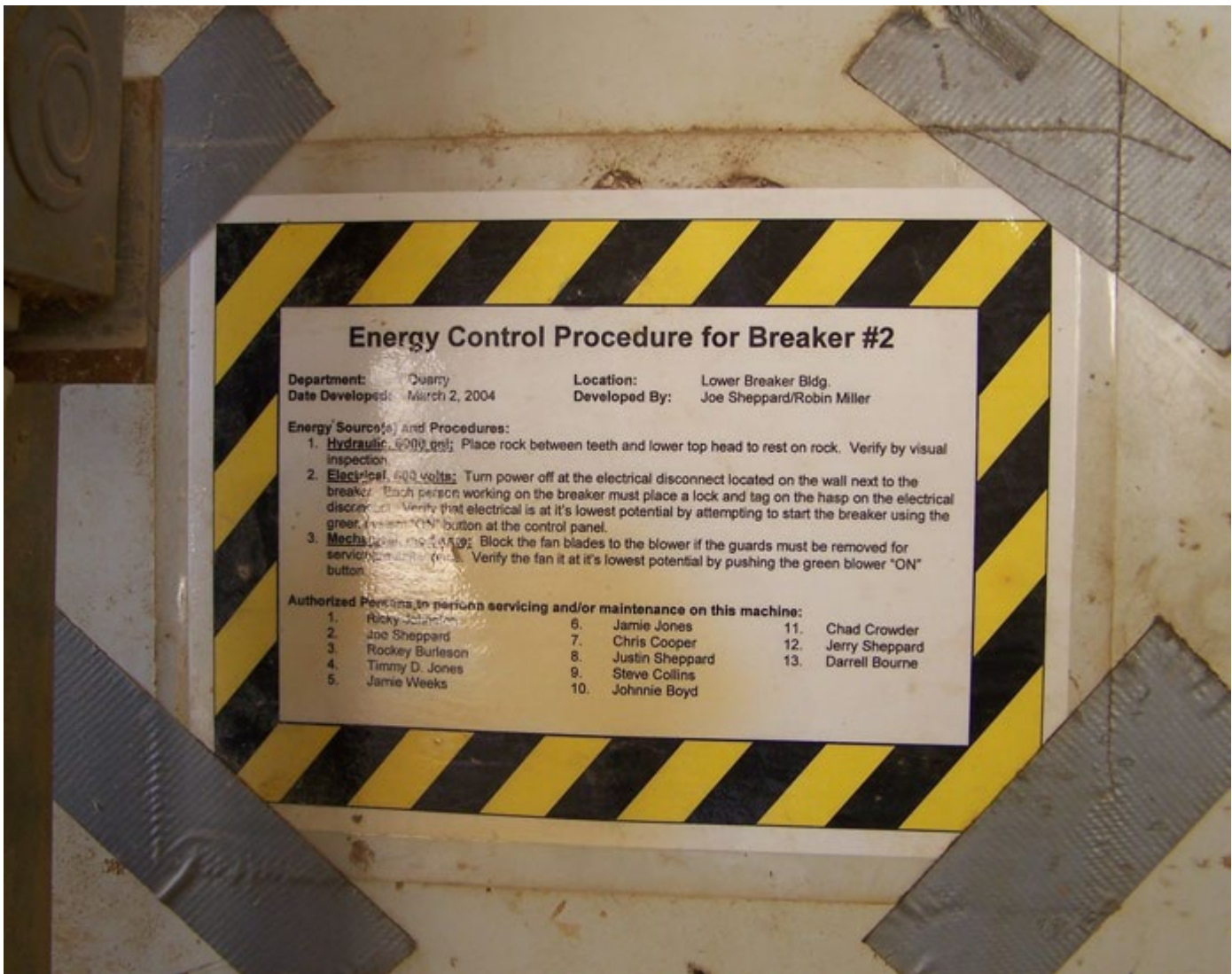
### **Step 2:** Preparing to *re-energize*

- a) Replace any guards that had been removed for service
- b) Once the task has been completed, tools picked up, safety chains, guards, guard rails, warning signs, etc. are replaced, notify affected personnel that the Lock-out device is going to be removed.
- c) Remove locks and tags.
- d) Once all Lock-out devices have been removed, the equipment or process may be restarted.
  - Temporary operation of locked out source
    - Make sure everyone is clear of the system.

- Make sure tools are clear.
- Remove lock(s).
- Energize the system and conduct check.
- Immediately de-energize the system and replace locks.
- Unauthorized removal of lock and tag is prohibited. Use the following **Emergency Lock Removal Procedure** for Supervisor or Authorized Person to remove lock/tag when employee is not available:
  - Verify authorized employee is not on site and available to remove own tag.
  - Check that employees are not exposed to hazards.
  - Verify equipment is safe to operate, tools have been removed and guards have been replaced.
  - Remain with affected equipment so that no one returns while equipment or process is being restarted.
  - Remove lock/tag and energize equipment.
  - Require that affected employee knows the Lock-out device(s) has been removed before he/she resumes work.
- **Energize** the machine/equipment/system following manufacturer's procedures or established protocols.

### **Energy Control Procedures (ECPs)**

Where ECPs are required, the department must maintain them in written form. ECPs must be available for Lock-out Authorized Employees to use when work covered by the ECP is to be performed. ECPs must be retained by the department until superseded by annual review or update. Lock-out Authorized Employees who have been trained on a specific ECP may be included on the ECP as a person authorized to use the ECP. If this is not done, the department must document which of the department's employees have been trained on each ECP in another manner.



Post ECPs at the location of the fixed machinery and equipment. If this is not feasible, ECPs may be maintained in a manner that is readily available to the Lock-out Authorized Employees, and Affected Employees are able to request service or maintenance work by the responsible person(s). Where access to machinery and equipment is controlled, such that only Lock-out Authorized Employees have access, ECPs may be maintained in another format provided that the ECPs are readily available to Lock-out Authorized Employees when needed. Contact EHS for additional support on acceptable methods to achieve this.

EHS will maintain and make available the **General Lock-out Procedure**. It can also be found on the [EHS website](#) under Policies and Procedures.

## VII. Training

Training shall be provided to all employees who perform work on or near equipment which has the potential to produce Hazardous Energy. Training is provided by the Environmental Health & Safety Department. The training program should enable employees to recognize the hazards associated with working near Hazardous Energy and provide the requirements to be followed to minimize these hazards. Training must be completed and documented prior to employees working in areas where such hazards exist.

## Lock-out Authorized Employee Training

- Each employee who will conduct work covered by this policy/program must attend Lock-out Authorized Employee training offered by EHS prior to beginning such work. Additionally, each Lock-out Authorized Employee must receive specific training on each Energy Control Procedure (ECP) to be used. This training is to be conducted by a Department Lock-out Authorized Employee familiar and experienced with the procedure and the system, machinery, or equipment. Authorized Refresher training is due every **(3)** years.

## Lock-out/Tag-out Awareness for Affected Personnel

- Employees who are working in areas where Lock-out/Tag-out is being conducted must attend awareness level training so that they understand the program requirements and procedures, and that the devices are not to be tampered with, removed, or bypassed in any way. Awareness level Refresher training is due every **(5)** years.
- A written certificate of training shall be maintained for all employees exposed to Hazardous Energy. The certificate must include the employee's name, date of training, and signature of trainer and employee.
  - The supervisor must maintain the latest certification for all their employees.
- Retraining shall be completed when the following occurs:
  - Authorized persons shall complete annual refresher training.
  - It is suspected that any affected employee who has already received training is no longer competent in Energy Control Processes and Procedures.
  - Changes in the workplace render the current training insufficient.
  - Accidents or incidents involving hazardous energy source(s)
  - A change in job assignment
  - A change in machines, equipment, or processes that present a new hazard
  - Deviations from, or inadequacies in, the employee's knowledge or use of the Energy Control Procedure
  - Periodic inspections reveal there are deviations in the Energy Control Procedure, or
  - Significant changes to the written program

## **VIII. Recordkeeping**

It is the responsibility of each LU department to maintain applicable records for employees regarding issuance and maintenance of Energy Control tools and devices.

- Employee training must be maintained for all employees exposed to Hazardous Energy.
- All inspection and certification records must be maintained for Energy Control tools and devices.
- An Inventory of Energy Control tools and devices should be maintained.
- Information to be included in the Inventory includes but is not limited to the following:
  - Employee name and ID number to which Energy Control tools or devices are assigned
  - Type of tools or devices assigned
  - General inspection records of the tool or device integrity of each tool or device assigned
  - An adequate supply of Tags used for the purpose of Energy Control, which are clean and can withstand outdoor elements where applicable
  - Tag attachment devices which are capable of withstanding at least 50 lbs. of pressure without failure
  - Tools, such as multi-lock scissors and lockboxes which are in good operating condition, this includes special devices for locking out of special equipment (i.e., designed for electrical molded-case circuit breakers, valve lock-out devices, or cord-end capture Lock-out devices, etc.)

## **IX. Periodic Program Review**

At least annually, the Environmental Health and Safety Program Administrator will conduct a review to assess the Program's effectiveness. The annual review will be evaluated, and the Program will be updated as needed.

## **X. Enforcement**

Failure to follow the Liberty University Energy Control Program or Energy Control Procedures (ECPs) can result in life threatening or serious injury situations for staff, faculty, students, and visitors. Failure to comply with the Policy/Program and/or Procedure requirements can result in disciplinary action up to and including discharge of employment.

## **XI. Quick Reference Guide**

Quick reference guides are 1 to 4 page documents at the end of the Policy/Program or SOP that have some key points of reference regarding the Program or Policy requirements and where to find them in the document.

## QUICK REFERENCE GUIDE

# ENERGY CONTROL PROGRAM & PROCEDURES

## LIBERTY UNIVERSITY

TOPIC	INFORMATION	LU ECP LOCATION
<b>Authorized Employee</b>	An employee who locks or tags machines or equipment to perform servicing or maintenance. This Employee is Authorized to control their own individual Lock-out/Tag-out Procedure but may or may not be the designated Person in Charge of a Group Lock-out/Tag-out Procedure.	Pg. 4
<b>Affected Employee</b>	An employee who is required to use machines or equipment on which servicing is performed under the Lock-out/Tag-out standard or who performs other job responsibilities in an area where such servicing is performed.	Pg. 4
<b>Person in Charge</b>	An Authorized Employee delegated responsibility to lead and control Group Lock-out/Tag-out Procedures due to knowledge of equipment under Energy Control. This may not necessarily be the most senior employee.	Pg. 4
<b>Lock-out Device</b>	Any device that uses positive means, such as a lock, blank flanges, and bolted slip blinds, to hold an energy-isolating device in a safe position, thereby preventing the energizing of machinery or equipment.	Pg. 5
<b>Tag-out Device</b>	A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy-isolating device in accordance with an established procedure, to indicate that the energy-isolating device and the equipment being controlled may not be operated until the Tag-out device is removed.	Pg. 6
<b>Group Lock-out/Tag-out</b>	Where multiple Authorized and Affected employees need to lock-out on the same piece or machinery or equipment...	Pg. 5
<b>Energy Control Procedures (ECPs)</b>	General requirements & Where ECPs are required, the department must maintain them in written form. ECPs must be available for Lock-out Authorized Employees to use when work covered by the ECP is to be performed.	Pg. 6, 12 & 13
<b>Annual Review Process</b>	EHS, in conjunction with supervisors and designated departmental safety coordinators, will conduct an annual review of each work group that performs Lock-out/Tag-out activities within the scope of this program to correct any deficiencies or inadequacies identified.	Pg. 9
<b>Emergency Lock Removal Procedure</b>	Unauthorized removal of lock and tag is prohibited. Use the <b>Emergency Lock Removal Procedure</b> for a Supervisor or Authorized Person to remove lock/tag when employee is not available:	Pgs. 9 & 11
<b>General Lock-out/Tag-out Procedures</b>	<b>Step 1: Achieving a “zero energy state”</b>	Pg. 10
<b>General Lock-out/Tag-out Procedures</b>	<b>Step 2: Preparing to <i>re-energize</i></b>	Pg. 11

<b>Training and Retraining</b>	Training shall be provided to all employees who perform work on or near equipment which has the potential to produce Hazardous Energy.	Pg. 12 & 13
<b>Recordkeeping</b>	It is the responsibility of each LU department to maintain applicable records for employees regarding issuance and maintenance of Energy Control tools and devices.	Pg. 14
<b>Enforcement</b>	Failure to comply with the Program and/or Procedure requirements can result in disciplinary action...	Pg. 14



# Liberty University Energy Control Program & Energy Control Procedures (ECP's)

## Revision Tracking

Revision Number	Revision Description	Revision Location	Date Originated/ Revised	Policy Author/Reviser:	Policy Approvers
	Original		April 2022	Bob Drane – A Greg Bennett – R	Ronald Sloan John Peterson Greg Bennett