



Hazardous Energy

Intent: To eliminate or minimise the risks of fatalities, injuries and events arising from energised plant, equipment, and sources like underground and overhead services, at installation, testing, commissioning, and decommissioning phases of operation.

Engineered Safety in Practice (examples):

- Eliminate work on or around energised plant
- Select equipment with built-in safety controls such as auto-shutdown and fail-safe modes
- Consider isolations and lockout systems for any augmented live services
- Integrate interlock systems that prevent access until energy is safely isolated
- Sequence work to avoid interactions with live services
- Physically separate vehicles and people through design layout planning

FSR Controls

1. Apply hazardous energy isolation methods in line with the hierarchy of control.
2. *Authorised Isolator* and other relevant roles are appointed for each isolation.
3. Obtain an Isolation Permit for all *group* and *multi-point isolations*.
4. Isolation locks, tags, and equipment must be readily available before work commences.
5. Clearly identify, tag, lock, and verify all isolation points to prevent inadvertent energisation.
6. Identify, de-energise, and physically isolate all hazardous energy sources before starting work on plant, equipment, or installations.
7. Treat all equipment and wiring as live until a *competent person* has verified the system is in a zero-energy state (e.g. bled or test-for-dead).
8. Release all stored energy before opening any hoses or vessels under pressure.
9. Persons working under an isolation must be trained and competent for the role that they hold.
10. Never remove another person's danger tag or isolation lock without following the approved isolation lock removal process.
11. Communicate isolation permit and all isolation changes to potentially impacted personnel.
12. Develop a commissioning plan for Mechanical, Electrical, and Plumbing (MEP) systems and communicate it to relevant personnel.

DEFINITIONS

Authorised Isolator: A trained and authorised person responsible for safely locking out, tagging, and verifying the isolation of energy sources before work begins, ensuring no uncontrolled energy can be released.

Group isolation: Process to manage more than one trade or more than six people from a single trade working under an isolation.

Multi-point isolation: Isolation of hazardous energy that requires more than one isolation point to fully de-energise or secure a plant, system, or process. May include single or multiple energy sources.

Competent Person: Competent persons for verifying a system is in a zero-energy state are defined in the Primary Standard – Hazardous Energy, Utilities and Services.

