

12 September 2024

# Electrical engineering manager of underground coal mines

## Prerequisites and written exam details

---

### 1. Prerequisites

An application for examination must be accompanied by evidence that you have the following:

Prerequisite	Requirement
Tertiary or vocational qualification	<p>AQF6 (or higher) qualification in the field of electrical engineering.</p> <p>Acceptable electrical engineering qualification includes those that have one or more of the following terms in their title that are reflective of the majority of the subjects or units of competence completed that are relevant:</p> <ul style="list-style-type: none"><li>• electrical engineering</li><li>• renewable energy</li><li>• electronics</li><li>• mechatronics.</li></ul> <p>Qualifications and/or providers must be listed on either:</p> <ul style="list-style-type: none"><li>• the National Register of Vocational Education and Training (<a href="http://training.gov.au">training.gov.au</a>) by a registered training organisation (RTO) with it on scope, or</li><li>• National Register of Higher Education Providers and Courses (<a href="http://www.teqsa.gov.au/national-register">www.teqsa.gov.au/national-register</a>)</li></ul> <p>The following qualifications have been recognised at 28 February 2024:</p> <ul style="list-style-type: none"><li>• Bachelor of Engineering (electrical engineering) issued by an Australian university, or</li><li>• UEE62320 Advanced Diploma of Electrical Engineering – Coal Mining issued by a registered training organisation (the superseded unit number UEE62311 Advanced Diploma of Electrical Engineering – Coal Mining or other equivalent superseded unit number, is acceptable), or</li></ul>

Prerequisite	Requirement
	<ul style="list-style-type: none"> <li>• UEE62220 Advanced Diploma of Electrical Engineering issued by a registered training organisation (the superseded unit number UEE62211 Advanced Diploma of Electrical Engineering or another equivalent superseded unit, is acceptable).</li> <li>• 52883WA - Advanced Diploma of Applied Electrical Engineering (electrical systems)</li> <li>• 52894WA - Advanced Diploma of Applied Electrical Engineering (renewable energy)</li> </ul> <p>If a potential applicant is unsure whether a qualification they have or considering completing will be accepted, then they can request a ruling from the Regulator (Chief Inspector), through submitting details to the exam panel by one or both of the following ways, as applicable:</p> <ol style="list-style-type: none"> <li>a) Name of qualification and list of subjects/units of competence, and any summary/overview, including any from the qualification provider</li> <li>b) Recognition of the equivalency of a qualification (including older ones and overseas), by referring to the <u>Fact sheet - Recognition of qualifications and units of competence</u></li> </ol> <p>The request is to be emailed with copies of the qualification and/or transcript in full to <a href="mailto:mca@regional.nsw.gov.au">mca@regional.nsw.gov.au</a> at least one month before the closing date for applying for the certificate of competence.</p>
Practical experience	<p>A minimum of 5 years practical underground coal mine experience*, including:</p> <ul style="list-style-type: none"> <li>• a minimum 2 years involved in the installation, commissioning, maintenance and repair of electrical plant and installations (this must be part of the 5 years of experience required above) <ul style="list-style-type: none"> <li>– within that 2 years' experience above, one year must involve for electrical plant and installations:</li> <li>– a minimum 6 months at an extraction face during production or development works and</li> <li>– during other mining activities.</li> </ul> </li> <li>• a minimum 2 years in a supervisory role responsible for electrical plant and installations at an underground coal mine.</li> </ul> <p>*in the 5 years of experience, up to one year in any other class of mine and up to one year working as an electrical engineer in another industry may be included.</p>

Prerequisite	Requirement
	<p>Your experience must be verifiable and/or signed off by your supervising manager who held an electrical engineering manager of underground coal mines practising certificate, or interstate or overseas equivalent certificate at the time of your employment (or an interstate equivalent or relevant). Refer to the <a href="#">Guide: Applying for a certificate of competence</a> for more details.</p>
Emergency preparedness unit	<p>RIIERR602E Establish and maintain underground coal mine emergency preparedness and response systems, issued by a registered training organisation.</p> <p>*the superseded unit numbers RIIERR602D and RIIERR602A Establish and maintain underground coal mine emergency preparedness and response systems, or other equivalent superseded unit number is acceptable.</p> <p>If you hold a qualification/unit of competence that is not specified as a prerequisite, refer to <a href="#">Fact sheet - Recognition of qualifications and units of competence</a>.</p>
Portfolio of evidence	<p>You must attach the following documents as evidence of your competence that must be relevant to the function. Your name must be in the document as evidence you were involved. If not, then you must have your supervisor/manager sign off the document confirming your involvement or attach another document confirming eg email. You may attach multiple documents to provide sufficient evidence:</p> <ul style="list-style-type: none"> <li>• Risk assessment - a copy of a WHS risk assessment that you participated in at your mine during the past 3 years.</li> <li>• Workplace inspection - a copy of a WHS workplace inspection, task observation or audit, that you conducted and documented for your mine in the past 3 years.</li> <li>• Review of principal hazard management plan or control plan - evidence, such as a report, of your involvement in reviewing a principal hazard management plan or control plan at your mine.</li> <li>• Shift handover report, shift work plan or compliance report - a copy of a WHS shift handover report, shift work plan or compliance report that you completed in the past 6 months. For a shift handover report, the document must include your name and role.</li> <li>• Delivery of workplace training program - evidence of a WHS related training program in a mining or related field that you participated in developing and delivering for workers in full or</li> </ul>

Prerequisite	Requirement
	<p>part of it at your mine (e.g. toolbox talks, shift or work group briefings). As an alternative a completed sign on list of attendees may be provided, with your name on it as the trainer, as evidence that you delivered it.</p> <ul style="list-style-type: none"> <li>• Safe work procedure or related document for standard setting - a copy of a safe work procedure or related document for standard setting (e.g. work instruction, work order job detail) that you actioned at your mine during the past 5 years.</li> </ul> <p>For more information about portfolio requirements refer to the <a href="#"><u>Portfolio requirements: certificate of competence examination process</u></a></p>
Identity verification	Refer to the <a href="#"><u>Fact sheet: Certifying documents and verifying identity</u></a>

## 2. Written examination details

The written examination consists of the following papers:

Paper	Method of examination	Duration of paper
CEE1 – Electrical engineering applicable to coal mines	Closed book	3 hours
CEE2 – Legislation and Australian Standards applicable to underground mines	Closed book	3 hours
<p><b>Note:</b> the examination panel may combine the above 2 exam papers for new candidates (those sitting to pass in one round in a year). This would be communicated in the briefing session held by the panel so applicants can be made aware of this before the closing date for applying and then sitting the exam papers.</p>		

### 2.1. CEE1 – Electrical engineering applicable to underground coal mines

This paper will deal with the interpretation and application of mining and engineering principles and Australian Standards together with relevant aspects of mining legislation. You will be expected to have a working knowledge of:

- knowledge of safe working procedures and the causes and prevention of mine incidents.

- identification and management of electrical hazards for different mining operations
  - maintenance and operation of electrical plant and structures regularly used at that type of mine, including explosion protected plant.
- 

## 2.2. CEE2 – Legislation and Australia Standards applicable to underground coal mines

You will be required to demonstrate a working knowledge of the *Work Health and Safety Act 2011*, *Work Health and Safety (Mines and Petroleum Sites) Act 2013*, and their supporting Regulations, as they relate to the duties of an electrical engineering manager of underground coal mines. You will also be required to:

- understand the implications and management of gazettal notices related to the electrical engineering aspects of coal mines.
  - know all the legislative requirements for the role, and the specific requirements for the electrical engineering control plan for that type of mine
  - demonstrate a working knowledge on key Australia Standards applicable to coal mining.
- 

© State of New South Wales through the Department of Primary Industries and Regional Development 2024. You may copy, distribute, display, download and otherwise freely deal with this publication for any purpose, provided that you attribute the Department of Primary Industries and Regional Development as the owner. However, you must obtain permission if you wish to charge others for access to the publication (other than at cost); include the publication in advertising or a product for sale; modify the publication; or republish the publication on a website. You may freely link to the publication on a departmental website.

Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (September) and may not be accurate, current or complete. The State of New South Wales (including Department of Primary Industries and Regional Development), the author and the publisher take no responsibility, and will accept no liability, for the accuracy, currency, reliability or correctness of any information included in the document (including material provided by third parties). Readers should make their own inquiries and rely on their own advice when making decisions related to material contained in this publication.