



ENERGY ISOLATION (LOCKOUT/TAGOUT)



Purpose

This program outlines how Validus Energy will meet the requirements outlined in OSHA's **Energy Isolation (LOTO)** standard. (1910.147)

Scope

This policy applies to all sites operated by Validus Energy.

Process

Validus Energy employees shall not work on any equipment that has not been locked and/or tagged out.

Every **Authorized Worker** on location regardless of company affiliation must have his/her own personal lock(s) to isolate equipment if performing service and maintenance.

A documented equipment specific procedure must be used during energy isolation.

Contractors shall be trained by their employer and perform **Lockout/Tagout** in accordance with 1910.147 when performing service and maintenance and must participate in and notify Validus Energy of Group LOTO when necessary.

Responsibilities

Leadership	Commit to, follow, and reinforce the requirements set forth in this program. Provide sufficient resources for implementation.
Supervisors	Ensure Validus employees have the knowledge and skills to follow this program. Ensure no Validus Energy employee attempts to perform service and maintenance on a piece of equipment with stored energy.
EHS	Provide guidance on energy isolation procedures and coordinate annual training. Monitor compliance with this program through an audit process.
Validus Employees	Complete training and adhere to the requirements set forth in this program. Do not perform Service and Maintenance on a piece of equipment with stored energy.



Definitions

Affected Worker- A Worker whose job requires them to operate or use a machine or equipment on which Service and/or Maintenance is being performed under energy isolation or whose job requires the Worker to work in an area in which such Service or Maintenance is being performed.

Affected Employee – An Affected Worker that is an employee of Validus Energy.

Authorized Worker- A person that performs energy isolation procedures on machines or equipment to perform Service or Maintenance.

Authorized Employee – An Authorized Worker that is an employee of Validus Energy.

Energized- Connected to an energy source containing residual or stored energy.

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 line valve, a block and any similar device used to block or isolate energy.

Note: Push buttons, selector switches and other control circuit type devices are not isolating devices.

Lockout- The placement of a Lockout 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 Lockout device is removed.

Lockout Device- A device that utilizes a positive means, such as either a key or combination type lock, to hold an Energy Isolating Device in the safe position and prevent the energizing of a machine or equipment. Included are blank flanges and bolted slip blinds.

Potential Energy Sources- Any source of gas, electrical, mechanical, hydraulic, pneumatic, chemical, gravity, steam, thermal, tension or other energy sources.

Service and/or Maintenance- Workplace activities such as constructing, Setting Up, adjusting, inspecting, modifying, and maintaining and/or servicing machines and equipment, where the Worker may be exposed to an unexpected energization or startup of the equipment or release of a hazardous energy source.

Tagout- The placement of a Tagout 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 Tagout device is removed.



Tagout 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 Tagout device is removed.

Policies

General

Only an **authorized worker** performing service and maintenance activities shall be permitted to perform energy isolation or lockout/tagout activities.

Devices

If an energy source can be locked out, a device that utilizes a lock to hold an **Energy Isolating Device** in a safe position shall be used.

If the equipment cannot be locked, measure(s) required to provide the same level of effectiveness (**tagout**) must be documented.

Documented Isolation Procedure

The Authorized Employee must use a previously developed procedure, or develop one using Appendix 1 prior to conducting work.

The isolation procedure must identify:

- Equipment
- **Authorized Worker(s)**
- Lockout/tagout type: Group Lockout or Individual Lockout
- All types of **potential energy sources** (including, but not limited to: flammable gas/liquids, electric, hazardous chemical, hydraulic, steam, stored potential and pneumatic)
- Each individual isolation point required to render equipment/system safe.
 - List in order of isolation.
- Drains, blow downs, and vents required to depressurize a system and prevent the reaccumulation of pressure.
- Shutdown position (i.e., Open, Closed, Off, Blinded)
- Isolation method.
- Individual performing isolation.
- Method(s) to remove residual energy.
- Specific steps to verify zero energy state, absence of trapped pressure, and electrical systems have been disconnected.



Shutdown and Isolation

The following steps shall be taken to prepare a machine for service and maintenance.

- Conduct a pre-task safety meeting.
- Notify Affected Employees/workers.
- Follow the normal shut-down process.
- Isolate equipment and release stored energy following the sequence listed in the equipment-specific Energy Isolation Procedure. If a procedure does not currently exist, create one using the form in Appendix 1.
- Affix appropriate energy isolating device in accordance with the lockout/tagout procedure. Attach a tag to each lockout device used.
- Test equipment to verify that it has been isolated, will not start, and stored or trapped energy has been released.
- Keep sole possession of personal lockout key.

Note: When group lockout/tagout is used, place the group lock key(s) in the group lockbox for isolation by authorized employees working on the equipment.
(See Group LOTO Procedure)

Restoration and Release

The following steps shall be taken to restore the machine to operational status.

- Verify work is complete and that all personal locks have been removed from equipment or group lockbox.
- Remove nonessential items, reinstall guards and verify that the equipment is operational.
- Notify affected employees that the lockout/tagout devices have been removed and the equipment is ready for use.
- Re-**energize** the equipment following equipment start-up procedure if applicable.

Shift Change

When a lockout or group lockout will exceed a single shift, authorized employees may not remove locks until the replacement workers have attached personal locks to the isolation points or lockbox.

For single machine lockout/tagout, the oncoming authorized worker's personal lock (s) will be placed on the isolation points or lockbox prior to the off-going authorized employee removes his/her lock (s).

For group lockout/tagout, the oncoming group leader must place a lock on the box prior to the off-going group leader removing his/her lock from the main hasp. Once removed, the oncoming group leader can place his/her lock on the main hasp.



Group LOTO Procedure

Group lockout/tagout must be used in situations where there are multiple employees, contractors, or crews working on a piece of equipment. All group lockout/tagout situations will use a lockbox and a set, or multiple sets, of group locks. Each employee in the group must have a personal lock on the hasp or lockbox during their time working on the equipment.

- A Supervisor shall designate an Authorized Worker to act as the Group Leader for the group lockout.
- The group leader shall attach a group lock and tag to each energy isolating device in accordance with the Isolation Procedure and ensure that the group lock key(s) is placed inside the lockbox.
- The group leader places his/her personal lock on the main hasp of the lockbox.
- Each employee working on the equipment shall apply a personal lock and tag to the group lockbox.
- Note: Each Authorized Worker has the right to verify that energy isolation has taken place, and the equipment is adequately de-energized.
- As each Authorized Worker completes his/her work, they shall remove their personal lock from the lockbox.
- Upon completion, the group leader will verify that all personal locks and tags have been removed, all guards have been replaced and all tools have been removed before removing his/her personal lock from the main hasp.
- The group locks and tags shall be removed by the group leader and noted on the Isolation Procedure.
- The group leader shall notify all affected employees that the equipment is being restarted prior to energizing the equipment.

Non-Owner Lock removal

- Contact the lock owner's leader and the EHS department to receive written authorization to remove the lock.
- Make positive verbal contact with the lock/tag owner to verify that he/she is not on location or working in the area.
- Verify that removal of the lock and isolating device will not negatively affect any other authorized employees or operation.

Note: Forward e-mail authorization to EHS@validus-energy.com. Authorization must include requestor, location, reason for removal, positive communication method and EHS & Operations approver.



Training

Affected Employees

Provide awareness level training to employees that may be exposed to energy isolation, but do not perform service and maintenance. Training shall include:

- The purpose of lockout/tagout procedures,
- Recognition of when and why energy-isolation is used
- Importance of not tampering with lockout/tagout devices
- Importance of not starting or using equipment that has been locked or tagged out

Authorized Employees

Provide training to employees that perform service and maintenance on equipment. Training shall include:

- Skills necessary for the safe application, use, and removal of lockout/tagout devices
- Recognition of hazardous energy sources
- Types, magnitude and sources of the hazardous energy
- Lockout/tagout program, forms and procedures

Annual Inspection

Each Authorized Employee shall annually complete a documented hands-on energy isolation demonstration with a leader or designated Authorized Employee.

Refresher training shall be conducted for authorized employees when the annual inspection or other event reveals a deficiency in the skills necessary to perform energy isolation.

Review

This program will be reviewed at least annually by the EHS Department.



Appendix 1

Energy Isolation Procedure (Blank)



Energy Isolation Procedure

Lease or Location _____ Equipment being locked out _____
Job Date(s): _____ Job Scope _____
Job Complete (Date) _____

Authorized Employees	_____	_____
	_____	_____
	_____	_____
	_____	_____

Energy Types			
Flammable Gas	<input type="checkbox"/>	Electricity	<input type="checkbox"/>
Pneumatic (Air/Pressure)	<input type="checkbox"/>	Steam	<input type="checkbox"/>
Gravity	<input type="checkbox"/>	Chemical/Thermal	<input type="checkbox"/>
Other	<input type="checkbox"/>	Describe _____	

Group Lockout?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Lead	_____
Affected Employees notified?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	By	_____

Isolation Information					
Isolation Point	Normal Position	Isolation Method		Isolation Position	Responsible Person
	Open/Closed On/Off, Blinded	Lock	Tag	Open/Closed On/Off, Blinded	
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					

Tagout procedures to be used	_____
Methods to remove energy (blowdown...etc)	_____
Additional Safety Precautions (shift change...etc)	_____

Prepared By: _____ Date: _____

Return completed form to EHS - EHS@Validus-energy.com



Change Log

[illegible]

Version: 1
Uncontrolled copy if printed.

Date: 07/8/2024
Valid on day of printing only.