

ANPR 714

## Removing 1500v Supply in Unplanned Situations

### Applicability

NSW

SMS

### Publication Requirement

External Only

### Document Status

Issue/Revision #	Effective from
2.0	11 October 2015

## Introduction

Removing 1500V supply requires coordination between *Network Control* and *Electrical System Operators*.

## Life-threatening and emergency circumstances

In life-threatening circumstances, the Electrical System Operator may remove the 1500V supply before telling the *Train Controller*.

In *emergency* circumstances, the Electrical System Operator and affected Train Controllers coordinate removal of 1500V supply. The Train Controllers coordinate the 1500V supply removal with affected *Signallers*.

## Electrical System Operator and Train Controllers

1. If practicable:
  - arrange a teleconference between the person making the call, yourself and the Train Controllers or the Electrical System Operator, and
  - get as much information about the life-threatening or emergency situation from the caller as possible.

## Electrical System Operator

2. Remove the 1500V supply from the affected overhead wiring sections.
3. As soon as possible, tell Train Controllers about the removal of the 1500V supply.
4. If the 1500V supply has been removed to allow a rescue operation, give the Train Controller a Rescue Power Outage number.
5. As soon as practicable, use the colour 1500V Sectioning Diagram to tell the Train Controller about the overhead wiring sections from which the 1500V supply has been removed.
6. Record, in *permanent form*, details about the removal of the 1500V supply and, if issued, the Rescue Power Outage number.



**In life threatening situations or for rescue operations, the 1500V supply must also be removed from adjacent sections that could allow the affected section to be electrified by the passage of a train.**

### Train Controllers

7. Tell affected Signallers about the *Condition Affecting the Network (CAN)* and the *isolated 1500V overhead wiring sections*.
8. Get assurance from the Signallers that:
  - signals controlling entry to the isolated 1500V overhead wiring sections have been set at STOP, with *blocking facilities* applied, and
  - *protection* has been applied to prevent entry by way of unsignalled routes.
9. Once the Rescue Power Outage has been obtained, tell the emergency services control centre that:
  - the 1500V supply has been removed for rescue purposes only, and
  - a Rescue Power Outage number is authorised for rescue operations at that location, and
  - as far as possible, rescue personnel should avoid going near overhead wiring.

### Signallers

10. Tell Drivers in affected areas:
  - about the CAN, and
  - that the 1500V supply has been removed for rescue purposes only
  - that people not directly involved in rescue operations must be kept away from overhead wiring.

### Network Control Officers

11. Record, in permanent form, details about the CAN and the removal of the 1500V supply.

### Removing 1500V supply for urgent engineering work

If urgent work on *infrastructure* is needed to prevent a Network failure, the 1500V supply *may* be removed without being *advertised*.

### Maintenance Representative

1. Ask the Electrical System Operator to remove 1500V supply for urgent engineering work.

### Electrical System Operator and Train Controllers

2. Confer and agree about:
  - the overhead wiring sections to be isolated, and
  - when the 1500V supply can be removed.

### Electrical System Operator

3. Prepare an *Authority for Removal of Supply from 1500 Volt Sections* form with the agreed details.
4. Issue the *Authority for Removal of Supply from 1500 Volt Sections* form to the *Maintenance Representative* and affected Train Controllers.
5. When 1500V supply removal is due, ask the Train Controller to give the clearance to remove the 1500V supply.

### Train Controllers

6. Get assurance from the *Electrical System Operator* and Signallers that:
  - parties are using the current colour version of the 1500V Sectioning Diagram, and
  - the details of the *Authority for Removal of Supply from 1500 Volt Sections* form correspond with the 1500V Sectioning Diagram.
7. Make sure or get assurance that the sections to be isolated are clear of vehicles requiring electric traction that may need to be moved during the period of isolation from the 1500V supply.
8. Get assurance from *Signallers* that protection has been applied to:
  - *controlled signals*, and
  - unsignalled routes allowing entry to the sections to be isolated.
9. Give the Electrical System Operator clearance to remove the 1500V supply.
10. Tell Signallers that you have given clearance to the Electrical System Operator to remove the 1500V supply.
11. Record, in permanent form, details about the clearance and the removal of the 1500V supply.

### Signallers

12. Compile an SMS-06-FM-0606 Advice 1500 Volt supply removed form to record removal of the 1500V supply.

## Restoring 1500V supply

### After issue of an Authority for Removal of Supply form

If an *Authority* for Removal of Supply from 1500 Volt Sections form was issued:

#### Electrical System Operator

1. Tell the coordinating Train Controller when you restore the 1500V supply.

#### Coordinating Train Controller

2. Tell affected Network Control Officers that the 1500V supply has been restored.

#### Affected Train Controllers and Signallers

3. Record, in permanent form, the time when the 1500V supply was restored.

### After emergency removal of 1500V supply

The Train Controller may authorise the 1500V supply to be restored only after receiving assurance that rescue personnel and their equipment are clear.

This assurance can only be given by:

- the *Qualified Worker* managing the rail response to the incident, or
- the emergency services control centre.

#### Electrical Systems Operator

1. Tell the Train Controller when the 1500V supply is restored.

#### Train Controllers

2. Tell affected Signallers that the 1500V supply has been restored.
3. If blocking facilities are not needed for *work on track*, arrange for Signallers to remove:
  - signal protection from isolated overhead wiring sections, and
  - protection applied to unsignalled routes.

#### Train Controllers and Signaller

4. Record, in permanent form, the time when the 1500V supply was restored.

## Related ARTC Network Procedures

<b>ANPR 705</b>	Removing 1500V supply
<b>ANPR 706</b>	Removing 1500V supply in Electric Vehicle Maintenance Centres

## Effective Date

11 October 2015