



Policy:	Safe Isolation of Electrical Equipment	Reference:	SIPSES0074
		Review Date:	01/2023

Purpose.

To ensure the safe use of electrical equipment, it is vital for all employees to have knowledge of the safe isolation of all electrical equipment.

Scope.

This procedure applies to all employees of SES Engineering (Newark) Ltd, and any subcontractors that are working and representing SES Engineering (Newark) Ltd.

Procedure.

Whilst applications may differ, the 7 steps for safe isolation are similar for both low and high voltage. The process is as follows:

1. Identify suitable points for isolation.
2. Carry out the safe isolation process.
3. Secure the point of isolation.
4. Prove dead.
5. Apply safety earths.
6. Place danger notices.
7. Issue electrical permit to work.

Identify Suitable Points for Isolation. All works must be planned. The level of planning will depend on the type of work to be carried out and the system that it is to be carried out on. There may be alternative sources of supply, such as interlinks or generator feeds, embedded generation will also need to be taken into account as will UPS supplies and impressed voltages. Neutral connections must be given special consideration – are they to remain connected, or disconnected as part of the isolation process? A permit to work is often required.

Carry out the Safe Isolation Process. Carrying out the safe isolation process includes cutting off the supply and isolation. In most cases for low voltage, both requirements are completed by the same action such as turning off an isolator or switching off an MCB. On occasion for high voltage applications, there is an off button but also a circuit breaker which is required to be racked in the isolate position.

Secure the Point of Isolation. All points of isolation must be secured against inadvertent reclosure. This is usually done using a safety lock with a single, unique key. For more complex isolations, other systems of work exist, but the principle of a safety lock for each person working on that system remains.

Prove dead. This should be completed by using a suitable Approved Voltage Indicator or Test Lamp. A test should be carried out at the point of work to confirm that all conductors are free of voltage or charge, and that conductors are dead in relation to earth.

Apply Safety Earths. This is normally not required for low voltage systems, but is normal practice at high voltage, with earthing normally being in the form of circuit main earth (CME) applied at the isolation device or protection equipment.

Place danger Notices. This falls under the requirement to take suitable precautions against adjacent live parts, where necessary. There may be no need to place notices, but these serve as a helpful reminder that equipment has been made safe.

Issue Electrical Permit to Work. For works on high voltage systems and primary low voltage systems the need for a permit to work is clearly understood, such documents should only be issued and cancelled by Authorised persons. A permit to work should only ever be issued to a competent person.