



# Electrical Certifications





## Electrical Certifications for Instructed and Authorised Persons

### Document Information

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|------------------|-------------------------------|------------------|
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# 1 Introduction

## 1.1 Purpose

This document defines the electrical safety competencies of workers who undertake work on the MTS Electrical Network; it documents how worker competencies are developed, certified, and maintained.

## 1.2 Scope

This document applies to all workers (including contractors) engaged to perform or who are supervising work on the MTS Electrical Network.

**NOTE:** The MTS Electrical Network includes the low voltage distribution network, high voltage distribution network, and the traction power systems including equipment being installed as part of the City & South West expansion project.

**NOTE:** Work on Low Voltage Installations shall be in accordance with the requirements set by the Department of Fair-Trading NSW.

Persons who hold either a Qualified Supervisors License or Qualified Electrical Contractors Licence may work to the AC Low voltage Safe Approach Distances as specified in the Electrical Safety Rules (ESR's).

**NOTE:** In accordance with Rail Safety National Law (NSW) (sections 4, 8 and 52) workers performing the work functions associated with the certifications in this document are performing 'rail safety work' and as such are regarded as a 'rail safety worker' and shall be competent to perform such work.

**NOTE:** In accordance with AS5577-2013, section 4.4.5: *The Network Operator shall ensure that all persons involved with the design, construction, commissioning, operation, maintenance, and decommissioning of the network are suitably competent and adequately trained to carry out their duties.*

Application of AS5577 is mandated under Electricity Supply (Safety and Network Management) Regulation 2014, section 7: *A network operator must have a safety management system in place that: is in accordance with AS 5577.*



## 1.3 Background

Electrical Certifications are a subset of the total set of personnel Certifications. MTS identifies two groups within Electrical Certifications, being Instructed Persons and Authorised Persons.

Therefore, a reference to being Instructed or Authorised for an electrical function is a reference to being certified for that function as stipulated under the respective parts of Electrical Certifications of this Procedure.

This Procedure sets out the Electrical Certifications that persons shall hold to carry out a function, and identifies the requirements for initial certification, the requirements for recertification and, where applicable, the maximum allowable intervals for recertification.

Where a specific function is listed under a certification in this Procedure, that function shall only be carried out by an appropriately Instructed or Authorised Person.

Electrical Authorisations are independent of a person's employment. A person may hold several Authorisations at the same time provided the person continues to be re-certified in each. Where a person transfers employment they should ensure that each certification required for their authorisation is maintained as a record on their RIW card under the new employer. If a person identifies that a certification is not recorded on their RIW card they should re-submit their completion certificates to their employers RIW administrator.

**Note:** Not addressed in this Procedure are other competencies, qualifications, or safe working requirements, including but not limited to the:

- High-Risk Work Licences requirements
- Requisite requirements for trade, para-professional and professional qualifications

## 1.4 Electrical Certifications Model

MTS applies the following model to electrical certifications. Workers are recognised as instructed or authorised persons as defined by their 'job role' and training.

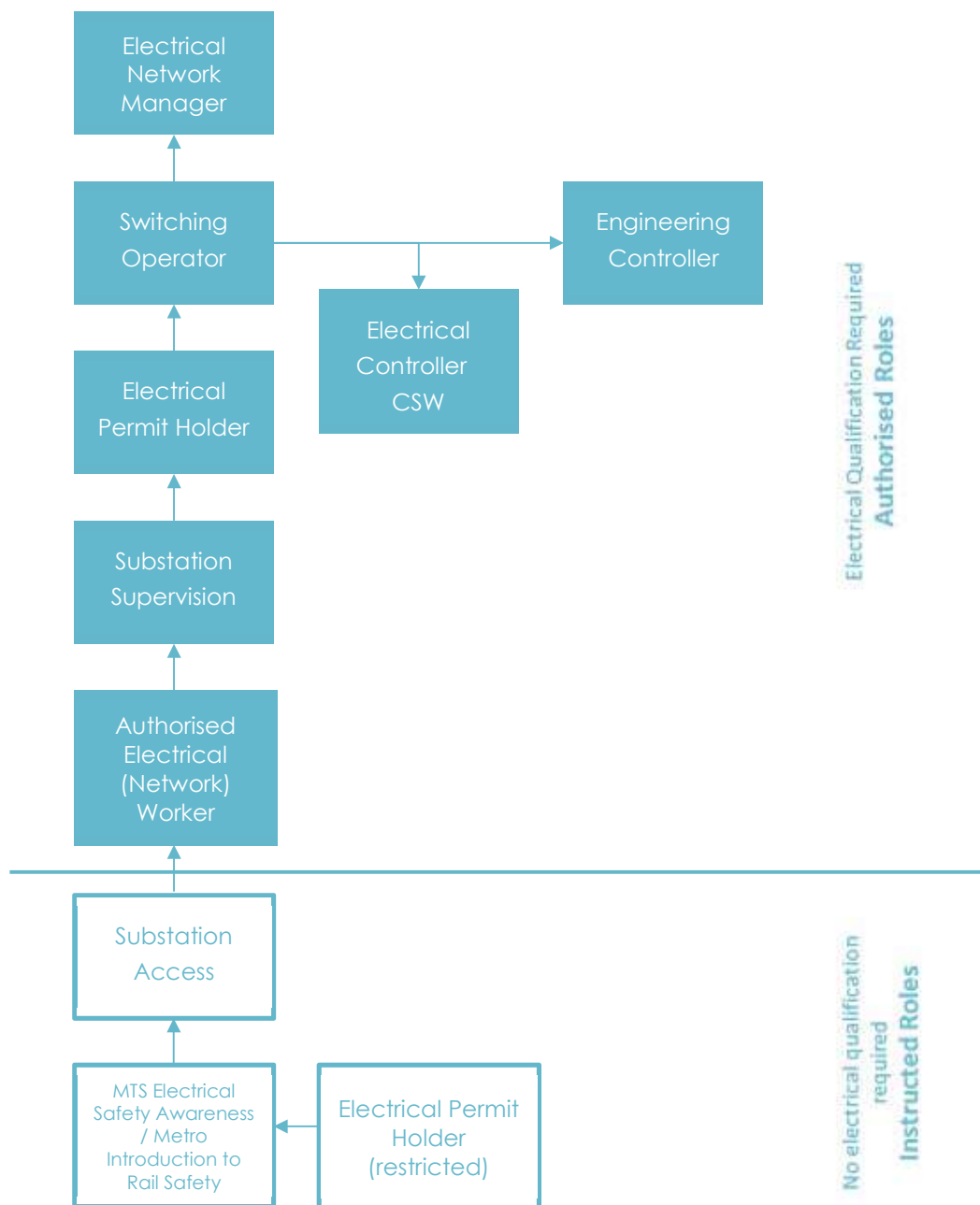


Figure 1 Electrical Certifications model

## 2 Terms and Acronyms

| Term/Acronym                   | Technical Term   |
|--------------------------------|--|
| Authorised/ Authorisation      | Has the permission of the appropriate certifying or recertification authority in writing for the duty concerned as detailed in this Procedure.   |
| Authorised Person              | A person who is specifically authorised to perform electrical work on, near and in the vicinity of electrical equipment. For the MTS Electrical Network, an Authorised Person must hold an MTS approved electrical qualification.  |
| Competency                     | The assessment of knowledge and skills to the standard of performance required in the workplace.   |
| Electrical Equipment           | Electrical equipment which includes any generator, transformer, switchgear, reactor, capacitor, control gear, conductor, cable, rectifier or other electrical equipment, parts of which may normally be energised at a high voltage, low voltage or 1500 volts dc. NOTE Electric rolling stock and electrical equipment within rolling stock are not regarded as part of the electrical network. |
| Electrical Network             | The: <ul style="list-style-type: none"> <li>• Electricity Network (high voltage and low voltage distribution system), and</li> <li>• 1500v Traction Power system, and</li> <li>• The associated protection and monitoring systems.</li> </ul>  |
| Electrical Permit              | An Electrical Permit to Work, a Substation Access Permit, or a Low Voltage Access Permit or variant as appropriate. NOTE: In some cases, this is abbreviated to Permit where it is clear from the context that it is referring to an Electrical Permit.  |
| Electrical Safety Rules or ESR | Means the document NWRLOTS-NRT-SWD-FRW-726001 Electrical Safety Rules and supporting documents as referenced in that document.   |
| Electrical System              | See Electrical Network   |

| Term/Acronym   | Technical Term   |
|--|--|
| Electrical Work  | <p>The actual physical work of:</p> <ul style="list-style-type: none"> <li>constructing, installing, maintaining, repairing, altering, removing, inspecting, testing, replacing or adding to, or</li> <li>removing or restoring supply to, electrical equipment of the electrical system or the supervising of that work.</li> </ul> <p>NOTE The erection, modification and dismantling of 1500 V OHW support structures is not considered to be electrical work. Exemptions to "electrical work" are listed in the Work Health and Safety Regulation section 146.).</p> |
| Electrical Controller – CSW  | The Systems Connect Line Wide Works employee or delegate competently trained and assessed in the operation of the MTS Electrical Network utilising the Integra Power Control System.   |
| Engineering Controller   | The MTS employee or delegate that is competently trained in controlling the MTS Electrical Network and MTS Control Systems (ie. CCS, PCS, TVCS, BMCS, ATS)   |
| High Voltage   | <p>A nominal voltage exceeding low voltage.</p> <p><b>Note:</b> 1500-volt DC is generally treated as High Voltage in the MTS Electrical Safety Rules.</p>  |
| Instructed Person  | A person who has received training approved by MTS on the safe systems of work around the MTS Electrical Network.  |
| Job Role   | The role applied to a person's RIW card to define the work activities the person is permitted to undertake on the MTS network. Job roles are used to determine a worker's currency for activities including instructed and authorised roles as set out in this document.   |
| Low Voltage  | <p>A nominal voltage exceeding extra low voltage but not normally exceeding 1000 volts alternating or 1500 volts direct current.</p> <p><b>Note:</b> 1500-volt DC is generally treated as High Voltage in the MTS Electrical Safety Rules.</p>   |
| Overhead Wiring or 1500 Volt Equipment or 1500 Volt Overhead Wiring or OHW | <p>All 1500-volt direct current (DC) overhead wires and associated equipment that normally conducts, isolates, or may be energised with a voltage of 1500 volts dc including the secondary circuit of rectifier transformers.</p> <p><b>Note:</b> Under Safe Approach Distances, negative equipment which is normally at rail potential (connected to rail) is not considered to be 1500-volt equipment.</p>   |

| Term/Acronym  | Technical Term   |
|---|--|
| Primary Equipment<br>(Primary electrical network equipment) | Electrical network equipment that is intended to carry electrical energy, including earthing and bonding equipment.  |
| Recertification   | The process of re-assessing competence. Recertification may occur at specified intervals, or as deemed necessary, for example, following an incident.                              |
| Supporting Infrastructure                                   | Infrastructure that is intended to support the operation of electrical network equipment.  |
| Worker / person   | Has the same meaning as defined in the Work Health and Safety Act and as such includes all employees, contractors, subcontractors or an employee of a contractor or subcontractor. |

*Table 1 Terms and Acronyms*

## 3 Electrical Certifications (general)

### 3.1 Responsibilities

Persons whose functions include electrical work requiring certification are responsible for:

- Undertaking only those tasks for which they have been trained and hold a current valid certification.
- Informing their immediate Supervisor, two months prior to a certification lapsing, if they have not been notified of any recertification planned for them in that competency.

### 3.2 Certificates of Competency

Workers must present a suitable certificate of competency to the satisfaction of the Electrical Network Manager prior to undertaking work on the MTS Electrical Network. Where required, the Electrical Network Manager will assess the submitted certificates before determining if the person is qualified to undertake work on the MTS Electrical Network and for authorised roles, will provide a supporting letter to the worker.

Approved Electrical Qualifications are listed in Appendix A of this document.

Once certified, workers are to ensure that their certification is recorded on their Rail Industry Worker Card.

All Instructed and Authorised Persons are to maintain a current Rail Industry Worker Card showing the specific certifications and authorisations that they hold for the MTS electrical network.

When carrying out functions for which certification is required, persons must be able to produce their valid Rail Industry Worker Card.

## 3.3 Record Keeping

### 3.3.1 MTS Internal Staff

On completion of the training and authorisation process MTS staff are to forward completion certificates to the MTS Learning and Development team.

The MTS Learning and Development team will then update the relevant documents to RIW and ensure the required Job Roles are indicating 'Valid'.

Upon confirmation of the documents being uploaded, the MTS staff member must log into their RIW account to ensure they hold the required 'Job Roles' and all are showing as 'Valid'.

### 3.3.2 External Staff

On completion of the training and authorisation process External Staff are to forward completion certificates to their respective RIW Coordinator for upload to the RIW Platform.

Upon confirmation of the documents being uploaded, the external staff member must log into their RIW account to ensure they hold the required 'Job Roles' and all are showing as 'Valid'.

### 3.3.3 Auditing

Electrical Network Manager will regularly audit the RIW platform to ensure all Electrical Certifications are 'Valid' for internal and external staff working on the Electrical Network.

Audits will be captured using a suitable method to allow for storage and review as required, MTS will be utilising Intalex for this purpose.

Any Switching Operator and MTS Staff Member providing access, supervising works or issues permits, shall confirm the recipient holds the required RIW Job Roles for the work being performed via the RIW Spot Check App.

## 3.4 Persons Undergoing Training

### 3.4.1 General

Unless otherwise stipulated for a specific certification, a person undergoing training to become an Authorised Person may perform work otherwise restricted to an Authorised Person, subject to the following conditions:

- The work is carried out under the direct/constant supervision of another person who is certified to carry out the function concerned.
- The Authorised Person supervising the work is responsible for the safety of the person undergoing training and shall implement appropriate controls.
- The supervising Authorised Person, when deciding on appropriate controls to be implemented, shall consider the level of competence and experience of the person undergoing training, the nature and complexity of the work to be carried out, and the risks pertaining to the work to be

undertaken. Such controls may include, for example, increasing the minimum electrical Safe Approach Distances that will be applicable for the person undergoing training.

The person undergoing training may fill out but shall not approve, check, issue, or be in charge of any ESR documents unless currently certified to do so.

The person undergoing training shall be identified by their Supervisor as undergoing training to become Authorised. The person shall be undertaking the work to achieve the competence required to become an Authorised Person.

### 3.4.2 Restricted authorisation

Where a demonstrated business requirement exists, a person undergoing Switching Operator or Engineering Controller training may be provided a restricted authorisation allowing them to undertake a discrete component of the tasks assigned to the role. Where a restricted authorisation is to be granted, the person receiving the restricted authorisation must have fully completed the training requirements from the relevant training program that would normally apply to the component of the role for which the restricted authorisation is being granted.

## 3.5 Delegation of Authority to Certify

The MTS General Manager Engineering and Maintenance Delivery may delegate a person to the role of Electrical Network Manager to certify persons as defined in this document. This delegation is to be reviewed at 2-year intervals.

To achieve the duties of the role, the Electrical Network Manager (ENM) may delegate certification tasks to individuals or organisations which hold appropriate competence and skills. Examples of appropriate delegation includes:

- Metro Trains Australia as the administrator of the Rail Industry Worker platform for management of worker certification records,
- The Learning and Development Manager or Learning and Development Administrator management and administration of training programs and records,
- A subject matter expert in electrical operations or safety for investigation of electrical incidents,
- An appropriately experienced engineering controller or switching operator for candidate assessment.

## 3.6 Restriction, Suspension and Cancellation of Certification

This section provides information on the application of Suspension as identified in section 4.1 of the MTS Electrical Safety Rules (ESR's). For clarity this section (3.5) uses the term Certification (or Certifications) to identify both Instructed and Authorised roles.

Restriction is used in this section as a term to identify that a worker is "restricted (stopped) from performing the normal duties of their certification".

### 3.6.1 Restriction

Following an electrical safety incident, and where indicated, a worker's Certification shall be restricted whilst an initial incident investigation is undertaken. The following roles may restrict a worker's Certification:

- The Worker's Line Manager
- Engineering Controller
- Electrical Network Manager

A person restricting the Certification of a worker shall notify:

- the Worker,
- duty Engineering Controller (who is to notify the Electrical Network Manager), and
- the restricted worker's line manager.

This notification shall include the 'initial' details of the restriction.

While under restriction, a worker is prohibited from performing the activities of the role associated with the incident and all other roles which are dependent on that Certification.

#### Examples:

A worker who is Authorised as a Permit Holder has their Certification restricted for an incident associated with a Substation Access role. Following notification of Restriction, that worker is prohibited from undertaking any duties associated with, Substation Access, Authorised Electrical Worker or Permit Holder roles.

A worker who is Authorised as a Switching Operator has their Certification restricted for an incident associated with a Permit Holder role. Following notification of Restriction, that worker is prohibited from undertaking any duties associated with Permit Holder and Switching Operator roles.

If the initial investigation reveals no (or a minor procedural) breach of ESR documents, the person's Certification may be restored by the officer who restricted it or by the Electrical Network Manager. All minor breaches must be recorded in the MTS Incident Reporting System and the incident investigated. Where appropriate the MTS Learning & Development Team will be advised of imposed restrictions.

All breaches not classed as procedural/other must be assessed by the Electrical Network Manager (or their nominated delegate) prior to lifting of Restriction.



### 3.6.2 Suspension

If an initial incident investigation identifies a breach of ESR documents (not classed as minor procedural), dangerous incident, or serious electrical works accident, the worker's Line Manager or the Electrical Network Manager shall suspend the worker until remedial actions are completed.

Remedial actions may include, briefing, training, assessment or other activity as required to demonstrate that the worker is able to safely undertake the Certified role. Note: the MTS Learning & Development Team will be advised regarding remedial actions required.

The Electrical Network Manager will suspend the workers affected 'Job Role' on the RIW platform following the initial investigation.

Once suspended, a worker's Certification may only be reinstated with the approval of the Electrical Network Manager.

### 3.6.3 Cancellation

If, following Suspension, a worker is unwilling or unable to demonstrate that they can safely undertake the Certified role, that worker's Certification shall be cancelled by the Electrical Network Manager.

Where a worker's Certification is to be cancelled, notification is to be provided to:

- the worker
- the worker's Line Manager or Employer, and
- MTS Learning & Development Team (who will apply a block to the persons RIW card – if applicable),

Following the cancellation of a Certification of a worker, that worker must fully re-complete all requisite training to achieve Certification including all training on which the Certified role is dependent.

If a worker's Certification is cancelled twice within a 24-month period, that person is prohibited from seeking Certification for a period of 12 months from the most recent cancellation.

### 3.6.4 Suspension and Restriction Decision Tree

This subsection provides guidance on the application of suspension and restriction of certifications.

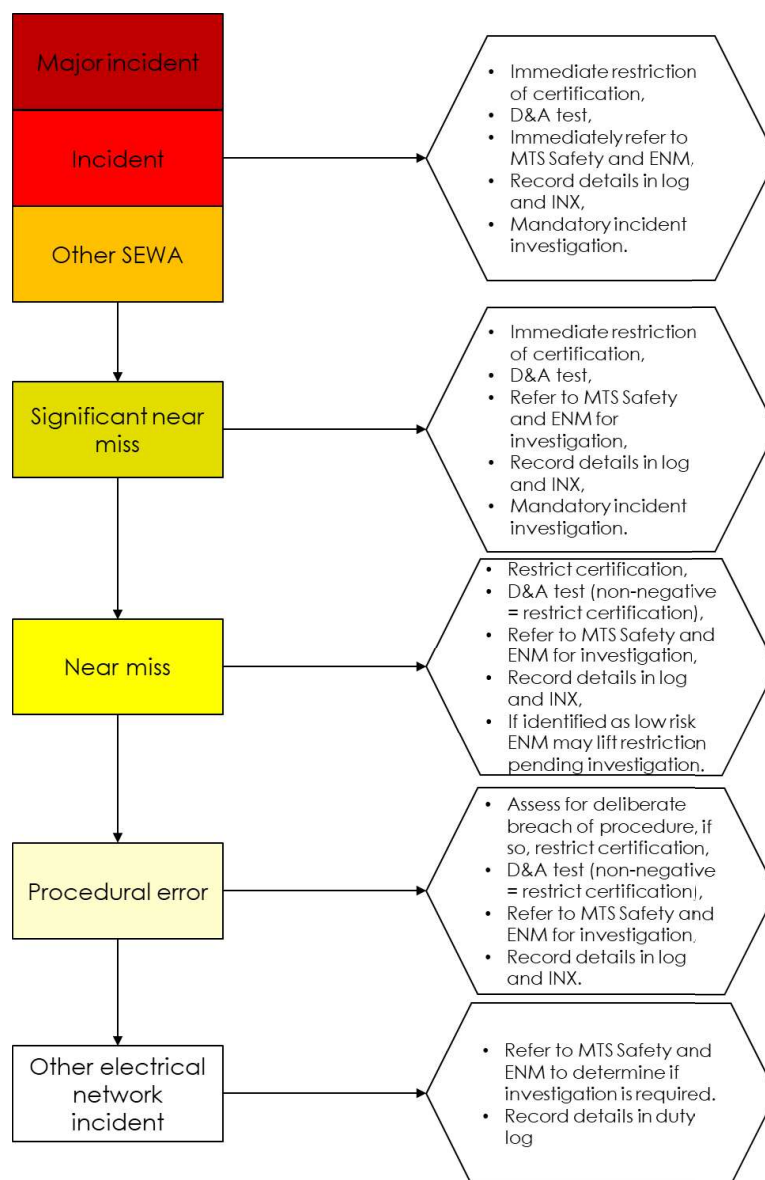


Figure 2 Restriction and suspension decision tree

### 3.6.5 Guidance on Applying Restriction or Suspension

This subsection provides guidance on the application of restriction and suspension for electrical certifications. Those applying a restriction or suspension should apply the most relevant scenario to ensure the safety of workers and the electrical network.

| Sample incident   | Initial incident investigation outcome | Category       | Assessment and remedial notes   |
|---|--|----------------|---|
| A worker is involved in an incident that results in, a fatality, permanent disability, permanent life changing injuries, or life-threatening injuries.  | IPART Category 1 - Major incident      | Major Incident | Workers involved in a major incident shall have their electrical certification restricted. Incident must be immediately notified to MTS Safety and the ENM.<br><br>Events of this type shall be referred to the ENM for further investigation. Restriction shall be maintained until advice is provided by the ENM. |
| A worker is involved in an incident that results in significant property damage (>\$500,000 estimated)  | IPART Category 1 - Major incident      | Major Incident | Workers involved in a major incident shall have their electrical certification restricted. Incident must be immediately notified to MTS Safety and the ENM.<br><br>Events of this type shall be referred to the ENM for further investigation. Restriction shall be maintained until advice is provided by the ENM. |
| A worker is involved in a Serious Electricity Works Accident – injury that does not meet the criteria for a Category 1 – major incident, but leads to a person/s:<br>- being hospitalised (where hospitalised means 'is admitted as an in-patient'), or receiving treatment from a health care professional and is unable to attend work for a full shift or more (this does not include the shift during which the incident occurred). | IPART Category 2 - incident            | Incident       | Workers involved in an incident shall have their electrical certification restricted. Incident must be immediately notified to MTS Safety and the ENM.<br><br>Events of this type shall be referred to the ENM for further investigation. Restriction shall be maintained until advice is provided by the ENM.      |
| A worker is involved in an incident that results in property damage (>\$100,000 estimated)  | IPART Category 2 - incident            | Incident       | Workers involved in an incident shall have their electrical certification restricted. Incident must be immediately notified to MTS Safety and the ENM.<br><br>Events of this type shall be referred to the ENM for further investigation. Restriction shall be maintained until advice is provided by the ENM.      |

| Sample Incident  | Initial Incident Investigation outcome | Category              | Assessment and remedial notes   |
|--|--|-----------------------|---|
| Switching operator undertakes switching operations out of sequence without the approval of the duty Engineering Controller ( <b>not self-reported and/or results in incident</b> )                 | ESR breach                             | Incident              | <p>Failure to self-report indicates that the switching operator is:</p> <ul style="list-style-type: none"> <li>- unaware of procedural requirements, or</li> <li>- is unwilling to comply with procedural requirements, or</li> <li>- is lacking sufficient awareness of their actions.</li> </ul> <p>Events of this type shall be referred to the ENM for further investigation. Restriction shall be maintained until advice is provided by the ENM.</p>  |
| Worker holding an electrical certification continues to undertake activities subject to a restriction.   | ESR breach                             | Incident              | <p>A worker who continues to undertake activities subject to a restriction shall have their electrical certification suspended. The worker must demonstrate to the ENM within 14 days of the event why their electrical certification should not be cancelled.</p>  |
| A worker is involved in an SEWA (Serious Electrical Works Accident) incident that does not meet the criteria for IPART Category 1 or 2 incident.   | Other SEWA                             | Other SEWA            | <p>Workers involved in a SEWA incident shall have their electrical certification restricted. Incident must be immediately notified to MTS Safety and the ENM.</p> <p>Events of this type shall be referred to the ENM for further investigation. Restriction shall be maintained until advice is provided by the ENM.</p>   |
| Failure to record issue of a permit against a switching program (permit register), not resolved by issuing officer or not self-reported. No risk event realised (electric shock, injury, fatality) | ESR breach                             | Significant near miss | <p>Failure to self-report indicates that the switching operator is:</p> <ul style="list-style-type: none"> <li>- unaware of procedural requirements, or</li> <li>- is unwilling to comply with procedural requirements, or</li> <li>- is lacking sufficient awareness of their actions.</li> </ul> <p>Events of this type should be referred to the ENM for further investigation. Restriction shall be maintained until advice is provided by the ENM.</p> |

| Sample Incident  | Initial Incident Investigation outcome | Category              | Assessment and remedial notes  |
|--|--|-----------------------|--|
| <p>A worker is involved in a significant near miss including events such as:</p> <ul style="list-style-type: none"> <li>- Electric shock or electrical burns originating from network assets where there has been no medical treatment, or only diagnostic monitoring has been carried out eg, ECG.</li> <li>- Unintended exposure to any arc flash where there has been no medical treatment.</li> <li>- Reverse polarity that has resulted from work carried out by a network operator's employee or contractor.</li> <li>- Defective neutral connection that has resulted from work carried out, within the last 12 months, by network operator's employee or contractor.</li> <li>- High voltage into low voltage (high voltage injection or high low intermix), except where the incident is related to a major event on a declared major event day.</li> <li>- Unintended contact with energised network asset by network operator's employee or contractor.</li> <li>- Breach of safe approach distance by network operator's employee or contractor.</li> </ul> <p>Inadvertent energisation of network assets resulting from switching and operating errors, equipment failure, operation of assets by an unauthorised person, connection to an alternate source of supply (customer generator) etc.</p> | Significant near miss                  | Significant near miss | <p>Workers involved in a significant near miss incident shall have their electrical certification restricted. Incident must be immediately notified to MTS Safety and the ENM.</p> <p>Events of this type shall be referred to the ENM for further investigation. Restriction shall be maintained until advice is provided by the ENM.</p> |



| Sample incident  | Initial incident investigation outcome | Category         | Assessment and remedial notes  |
|--|--|------------------|--|
| Failure of switching operator to: <ul style="list-style-type: none"> <li>- Apply a DANGER tag, or</li> <li>- Complete a DANGER tag with switching program number, or</li> <li>- Secure a DANGER tag with a padlock (where the facility exits), and</li> <li>- Where the incident does not result in the exposure of workers to live equipment, and</li> <li>- Where the switching operator <b>fails to self-report</b>.</li> </ul> | ESR breach                             | Near miss        | Failure to self-report indicates that the switching operator is: <ul style="list-style-type: none"> <li>- unaware of procedural requirements, or</li> <li>- is unwilling to comply with procedural requirements, or</li> <li>- is lacking sufficient awareness of their actions.</li> </ul> Events of this type should be referred to the ENM for further investigation. Restriction shall be maintained until advice is provided by the ENM.  |
| Switching operator undertakes switching operations out of sequence without the approval of the duty Engineering Controller ( <b>self-reported and no incident</b> )  | ESR breach                             | Near miss        | Self-reporting identifies that the worker is aware of their error and understands the safety implications. Record of the error is to be entered into the duty log and INX report is to be raised. Event to be referred to ENM for investigation. Restriction may be lifted.  |
| Failure to record issue of a permit against a switching program (permit register), immediately resolved by issuing officer and self-reported   | ESR breach                             | Procedural error | Self-reporting identifies that the worker is aware of their error and understands the safety implications. Record of the error is to be entered into the duty log and INX report is to be raised.  |
| Inadvertent operation of switchgear via Power Control System, with no uncontained discharge of energy or impact on customer service (self-reported)  | Inadvertent operation                  | Procedural error | Self-reporting identifies that the worker is aware of their error and understands the impact on the network. Record of the error is to be entered into the duty log and INX report is to be raised.  |
| Inadvertent operation of switchgear via Power Control System, with no uncontained discharge of energy or impact on customer service (reported by others)   | Inadvertent operation                  | Procedural error | Failure to self-report indicates that the worker was not aware of their error or did not understand the impact of their action on the operation of the network.<br><br>If the worker demonstrates understanding and acknowledgement of their error after the event is flagged, the restriction may be withdrawn.<br><br>If the worker fails to demonstrate understanding and acknowledgement of their error, restriction shall be maintained and the event referred to the Electrical Network Manager for investigation. |

| Sample Incident   | Initial Incident Investigation outcome | Category                          | Assessment and remedial notes   |
|---|--|-----------------------------------|---|
| Failure of switching operator to: <ul style="list-style-type: none"> <li>- Apply a DANGER tag, or</li> <li>- Complete a DANGER tag with switching program number, or</li> <li>- Secure a DANGER tag with a padlock (where the facility exits), and</li> <li>- Where the incident does not result in the exposure of workers to live equipment, and Where the switching operator <b>self-reports</b>.</li> </ul> | ESR breach                             | Procedural error                  | Self-reporting identifies that the worker is aware of their error and understands the safety implications. Record of the error is to be entered into the duty log and INX report is to be raised. |
| Perceived breach of electrical safety rule or procedure   | No breach found                        | Other Electrical Network Incident | Record to be entered into the Engineering Controllers log   |

### 3.6.6 Restriction and Suspension of Engineering Controllers

By the nature of their role, duty Engineering Controllers will have some level of involvement in almost all incidents that occur on the electrical network. As such, restriction or suspension of duty Engineering Controllers should only occur where:

- It is immediately evident by the nature of the incident that the duty Engineering Controller directly contributed to the incident, or
- An initial incident investigation identifies that the duty Engineering Controller directly contributed to the incident, and
- A restriction or suspension is appropriate as set out in Figure 2 Restriction and suspension decision tree.

A worker who is authorised as an Engineering Controller but working in another role at the time of an incident is not considered as a duty Engineering Controller when applying this subsection.

## 3.7 Recertification

Where a recertification period of 12 months or greater is nominated for a competency, the qualification is retained for a period of 10 weeks from the due date, within which time the assessment shall be done.

The date from which the next required recertification is calculated, is based upon the original due date and not the date of the assessment.

Where a person is deemed to be 'not yet competent', the Electrical Network Manager may arrange either:

- further assessments to ensure that the person demonstrates continued competency; or
- notification to the person that they have been deemed 'not yet competent' in that certification and the certification has been cancelled.

Persons not currently certified shall not be put forward for recertification.



## 4 Electrical Certifications (roles)

Details for the following certifications are provided in this section:

- Substation Access
- Electrical Permit Holder (restricted)
- Authorised Electrical Worker
- Substation Supervisor
- Electrical Permit Holder
- Switching Operator
- Electrical Controller - CSW
- Engineering Controller
- Electrical Network Manager

### 4.1 Generic Requirements

All persons seeking issue of MTS certifications are required to fulfil the generic requirements set out below. These requirements ensure that all persons meet the minimum requirements to work safely on and around the MTS electrical network.

| Requirement   | Evidence Required                     | Recertification Period         |
|---|---------------------------------------|--------------------------------|
| Current Rail Industry Worker card (including TfNSW Operator) – incorporates rail safety worker medical. | RIW card                              | As per RIW requirements        |
| TLIF2080 Safely access the rail corridor (or recognised equivalent)                                     | Statement of attainment / certificate | 2 Years                        |
| Metro Introduction to Rail Safety   | Statement of attainment / certificate | 2 Years                        |
| MTS Electrical Safety Awareness   | Statement of attainment / certificate | 2 Years                        |
| Minimum Cat 3 – Rail industry medical assessment  | Statement from Medical Practitioner   | As per medical assessment      |
| White Card (general construction induction card)  | White Card                            | n/a                            |
| Demonstrated need for certification and authorisation   | Provide supporting correspondence     | As and when role changes occur |

Table 2 Generic Requirements

## 4.2 Units of Competency

Where a specific certificate or unit of competency is quoted in the subsequent tables of this section for a certification, the certificate or unit referred to is the current version at the time of publishing. A preceding or succeeding version of that certificate or unit may be accepted.

## 4.3 Approved Electrical Qualifications

Due to the complex nature of electrical work and the associated safety risks of unqualified work on the electrical network, candidates for some Authorised roles are required to hold an approved electrical qualification. Where an approved electrical qualification is required, the candidate must provide an original or certified copy of the certificate when requesting authorisation.

Approved electrical qualifications have been selected based on their relevance to electricity network operation. A higher AQF level of qualification is not necessarily deemed more appropriate.

If a candidate holds a qualification that is not listed as an approved electrical qualification, they may apply to the Electrical Network Manager to have their qualification assessed for inclusion as an approved electrical qualification.

Approved electrical qualifications are listed at Appendix A.

Where a candidate submits a qualification deemed to be suitable for work on the electrical network, they will be issued a recognised qualification letter from the Electrical Network Manager and forwarded to the Learning & Development Team. If relevant, this letter will include details of any ongoing restriction that may be applicable.

## 4.4 Instructed Roles

This subsection identifies the Instructed roles applicable to the MTS electrical network as per the electrical certifications model.

Instructed roles include:

- Worker with MTS Electrical Safety Awareness
- Substation Access
- Electrical Permit Holder (restricted)

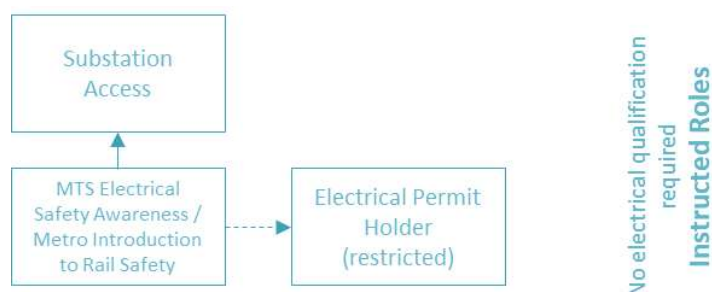


Figure 3 Instructed roles.

#### 4.4.1 Substation Access

Candidates seeking certification with MTS for Substation Access are required to meet the requirements set out below.

| Requirement   | Evidence Required                 | Recertification Period         |
|---|-----------------------------------|--------------------------------|
| Generic requirements  | As per Table 2                    | As per Table 2                 |
| Demonstrated need for substation access                                       | Provide supporting correspondence | As and when role changes occur |
| Successful completion of MTS Substation Access training and assessment (EL94) | Provide relevant documentation    | 2 Years                        |

*Table 3 Substation Access requirements*

#### 4.4.2 Electrical Permit Holder (restricted)

A person seeking certification by MTS to hold an Electrical Permit, restricted to 1500v traction power equipment within the rail corridor, outside of a substation, is required to meet the requirements set out below.

| Requirement   | Evidence Required                 | Recertification Period         |
|---|-----------------------------------|--------------------------------|
| Generic requirements  | As per Table 2                    | As per Table 2                 |
| Demonstrated need to hold an Electrical Permit (1500v trackside equipment only)                   | Provide supporting correspondence | As and when role changes occur |
| Successful completion of MTS Electrical Permit Holder (restricted) training and assessment (EL95) | Provide relevant documentation    | 2 Years                        |

*Table 4 Electrical Permit Holder (restricted) requirements*

## 4.5 Authorised Roles

This subsection identifies the Authorised roles applicable to the MTS electrical network as per the electrical certifications model.

Authorised roles include:

- Authorised Electrical (Network) Worker
- Substation Supervision
- Electrical Permit Holder
- Switching Operator
- Electrical Controller - CSW
- Engineering Controller
- Electrical Network Manager

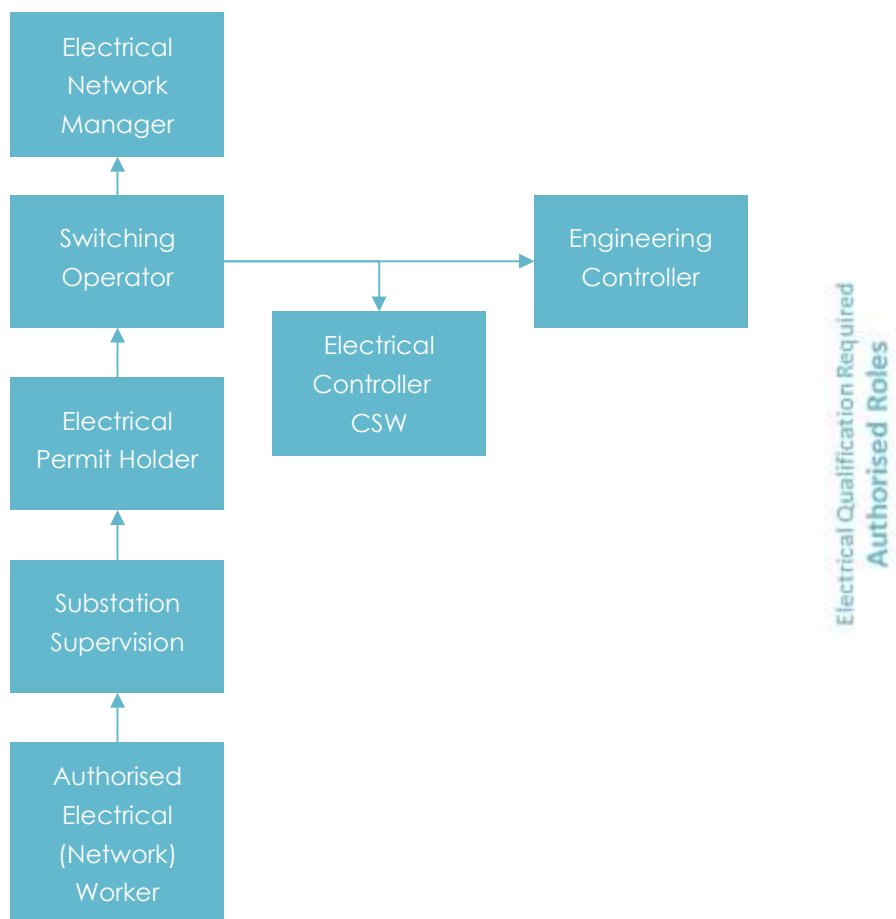


Figure 4 Authorised roles

## 4.5.1 Authorised Electrical (Network) Worker

A person undertaking electrical work on the MTS electrical network, must be authorised by MTS for the work that they are undertaking. This ensures that workers are suitably trained and qualified for the role they are undertaking.

### 4.5.1.1 Work on the Electrical Network Primary Equipment

Work on the Electrical Network means the work of constructing, installing, maintaining, repairing, altering, removing, or adding to the MTS electrical network or the supervising of that work.

Examples of work on the Electrical Network includes work on:

- a) High voltage or traction power equipment,
- b) Control and protection systems (where access to [or the risk of inadvertent access to] exposed live equipment is required, or where operation of primary equipment may occur),
- c) Wiring work on 48v/120v/125v DC equipment supplying HV or traction power equipment,
- d) Earthing, bonding, and negative return systems,
- e) Overhead wiring work,
- f) Cable installation and jointing or termination,
- g) Equipment testing, and
- h) Switchgear operation, isolation, and earthing/rail connecting.

### 4.5.1.2 Work on Supporting Infrastructure or equipment

Work on supporting infrastructure or equipment is not considered work on the MTS Electrical Network, however workers who are required to undertake this work within electrical network facilities must seek Authorised Electrical (network) Worker (restricted) certification or be supervised in compliance with the MTS Electrical Safety Rules.

Examples of work on supporting infrastructure includes work on:

- (a) Building or facility structures,
- (b) Control and protection system equipment where there is no risk of exposure to live equipment (see 4.5.1.1b),
- (c) Overhead wiring structures (not including overhead wiring fittings and fixtures),
- (d) Construction and maintenance of pits, supporting trays, and ducts,
- (e) Rail,
- (f) Track bonds,
- (g) Fire systems,
- (h) Heating Ventilation and Cooling systems,
- (i) Building facilities, and
- (j) General communication systems

Work on supporting infrastructure or equipment outside of electrical network facilities does not require the worker to be an Authorised Electrical (network) worker for the MTS electrical network, however other statutory requirements may apply, such as a trade licence.

### 4.5.1.3 Authorised Electrical (Network) Worker Requirements

All persons seeking authorisation as an Authorised Electrical (Network) Worker must meet the generic requirements of section 4.1 and hold an appropriate qualification for the work that they are undertaking as per the table below.

| Requirement   | Evidence Required                        | Recertification Period |
|---|--|------------------------|
| Generic requirements  | As per Table 2                           | As per Table 2         |
| Substation Access requirements  | As per Table 3                           | As per Table 3         |
| Approved Network Qualification (RIW 85746)  | Certificate <u>or</u> Recognition Letter | None                   |
| Successful completion of MTS Electrical Safety Rules for Authorised Workers training and assessment (EL82a) | Certificate                              | 1 Year                 |
| HLTAID009 - Provide cardiopulmonary resuscitation   | Certificate                              | 1 Year                 |
| UETDRRF06 - Perform rescue from a live LV panel   | Certificate                              | 1 Year                 |
| UETDRRF10 – Provide first aid in an ESI environment (1 Year), or<br>HLTAID011 - Provide First Aid (3 Years) | Certificate                              | 1 Year/3 Years         |

*Table 5 Authorised Electrical Worker requirements*

#### 4.5.1.4 Authorised Electrical (Network) Worker (restricted) Requirements

Where a person is seeking certification to perform work on electrical network supporting infrastructure or equipment within electrical network facilities, but not on primary electrical network equipment, they may seek Authorised Electrical (Network) Worker (restricted) certification.

All persons seeking authorisation as an Authorised Electrical (Network) Worker (restricted) must meet the generic requirements of section 4.1 and hold an appropriate qualification for the work that they are undertaking as per the table below.

**APPLICATION NOTE:** This certification is a restricted sub-set of the Authorised Electrical (Network) Worker certification and allows a worker with a relevant (non-electrical) qualification to obtain certification for work on electrical network supporting infrastructure or equipment within electrical network facilities. While certifying a worker to undertake work on supporting infrastructure or equipment, this certification does not permit a worker to undertake work on primary electrical network equipment. As workers are not accessing primary equipment under this certification, CPR, LV rescue, and first aid is not mandated. Work groups are to risk assess their work and consider emergency response requirements and define subsequent controls. This approach also recognises that all switchgear provided in substations on the electrical network is contained and risk of uncontrolled access to live equipment is minimised through a greatly reduced risk profile.

**NOTE:** Holders of this certification are not permitted to undertake Permit Holder, Switching Operator or Engineering Controller roles.

**NOTE:** Where a holder of this role requires access to primary electrical network equipment, they must undertake this work under the supervision of a Permit Holder or Substation Supervisor.

| Requirement   | Evidence Required                 | Recertification Period |
|---|-----------------------------------|------------------------|
| Generic requirements  | As per Table 2                    | As per Table 2         |
| Substation Access requirements  | As per Table 3                    | As per Table 3         |
| Approved Electrical (Network) Qualification (85746)   | Certificate or Recognition Letter | None                   |
| Successful completion of MTS Electrical Safety Rules for Authorised Workers training and assessment (EL82a) | Certificate                       | 1 Year                 |

*Table 6 Authorised Electrical Worker (restricted) requirements*



## 4.5.2 Substation Supervision

A person undertaking supervision of workers (without Substation Access certification) in a substation, shall hold certification in Substation Supervision.

A person seeking certification in Substation Supervision is required to meet the requirements set out below.

**NOTE:** An Authorised Electrical (Network) Worker (**restricted**) does not meet the requirements for this role.

| Requirement   | Evidence Required | Recertification Period |
|---|-------------------|------------------------|
| Generic requirements  | As per Table 2    | As per Table 2         |
| Substation Access requirements  | As per Table 3    | As per Table 3         |
| Authorised Electrical (Network) Worker requirements                     | As per Table 5    | As per Table 5         |
| Successful completion of Substation Supervision training and assessment | Certificate       | 2 Years                |

*Table 7 Substation Supervision requirements*

## 4.5.3 Electrical Permit Holder

A person seeking certification by MTS to hold an Electrical Permit is required to meet the requirements set out below.

**NOTE:** An Authorised Electrical (Network) Worker (**restricted**) does not meet the requirements for this role.

| Requirement  | Evidence Required | Recertification Period |
|--|-------------------|------------------------|
| Generic requirements   | As per Table 2    | As per Table 2         |
| Substation Access requirements   | As per Table 3    | As per Table 3         |
| Authorised Electrical Worker requirements  | As per Table 5    | As per Table 5         |
| Successful completion of MTS Electrical Permit Holder training and assessment (EL94) | Certificate       | 2 Years                |

*Table 8 Permit Holder requirements*

## 4.5.4 Switching Operator

To be eligible for certification or recertification as a Switching Operator, a person shall hold an approved electrical qualification as listed in 4.3 or as accepted by the Electrical Network Manager and meet the requirements in the table below.

**NOTE:** An Authorised Electrical (Network) Worker (**restricted**) does not meet the requirements for this role.

| Requirement   | Evidence Required                                     | Recertification Period |
|---|---|------------------------|
| Competency, <ul style="list-style-type: none"> <li>Switching Operator training course that includes the content of UETDRSB001 Perform power system substation switching operation to a given schedule or,</li> <li>Evidence of completion of high voltage electrical switching operator training and successful authorisation with a recognised electricity network operator (evidence assessed on a case-by-case basis by the Electrical Network Manager)</li> </ul> | Provide relevant documentation, or certificate        | None                   |
| Generic requirements  | As per Table 2  | As per Table 2         |
| Authorised Electrical (Network) Worker requirements   | As per Table 5  | As per Table 5         |
| Permit Holder requirements  | As per Table 8  | As per Table 8         |
| Successful completion of MTS High Voltage Switching Operator Training Logbook (MTS-AEL-GL-78317)  | Provide relevant documentation                        | None                   |
| Successful completion of MTS High Voltage Switching Operator Skills and Knowledge Assessment (MTS-AEL-GL-78316)   | Provide relevant documentation                        | 2 Years                |
| MTS Switching Operator authorisation (85744)  | Authorisation Letter from MTS Electrical Network Mgr. | 2 Years                |

Table 9 Switching Operator requirements

## 4.5.5 MTS Electrical Controller – CSW

A person seeking authorisation as an MTS Electrical Controller - CSW under the ESR's is required to demonstrate the requisite electricity network knowledge for a construction and operational environment. Candidates must demonstrate the ability to safely manager electrical network operations.

| Requirement  | Evidence Required                                     | Recertification Period |
|--|---|------------------------|
| Confirmed business need for authorisation as an engineering controller   | Provide supporting correspondence                     | None                   |
| Generic requirements   | As per Table 2  | As per Table 2         |
| Authorised Electrical (Network) Worker requirements  | As per Table 5  | As per Table 5         |
| Permit Holder requirements   | As per Table 8  | As per Table 8         |
| Switching Operator requirements  | As per Table 9  | As per Table 9         |
| Successful completion of engineering controller – competency development pathway (MTS-AEL-PL-78104)<br>Including Training specific to the Integra Power Control System | Provide relevant documentation                        | None                   |
| MTS Electrical Controller – CSW authorisation  | Authorisation Letter from MTS Electrical Network Mgr. | 2 Years                |

*Table 10 Electrical Controller requirements*

## 4.5.6 MTS Engineering Controller

A person seeking authorisation as an Engineering Controller under the ESR's is required to demonstrate the requisite electricity network knowledge for an operational environment. Candidates must demonstrate the ability to safely manage electrical network operations.

**NOTE:** An Authorised Electrical (Network) Worker (**restricted**) does not meet the requirements for this role.

| Requirement   | Evidence  |                |
|---|---|----------------|
| Confirmed business need for authorisation as an engineering controller                              | Provide supporting correspondence                     | None           |
| Generic requirements  | As per Table 2  | As per Table 2 |
| Authorised Electrical (Network) Worker requirements   | As per Table 5  | As per Table 5 |
| Permit Holder requirements  | As per Table 8  | As per Table 8 |
| Switching Operator requirements   | As per Table 9  | As per Table 9 |
| Successful completion of engineering controller – competency development pathway (MTS-AEL-PL-78103) | Provide relevant documentation                        | None           |
| MTS Engineering Controller authorisation (RIW 85745)  | Authorisation Letter from MTS Electrical Network Mgr. | 2 Years        |

*Table 11 Engineering Controller requirements*

## 4.5.7 Electrical Network Manager

For a candidate to be Authorised as the Electrical Network Manager, they must demonstrate suitable skills, experience, and knowledge to support safe and compliant operation of the MTS electricity network.

| Requirement  | Evidence                          |                |
|--|-----------------------------------|----------------|
| Confirmed business need for authorisation as Electrical Network Manager  | Provide supporting correspondence | None           |
| Approved Electrical Qualification  | Provide relevant documentation    | None           |
| Switching Operator authorisation   | As per Table 9                    | As per Table 9 |
| Work Health and Safety qualification   | Provide relevant documentation    | None           |
| Successful assessment for the role of Electrical Network Manager as set out in 'appendix' of 'Electrical Network Manager – Qualification, skills, knowledge assessment and authorisation' (MTS-AEL-GL-78310) | Provide relevant documentation    | None           |
| Endorsement from MTS General Manager Engineering and Maintenance Delivery  | Provide relevant documentation    | 2 Years        |

*Table 12 Electrical Network Manager requirements*

## 5 Authorisation Procedure

A person seeking certification for authorised activities under the MTS Electrical Safety Rules shall apply to MTS, in writing, through their designated MTS representative.

Once all requirements for the relevant Authorisation are obtained the person seeking certification shall complete the Authorised Role Application form below and submit the form, along with supporting documentation, to the Electrical Network Manager for review.

On completion of the training and authorisation External Staff are to forward completion certificates to their respective RIW Coordinator for upload to the RIW Platform.

Upon confirmation of the documents being uploaded, the external staff member must log into their RIW account to ensure they hold the required 'Job Roles' and all are showing as 'Valid', prior to carrying out any work requiring the certification.

## 6 Related documents

| # | Document title                   | Document Number               |
|---|----------------------------------|-------------------------------|
| 1 | MTS Electrical Safety Rules      | NWRLOTS-NRT-SWD-SF-FRW-726001 |
| 2 | Authorised Role Application Form | MTS-AEL-FM-78409              |

*Table 133 Related Documents*

# Appendix A. Approved Electrical Qualifications

## Appendix A1. Approved Electrical Qualifications – No restrictions

Qualifications listed below are deemed as an Approved Electrical Qualification and no further evidence will be required from the candidate.

**NOTE:** Only current qualifications at the time of writing are listed. Current, superseding, superseded, and deleted versions of these qualifications are deemed as approved electrical qualifications.

| AQF level | Qualification Title   | Comments |
|-----------|---|----------|
| 3         | UET30821 - Certificate III in ESI - Distribution Underground            |          |
| 3         | UET30621 - Certificate III in ESI - Distribution Overhead               |          |
| 3         | UET30721 - Certificate III in ESI - Rail Traction                       |          |
| 3         | UET30521 - Certificate III in ESI - Transmission Overhead               |          |
| 4         | UET40421 - Certificate IV in ESI - Network Systems                      |          |
| 4         | UET40621 - Certificate IV in ESI - Power Systems Network Infrastructure |          |
| 4         | UET40521 - Certificate IV in ESI - Power Systems Substations            |          |

*Table 144 Approved Electrical Qualifications*

## Appendix A2. Approved Electrical Qualifications – restrictions apply

Qualifications listed below are deemed as an Approved Electrical Qualification where supporting evidence is supplied by the candidate.

**NOTE 1:** Only current qualifications at the time of writing are listed. Current, superseded, and deleted versions of these qualifications are deemed as approved electrical qualifications.

**NOTE 2:** Candidates with specialist technical or engineering qualifications not listed below can apply to the Electrical Network Manager for recognition of their qualification. Work undertaken by workers must be within the limits of their training and qualification.

| AQF level | Qualification Title  | Restrictions  |
|-----------|--|---|
| 5         | UET50221 - Diploma of ESI - Power Systems  | Must provide evidence of > 12 months field experience in an ESI environment, <b>or</b><br>Limited to Permit Holder, Authorised Electrical (Network) Worker only.  |
| 5         | UET50321 - Diploma of ESI - Power Systems Operations   | Must provide evidence of > 12 months field experience in an ESI environment, <b>or</b><br>Limited to Permit Holder, Authorised Electrical (Network) Worker only.  |
| 3         | UEE30820 – Certificate III in Electrotechnology Electrician<br><br>or<br><br>an Unrestricted Electrician's Licence' or equivalent issued in an Australian state or territory | Must provide evidence of >12 months field experience in an ESI or equivalent environment, <b>or</b><br>Transcript must include all the following units:<br>- UETDRIS67 Solve problems in energy supply network equipment<br>- UETDRIS032 - Solve problems in network equipment<br><b>or</b><br>Limited to Permit Holder, Authorised Electrical (Network) Worker only. |
| n/a       | Statutory Electricians Licence (Current)   | Must provide evidence of >12 months field experience in an ESI or equivalent environment, <b>or</b><br>Limited to Permit Holder, Authorised Electrical (Network) Worker only.   |
| 4         | UEE40620- Certificate IV in Electrotechnology - Systems Electrician  | Must provide evidence of >12 months field experience in an ESI or equivalent environment, <b>or</b><br>Limited to Permit Holder, Authorised Electrical (Network) Worker only.   |



| AQF level | Qualification Title  | Restrictions   |
|-----------|--|--|
| 5         | UEE50420- Diploma of Electrical Engineering  | Must provide evidence of >12 months field experience in an ESI or equivalent environment, <b>or</b><br>Limited to Permit Holder, Authorised Electrical (Network) Worker only.  |
| 5         | Diploma in a relevant discipline (University issued qualification)                     | Qualification must be recognised in Australia, <b>and</b><br>Qualification must include appropriate content relevant to the role to be performed, <b>and</b><br>Certifications are limited to Authorised Electrical (Network) Worker.<br>NOTE: Approval for this qualification to be applied to other certifications is to be assessed by the electrical network manager on a case-by-case basis |
| 6         | Bachelor or master's degree in a relevant discipline (University issued qualification) | Qualification must be recognised in Australia, <b>and</b><br>Qualification must include appropriate content relevant to the role to be performed, <b>and</b><br>Certifications are limited to Authorised Electrical (Network) Worker.<br>NOTE: Approval for this qualification to be applied to other certifications is to be assessed by the electrical network manager on a case-by-case basis |

Table 155 Approved Electrical Qualifications (Restrictions Apply)

## Appendix A3. Non-approved electrical qualifications

MTS have assessed the qualifications listed in this section and deemed that they **do not** provide suitable knowledge to be considered an approved electrical qualification for MTS electricity network roles. The listed qualifications will not be accepted as MTS approved electrical qualifications.

| AQF level | Qualification Title   | Comments  |
|-----------|---|---|
| 3         | UET30921 - Certificate III in ESI - Very Remote Community Utilities | This qualification does not provide sufficient training for electricity network activities on a complex interconnected network. |

Table 166 Non-approved Electrical Qualifications

## Appendix B. Forms

Appendix B contains forms that are to be utilised when managing authorisation for Authorised Electrical (Network) Worker, Switching Operator, and Engineering Controller roles.

## Appendix B1. Authorised Role Application form

| Applicant details |  |        |                               |
|-------------------|--|--------|-------------------------------|
| Name              |  | D.O.B. | Click or tap to enter a date. |
| Mobile            |  | Email  |                               |
| Company           |  | RIW    |                               |

| Authorised Role (or recognition of qualification)  |                          |   |                          |
|--|--------------------------|---|--------------------------|
| Select the role for which you are seeking authorisation (or recognition of qualification). |                          |   |                          |
| Switching Operator (SO)  | <input type="checkbox"/> | Engineering Controller (EC)   | <input type="checkbox"/> |
| Electrical Controller - CSW  | <input type="checkbox"/> | Recognition of qualification for work on the MTS Electrical Network | <input type="checkbox"/> |

| Line manager approval |                               |          |  |
|-----------------------|-------------------------------|----------|--|
| Name                  |                               | Sign     |  |
| Date                  | Click or tap to enter a date. | Position |  |

| Supporting documents checklist  |                          |  |                          |
|---|--------------------------|--|--------------------------|
| Please ensure that supporting documents are provided for each category listed below:  |                          |  |                          |
| Qualification for assessment (where recognition of qualification is requested)        | <input type="checkbox"/> | Post qualification training (endorsements, units of competency etc...) [SO, EC, and as applicable] | <input type="checkbox"/> |
| HLTAID009 - Provide cardiopulmonary resuscitation                                     | <input type="checkbox"/> | UETDRRF06 - Perform rescue from a live LV panel  | <input type="checkbox"/> |
| UETDRRF07 – Provide first aid in an ESI environment, or HLTAID011 – Provide first aid |                          |  | <input type="checkbox"/> |

Forward completed form and supporting documents to the MTS Electrical Network Manager for assessment.

| Electrical Network Manager Approval  |                               |          |   |
|--|-------------------------------|----------|---|
| This worker has satisfied MTS requirements for authorisation in the role listed above.     |                               |          | Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> |
| This worker has submitted a qualification suitable for work on the MTS Electrical Network. |                               |          | Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> |
| Name   |                               | Sign     |   |
| Date   | Click or tap to enter a date. | Position |   |

## Appendix B2. Authorisation Letter Switching Operator

Metro Trains Sydney  
47 Tallawong Road, Tallawong NSW 2762

Click or tap to enter a date.

Click or tap here to enter recipient full name.

[Company]

[Company Address]

RIW No. Click or tap here to enter text.

Notification of authorisation for the MTS Electrical Network.

Dear: Click or tap here to enter recipient first name.

Congratulations, your recent application for authorisation on the MTS Electrical Network for the role of **MTS Switching Operator** has been approved as of **Click or tap to enter a date..** Your authorisation is valid for 24 months from this date of approval.

**Restrictions:** Choose an item.

As an authorised person on the MTS Electrical Network, you are responsible to ensure that you maintain currency in your role. Importantly you must recertify your safety training every twelve months as required by section 3.6, and the relevant requirements table of the MTS Electrical Certifications document, (reference NWRLOTS-NRT-SWD-HV-SPC-720350). Units of competency that shall be maintained are:

- EL97 - MTS Electrical Safety Rules for Authorised Electrical Workers (RIW e-learning), and
- HLTAID009 – Provide cardiopulmonary resuscitation, and
- UETDTRRF06 – Perform rescue from a live LV panel, and
- UETDTRRF10 – Provide first aid in an ESI environment (12 months), or HLTAID011 Provide First Aid (36 months).

Upon receipt of this letter, it is your responsibility to ensure that your authorisation is registered on your Rail Industry Worker (RIW) card. You can do this by contacting your organisations RIW administrator and submitting this letter as evidence of authorisation for the certification listed above.

NOTE: Your authorisation is not valid until it is displayed on your RIW card.

Once again, congratulations on your authorisation with MTS. If you have any further questions on this authorisation, please contact your MTS representative or the MTS Electrical Network Manager.

Kind regards,

Name

Electrical Network Manager

## Appendix B3. Authorisation Letter Engineering Controller

Metro Trains Sydney  
47 Tallawong Road, Tallawong NSW 2762

Click or tap to enter a date.

Click or tap here to enter recipient full name.

[Company]

[Company Address]

RIW No. Click or tap here to enter text.

Notification of authorisation for the MTS Electrical Network.

Dear: Click or tap here to enter recipient first name.

Congratulations, your recent application for authorisation on the MTS Electrical Network for the role of **MTS Engineering Controller** has been approved as of **Click or tap to enter a date..** Your authorisation is valid for 24 months from this date of approval.

**Restrictions:** Choose an item.

As an authorised person on the MTS Electrical Network, you are responsible to ensure that you maintain currency in your role. Importantly you must recertify your safety training every twelve months as required by section 3.6, and the relevant requirements table of the MTS Electrical Certifications document, (reference NWRLOTS-NRT-SWD-HV-SPC-720350). Units of competency that shall be maintained are:

- EL97 - MTS Electrical Safety Rules for Authorised Electrical Workers (RIW e-learning), and
- HLTAID009 – Provide cardiopulmonary resuscitation, and
- UETDRRF06 – Perform rescue from a live LV panel, and
- UETDRRF10 – Provide first aid in an ESI environment (12 months), or HLTAID011 Provide First Aid (36 months).

Upon receipt of this letter, it is your responsibility to ensure that your authorisation is registered on your Rail Industry Worker (RIW) card. You can do this by contacting your organisations RIW administrator and submitting this letter as evidence of authorisation for the certification listed above.

NOTE: Your authorisation is not valid until it is displayed on your RIW card.

Once again, congratulations on your authorisation with MTS. If you have any further questions on this authorisation, please contact your MTS representative or the MTS Electrical Network Manager.

Kind regards,

Name

Electrical Network Manager

## Appendix B4. Authorisation Letter Electrical Controller - CSW

Metro Trains Sydney  
47 Tallawong Road, Tallawong NSW 2762

Click or tap to enter a date.

Click or tap here to enter recipient full name.

[Company]

[Company Address]

RIW No. Click or tap here to enter text.

Notification of authorisation for the MTS Electrical Network.

Dear: Click or tap here to enter recipient first name.

Congratulations, your recent application for authorisation on the MTS Electrical Network for the role of **MTS Electrical Controller - CSW** has been approved as of **Click or tap to enter a date..** Your authorisation is valid for 24 months from this date of approval.

**Restrictions:** Choose an item.

As an authorised person on the MTS Electrical Network, you are responsible to ensure that you maintain currency in your role. Importantly you must recertify your safety training every twelve months as required by section 3.6, and the relevant requirements table of the MTS Electrical Certifications document, (reference NWRLOTS-NRT-SWD-HV-SPC-720350). Units of competency that shall be maintained are:

- EL97 - MTS Electrical Safety Rules for Authorised Electrical Workers (RIW e-learning), and
- HLTAID009 – Provide cardiopulmonary resuscitation, and
- UETDRRF06 – Perform rescue from a live LV panel, and
- UETDRRF10 – Provide first aid in an ESI environment (12 months), or HLTAID011 Provide First Aid (36 months).

Upon receipt of this letter, it is your responsibility to ensure that your authorisation is registered on your Rail Industry Worker (RIW) card. You can do this by contacting your organisations RIW administrator and submitting this letter as evidence of authorisation for the certification listed above.

NOTE: Your authorisation is not valid until it is displayed on your RIW card.

Once again, congratulations on your authorisation with MTS. If you have any further questions on this authorisation, please contact your MTS representative or the MTS Electrical Network Manager.

Kind regards,

Name

Electrical Network Manager

## Appendix B5. Electrical Network recognised qualification letter

Metro Trains Sydney  
47 Tallawong Road, Tallawong NSW 2762

Click or tap to enter a date.

Click or tap here to enter recipient full name.

[Company]

[Company Address]

RIW No. Click or tap here to enter text.

### Recognised qualification for work on the MTS Electrical Network.

Dear: Click or tap here to enter recipient first name.

Congratulations, your recent application for recognition of your qualification for work on the MTS Electrical Network has been approved as of **Click or tap to enter a date..** As this is recognition of a qualification no renewal date is applicable.

**Approved discipline:** Choose an item.

**Restrictions:** Choose an item.

As an authorised person on the MTS Electrical Network, you are responsible to ensure that you work within the limits of your qualification including any restrictions listed in this letter and maintain currency in your role. Importantly you must recertify your safety training every twelve months as required by section 3.6, and the relevant requirements table of the MTS Electrical Certifications document, (reference NWRLOTS-NRT-SWD-HV-SPC-720350). Units of competency that shall be maintained are:

- EL97 - MTS Electrical Safety Rules for Authorised Electrical Workers (RIW e-learning), and
- HLTAID009 – Provide cardiopulmonary resuscitation, and
- UETDRRF06 – Perform rescue from a live LV panel, and
- UETDRRF10 – Provide first aid in an ESI environment (12 months), or HLTAID011 Provide First Aid (36 months), and

Upon receipt of this letter, it is your responsibility to ensure that your certification is registered on your Rail Industry Worker (RIW) card. You can do this by contacting your organisations RIW administrator and submitting this letter as evidence of authorisation for the certification listed above.

**NOTE:** Your certification is not valid until it is displayed on your RIW card.

Once again, congratulations on your certification with MTS. If you have any further questions on this authorisation, please contact your MTS representative or the MTS Electrical Network Manager.

Kind regards,

Name

Electrical Network Manager

## Appendix B6. Suspension Letter

Metro Trains Sydney  
47 Tallawong Road, Tallawong NSW 2762

Click or tap to enter a date.

Click or tap here to enter recipient full name.

[Company]

[Company Address]

RIW No. Click or tap here to enter text.

Notification of **suspension of certification** for the MTS Electrical Network.

Dear: Click or tap here to enter recipient first name.

Following notice of an incident on the MTS Electrical Network and the outcome of an initial incident investigation, you are notified by issue of this letter notified that your certification under the MTS Electrical Safety Rules is suspended for the role of Choose an item. as of Click or tap to enter a date..

**Upon receipt of this letter, you are instructed to immediately cease all activities associated with this certification including any activities for which this certification is a pre-requisite.**

MTS initiate a suspension of certification where information is provided that a worker is unable to undertake a certified role in a safe manner and further investigation of an incident is required. Suspension is intended to facilitate the development of skills and knowledge to allow a worker subject to suspension to safely resume work under their certification.

**Failure to comply with this suspension, or a failure to engage in skills and knowledge development will result in cancellation of your certification.**

MTS operate under a just culture philosophy, where the aim of any investigation is to prevent a recurrence of the incident.

Following completion of the incident investigation, you will be advised of any skills and knowledge development activities that have been identified for completion. Once you have completed the identified activities, please contact MTS to discuss reinstatement of your certification.

Kind regards,

Name

Electrical Network Manager



## Appendix C. Course alignment

### Appendix C1. Course alignment to national units of competency

Table below identifies recommended alignment of MTS courses to national units of competency.

| MTS Course  | National unit code | National unit title  |
|---|--------------------|--|
| MTS Electrical Safety Awareness (EL82a)                                   | UETDREL006         | Work safely in the vicinity of live electrical apparatus as a non-electrical worker  |
| MTS Substation Access (EL94)  | n/a                | No relevant national unit identified   |
| MTS Permit Holder (restricted) (EL95)                                     | UETDRRF09          | Apply access procedures to work on or near electrical network infrastructure<br><b>Note:</b> Content to be targeted to 1500V OHW access. |
| MTS Electrical Safety Rules for Authorised Electrical Worker Roles (EL97) | UETDRRF01          | Apply ESI safety rules, codes of practice and procedures for work on or near electrical apparatus  |
| MTS Permit Holder (EL96)  | UETDRRF09          | Apply access procedures to work on or near electrical network infrastructure   |
| MTS Authorised Switching Operator (85744)                                 | UETDRSB001         | Perform substation switching operations to a given schedule  |

# NWRLOTS-NRT-SWD-HV-SPC-720350











## Electrical Certifications rev 2.4

Final Audit Report

2022-10-28

|                 |   |
|-----------------|---|
| Created:        | 2022-10-26  |
| By:             | Jeff Gordon (jeff.gordon@metrotrains-sydney.com.au) |
| Status:         | Signed  |
| Transaction ID: | CBJCHBCAABAAIPURnYGkG1ZI6V2FQRQIZ-riArMPnTef        |

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 Agreement completed.

2022-10-28 - 1:46:49 AM GMT