

Electrical Hazards – Lockout and Tagging

Lockout and tagging are critical safety procedures used to prevent the release of hazardous energy during maintenance or repair work. These procedures ensure that electrical systems and equipment are de-energized, deactivated, or otherwise made inoperable, protecting workers from electric shock, sudden movement of components, chemical combustion, and other dangers.

What is Lockout?

Lockout involves using a locking device to physically secure a switch in the “off” position or isolate energy sources. This prevents accidental re-energization and ensures the safety of workers performing tasks on or near electrical systems.

What is Tagging?

Tagging provides essential information about the locked-out equipment, including:

- The reason for the lockout.
- The name of the person who performed the lockout.
- The employer’s name.
- The date and time of the lockout.

Tagged devices and systems must not be re-energized without the authorization of the person named on the tag.

Regulatory and Safety Standards

In Saudi Arabia, electrical work on or near transmission and distribution systems must comply with HSE regulations and industry best practices. These regulations require:

- Written lockout/tagout (LOTO) procedures to protect workers from electrical shock and burns.
- Copies of these procedures to be available to all workers on the project.
- Workers to follow written procedures and verify that energy sources have been disconnected, discharged, or contained before beginning work.

Key Steps for Lockout and Tagging

1. Identify Energy Sources: Determine all sources of electrical energy and hazardous stored energy.
2. Isolate Energy Sources: Use lockout devices to physically isolate energy sources.
3. Apply Tags: Attach tags to provide clear information about the lockout.
4. Verify De-energization: Test equipment to ensure it is de-energized before starting work.
5. Communicate: Ensure all workers are aware of the lockout status and follow safe work procedures.

Requirements for Tags

Tags must:

- Be made of non-conducting material.
- Be installed in a way that prevents them from becoming energized.
- Be placed in a highly visible location.
- Be secured to prevent accidental removal.
- Not be removed until the equipment or system is unlocked.

Each tag must include:

- The reason for the lockout.
- The name of the person who performed the lockout.
- The employer’s name.
- The date and time of the lockout.

Handling Multiple Workers

- When multiple workers are involved, clear communication is essential to ensure everyone understands the status of the locked-out equipment. Workers must:
- Use a group lockout procedure to ensure all energy sources are controlled.
- Communicate effectively to prevent accidental re-energization.

Special Cases

In some situations, disconnecting equipment or conductors may not be practical or possible. In such cases, refer to the Electrical Hazards – Working on Energized Systems document for additional guidance.

Worker Responsibilities

- Follow all written lockout/tagout procedures.
- Verify that energy sources are de-energized before starting work.
- Use appropriate lockout devices and tags.
- Communicate effectively with other workers about the status of locked-out equipment.

NCC T&D Project Leaders' Responsibilities

NCC T&D Project Leaders are responsible for ensuring the safety of all workers under their supervision. This includes:

- Developing and implementing comprehensive lockout/tagout procedures.
- Providing training to workers on proper lockout/tagout practices.
- Ensuring all necessary lockout devices and tags are available and in good condition.
- Conducting regular audits to verify compliance with lockout/tagout procedures.
- Monitoring and enforcing adherence to Saudi Arabian labor laws and HSE regulations.

Additional Considerations for NCC T&D Projects

Given the high-risk nature of NCC T&D's operations, the following measures are recommended:

- Implement a robust lockout/tagout program tailored to the specific hazards of substations, transmission lines, and underground cables.
- Conduct regular training sessions to reinforce lockout/tagout practices.
- Ensure all lockout/tagout procedures align with Saudi Arabian labor laws and HSE regulations.

For more information, refer to NCC T&D's relevant IMS procedures or consult our HSE Department for expert guidance and training resources aligned with Saudi Arabian regulatory requirements.

