



SAFETY FACT SHEETS

Working with Live Electricity Safety Non Negotiable

G-HS-ST-00745 Working with Live Electricity



Safety Non-Negotiables (SNN)

Zinfra Group is committed to providing a safe workplace in line with our number one company value – Health, Safety and the Environment. To bring this value to life, our strategy is to directly manage critical hazards through Safety Non-Negotiables (SNN's) and systematically manage other safety risks.

All employees and vendors (whether suppliers, subcontractors or consultants) need to consistently apply the relevant controls stipulated on these SNN's across all Zinfra Group controlled sites. Any deviation from these SNN's will require a documented risk assessment with approval of the direct manager and HSEQ manager.



Definition – Working with Live Electricity

Carrying out electrical work on a live electrical installation





Working with live electricity - examples

Work that may involve work on live electricity includes:

- Commissioning.
- High Voltage and Low Voltage Distribution work.
- Transmission work.





SNN Requirements

Item 1: Must have and follow the Safe Work Method Statement

Do you understand the hazards and risks with the work?

The most significant risk of working with live electricity is a Fatality.

This may occur by:

- Electrocution;
- Burns.

Over the 10 year period from 2003 to 2012, 121 fatalities were a result of a person making contact with electricity.

(Source: Safe Work Australia, Work-related traumatic injury fatalities, Australia 2012.)

What Safe Work Method Statements (SWMS) are relevant?

Are all the controls in the SWMS in place?

Is there anything unsafe that should be raised with your supervisor?



SNN Requirements

Item 2: Only work live if trained and authorised

All personnel working on the live electricity must be suitably trained, competent, licensed and authorised to do so.

The training and licencing requirements will vary depending on the state legislative requirements and must be identified and adhered to by the business unit.



SNN Requirements

Item 3: Only work live with a trained safety observer

A competent safety observer must be present when work is carried out on energised electrical equipment, unless the work consists only of testing and a risk assessment shows that there is no serious risk associated with the proposed work.

The risk assessment must document where a safety observer is required.

The safety observer must be competent in electrical rescue and hold a current cardiopulmonary resuscitation certification.



SNN Requirements

Item 4: Wear insulated gloves and outers appropriate to the voltage and inspect before use

Both hands must be dressed in insulated gloves and outers appropriate to the voltage;

All selected PPE must be designed to be worn for protection against the live electricity and meet network operators/client requirements.

All PPE must be inspected for any damage prior to use.



SNN Requirements

Item 5: Set up emergency rescue equipment and maintain agreed communication

A communication system must be established between people working on the electrical system and the safety observer to summon help in an emergency.

All rescue equipment must be set-up and ready for deployment in the immediate vicinity of the works.





SNN Requirements

Item 6: Use tested and certified plant and equipment and inspect before use

All plant and equipment, tools and covers used must:

- Be designed, tested and approved specifically for work on live electricity in accordance with relevant Standards.
- Be rated (electrically and mechanically) and certified for use by the manufacturer where appropriate.
- Meet testing requirements of network operator/client.

All insulated plant and equipment, tools and covers must be within the required test date and inspected for any damage by a competent person prior to use.



SNN Requirements

Item 7: Use insulated Elevated Work Platforms to the appropriate voltage

All Elevated Work Platforms used in an electrical environment must be insulated and rated according to the voltage to be worked on and within current test date.





SNN Requirements

Item 8: Earth all mobile plant used in a live HV environment

All mobile plant used in a live High Voltage (HV) environment must be earthed and set up as per network operators/clients requirements.





SNN Requirements

Item 9: Set up non-conductive barriers to prevent accidental contact

Safety measures to guard against contact with electrical energies must be identified and implemented.

Non-conductive barriers must be of suitable material to effectively separate electrical workers from adjacent energised equipment.



SNN Requirements

Item 10: Install insulated mats and covers to stop secondary contact

Insulating covers and mats used for electrical safety purposes must comply with AS/NZS 2978:1995 Insulating mats for electrical purposes.

Insulated covers and mats should be visually inspected for possible defects before and after each use.



SNN Requirements

Item 11: Use insulated tools when working on live switchboards or underground system

Insulated tools must be used when working on live switchboards or underground system. Separation barriers outlined in “*4.4.2.1 Install Separation Barrier*” should also be considered in conjunction with the insulated tool.