

March 2024

Electrical engineer of coal mines other than underground mines

Prerequisites and written examination details

1. Prerequisites

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

<p>Tertiary or vocational qualification</p>	<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">• Electrical Engineering• Renewable energy• Electronics• Mechatronics <p>Qualifications and/or providers must be listed on either:</p> <ul style="list-style-type: none">• the National Register of Vocational Education and Training (training.gov.au) by an Registered Training Organisation (RTO) with it on scope OR• National Register of Higher Education Providers and Courses (https://www.teqsa.gov.au/national-register) <p>The following qualifications have been recognised as at 28 February 2024:</p> <ul style="list-style-type: none">• Bachelor of Engineering (Electrical Engineering) issued by an Australian university, or• UEE62320 Advanced Diploma of Electrical Engineering – Coal Mining issued by a registered training organisation (the superseded unit number UEE62311 Advanced Diploma of Electrical Engineering – Coal Mining or other equivalent superseded unit number, is acceptable), or• UEE62220 Advanced Diploma of Electrical Engineering issued
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	<p>by a registered training organisation (the superseded unit number UEE62211 Advanced Diploma of Electrical Engineering or other equivalent superseded unit, is acceptable).</p> <ul style="list-style-type: none">• 52883WA - Advanced Diploma of Applied Electrical Engineering (Electrical Systems)• 52894WA - Advanced Diploma of Applied Electrical Engineering (Renewable Energy) <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">a) Name of qualification and list of subjects/units of competence, and any summary/overview, including any from the qualification providerb) 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> <p>The request is to be emailed with copies of the qualification and/or transcript in full to mca@regional.nsw.gov.au at least one month prior to the closing date for applying for the certificate of competence.</p>
<p>Practical experience</p>	<p>A minimum of four years* practical coal mine other than underground experience, including:</p> <ul style="list-style-type: none">• a minimum two years involved in the installation, commissioning, maintenance and repair of electrical plant and installations (this must be included in the four years of experience above), and<ul style="list-style-type: none">○ within that two years' experience, one year must involve electrical plant and installations:<ul style="list-style-type: none">▪ with a minimum 6 months at an extraction face during production or development works and▪ during or other mining activities• a minimum one year in a supervisory role responsible for electrical plant and installations at a coal mine other than underground

	<p>*In the four years of experience, up to one year in any other class of mine and one year working as an electrical engineer in another industry may be included.</p> <p>Your experience must be verifiable and/or signed off by your supervising manager who holds an Electrical Engineer of mines other than underground mines practising certificate.</p>
Emergency preparedness unit of competence	<p>RIIERR601E Establish and maintain mine emergency preparedness and response systems, issued by a registered training organisation.</p> <p>*The superseded units RIIERR601D and RIIERR601A Establish and maintain 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 specific as a prerequisite, refer to <u>Fact sheet: recognition of qualifications and unit of competence</u></p>
Portfolio of evidence	<p>You must attach the following documents as evidence of your competence:</p> <ul style="list-style-type: none">• Risk assessment – a copy of a WHS risk assessment that you were involved in at your mine during the last three years.• Workplace inspection - a copy of a WHS workplace inspection, task observation or audit, that you carried out and documented for your mine in the last three years.• 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.• 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 last six months.• Delivery of workplace training program (may include mentoring or coaching) - evidence of a WHS related training program in a mining or related field that you were

	<p>involved in developing and delivering for workers in full or part of it at your mine (eg. toolbox talks, shift or work group briefings).</p> <ul style="list-style-type: none"> • Safe work procedure or related document for standard setting - a copy of a safe work procedure or related document for standard setting (eg. work instruction, work order job detail) that you actioned at your mine during the last three years. <p>For more information about portfolio requirements, refer to <u>Portfolio requirements: certificate of competence examination process</u></p>
<p>Identify verification</p>	<p>Refer to the <u>Factsheet: Certifying documents and verifying identity</u></p>

2. Written examination details

The written examination consists of the following papers:

PAPER	METHOD OF EXAMINATION	DURATION OF PAPER
CEE3 – Legislation, Australian Standards and electrical engineering applicable to open-cut mining	Closed book	3 hours

2.1 CEE3 – Legislation, Australian Standards and electrical engineering applicable to open-cut mining

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

- 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.

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 engineer of coal mines other than 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.

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