

# FACT SHEET

## Planned Inspection Program – Electrical Energy Surface and underground coal mines

**JULY 2021**

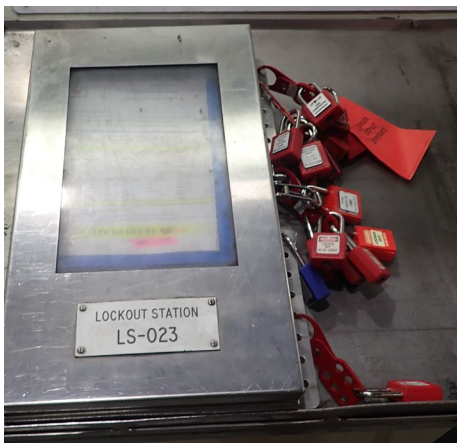
Electrical energy is a hazard which is present within various mining environments and can potentially cause serious and/or fatal injuries to workers if not controlled effectively. This fact sheet is focused on the critical controls for electrical energy risks within the coal mining sector and should be considered by mine operators when assessing the risk at their operation.

The NSW Resources Regulator is commencing a program of planned inspections and targeted assessments which will be focussing on the below criteria and ensuring compliance across the coal mining industry in NSW.



### Identify electrical services

The locations of electrical services are labelled, and concealed services have their location positively identified before penetrating ground or structures in the vicinity of the cable.



### Energy isolation

Energised electrical conductors are securely de-energised prior to accessing them.

### Basic Electrical Protection

Unintentional contact is prevented with energised electrical parts above extra low voltage.



## Reduced voltage

The consequence of contact with electricity is minimised by reducing the supply voltage to a level that does not cause harm.

## Switchgear design

Switchgear is adequately rated to prevent personnel being exposed to an uncontrolled release of electrical energy.

## Fault protection

Fault protection is achieved by detection and disconnection of faulty electrical equipment.



## Shelter from lightning

People are protected from being struck by lightning.

## Earthing

Provide a sufficiently secure low impedance path to clear faults (i.e. an insulation failure to earth) and to limit touch, step and transfer voltages to a level that is not dangerous.

## Considerations

Mine operators should consider the above criteria as a minimum and ensure that such information is included within their respective principal hazard management plans and associated documentation. Following investigations into electrical energy related incidents, it is evident that non-compliance with these key control measures have contributed to incident outcomes, causing both severe and fatal injuries to workers. When identifying and implementing control measures, mine operators are also reminded to follow the hierarchy of controls to ensure health and safety risks are minimised, so far as is reasonably practicable.

**Other relevant safety alerts and bulletins published by the Regulator:**

DATE PUBLISHED	REFERENCE	TITLE
09 Oct 2020	SA20-10	<a href="#">Anti-static materials in underground coal mines</a>
25 May 2020	SB20-03	<a href="#">Electric shocks in the mining industry</a>
21 Dec 2018	SB18-19	<a href="#">Isolation issues identified at coal mines</a>
15 Aug 2018	SB18-13	<a href="#">Alternators and IS equipment</a>
11 May 2017	SB17-04	<a href="#">Uninterruptible power supply installations at mines</a>
20 Apr 2015	SA15-03	<a href="#">Electrician injured after making contact with live high voltage conductor</a>

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