

Electricity

Electrical work risks include shock, arcing, explosions, toxic gas, and fire-related burns.



Cause #	Cause description	Preventive controls (reducing likelihood)	Critical/non critical	Cause #
1	Working on/with/near unfamiliar electrical equipment with an unknown status, resulting in misuse.	(CC01) Electrical Isolation: All electrical equipment must be de-energised by isolating and locking out electrical supply and equipment, and unauthorised access put in place.	Critical	1 – 10
2	Contact with an energised system during work, inspections or investigations.	(CC02) Inspection and testing of electrical equipment: Electrical equipment must be inspected and tested by a competent person to AS3760.	Critical	1 – 10
3	Equipment failure due to poor design, overload, incorrect grading, aging.	(CC03) PPE: Appropriately rated PPE must be supplied and used when working on or near energised equipment, or if risk of Arc Flash (face shield, glasses, mat, clothing).	Critical	1 – 10
4	Uncertified equipment.	Formal or on-the-job training training provided to relevant SCU employees including induction, manager and supervisor training, work specific training, refresher training, and emergency rescue training.	Non-Critical	1 – 10
5	Exposed to an alternate supply such as solar.	(CC04) Proximity testing: SCU employees shall ensure proximity testing of potential live energy sources.	Critical	1 – 10
6	Failure to lock out, tag out.	Visual confirmation and check of switching, earth (refer HVIA) for all external PCBU isolations.	Non-Critical	1 – 10
7	Arc Flash.	Obtain expert advice (Supply entity, ESO, Electrician, Before You Dig).	Non-Critical	10
8	Energised shock path.	(CC05) Exclusion zones: Maintain safe distance (exclusion area, isolate people, barricade).	Critical	1 – 10
9	Failure to test for dead.	(CC06) Residual Switch Device (RCD): Fixed or portable RCD’s shall be used with all circuits, socket outlets and electrical equipment.	Critical	3
10	Underground or overhead strike (cranes, excavations).	Provision at the worksite of ‘as installed’ underground cable records to anyone concerned with planning, organising and supervising excavation work to enable the use of records and other locating methods to positively identify the position of underground cables.	Non-Critical	10
11	Testing for polarity incorrectly.	Incorporate an earthing and protection system to a recognised electricity supply industry standard.	Non-Critical	1 – 10
Potential to interact with other fatal risks		Appropriate storage of electric batteries.	Non-Critical	3
Critical risk	Potential interaction	Review of data base to ascertain the potential presence of electrical and other service hazards prior to entering a premises.	Non-Critical	4
Remote and isolated work	Delay in emergency response.	Correct labelling of switchboards.	Non-Critical	1
Falls	Contact with electrical energy whilst working at height.	Work on switchboards can only be conducted by licensed electricians.	Non-Critical	1
Person-vehicle machinery interaction	Electrical energy sources contained within fixed/mobile plant.	A minimum of two persons for live testing (electrically qualified observer).	Non-Critical	11
Emergency events	Contact with electrical energy or downed powerlines.	Mitigating controls (reducing consequence)	Critical/non critical	Cause #
		(CC07) Low Voltage Rescue and CPR: Applied as per national competency framework.	Critical	1 – 10