

## Form #4

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TITLE 48  
LEGISLATIVE RULE  
BOARD OF MINER TRAINING, EDUCATION, AND CERTIFICATION  
SERIES 7  
RULES AND REGULATIONS GOVERNING THE STANDARDS  
FOR CERTIFICATION OF COAL MINE ELECTRICIANS

§ 48-7-1. General.

1.1. Scope. -- This legislative rule establishes standards for certification of persons performing electrical work in coal mines.

1.2. Authority. -- W. Va. Code § 22A-7-6.

1.3. Filing Date. --

1.4. Effective Date. --

§ 48-7-2. Definitions.

2.1. Electrical work -- The term "electrical work" means work consisting primarily of electrical construction, installation, testing, inspection, maintenance and repair tasks on electrical coal mining equipment, apparatus, circuits, and/or distribution circuits used in or around a coal mine.

(a) Listed below are examples of work that are required to be performed by a certified electrician or apprentice electrician, under the supervision required by Section 4.1(d) of this rule:

- (1) Locating faults in cables;
- (2) Installation of couplers on the end of cables;
- (3) Repair of electric components of electrically powered portable, mobile or stationary equipment;
- (4) Installation of electric wiring (excluding mine trolley wire);
- (5) Electrical maintenance of permissible equipment;
- (6) Any type of work performed inside transformers, power centers, rectifiers, switch boxes, switch houses, panels and other enclosures of electrical equipment or conductors; and
- (7) Electrical troubleshooting and testing.

(b) Listed below are examples of work, ~~which~~ that are not required to be performed by a certified electrician or apprentice electrician:

- (1) Operation of electric equipment;
  - (2) Normal operation of control switches, switch boxes, or circuit breakers: Provided that no energized parts or conductors are exposed;
  - (3) Operation of cutout switches in trolley circuits;
  - (4) Hanging or removing fuse nips on or from trolley wires;
  - (5) Changing bits;
  - (6) Lubrication;
  - (7) Handling energized trailing cables;
  - (8) Inserting low and medium-voltage cable couplers from receptacles;
  - (9) Transportation of electric equipment and cables;
  - (10) Mechanical repairs on electrically powered equipment: Provided that no energized parts or conductors are exposed;
  - (11) Installation and repair of equipment and circuits in which shock hazards do not exist (having a normal rating of 40 volts or less when energized): Provided that such equipment is not required to be permissible;
  - (12) Installation, repair and guarding of trolley feeder wires when de-energized;
  - (13) Re-insulating or taping cables when no conductors or bare wires are exposed;
- and,
- (14) Replacing blown fuses on trolley poles and nips.

2.2. Work Area -- The term "work area" means the area in a mine within five-hundred (500) feet in any direction of the area in a mine where electrical work is being performed.

2.3. Certified Electrician -- The term "certified electrician" means any person who is:

(a) qualified as a mine electrician, and who has passed an examination administered by the Office of Miners' Health, Safety and Training and has satisfactorily completed a coal mine electrical training program approved by the MHST Office of Miners' Health, Safety and Training; or, any person who

(b) has at least three (3) years of experience ~~in~~ performing electrical work in an underground ~~in a~~ coal mine, ~~in~~ on the surface work areas of an underground coal mine, ~~in~~ on a surface coal mine, in a non-coal mine, in the mine equipment manufacturing industry, or in any other industry using or manufacturing similar equipment, and who has passed a certification examination administered by the Office of Miners' Health, Safety and Training; or

(c) any person who is qualified as a mine electrician in any state that recognizes certified electricians licensed in West Virginia.

2.4. Direct Supervision -- The term "direct supervision" means the supervision of an apprentice electrician by a certified electrician in the work area where electrical work is being performed.

2.5. Immediate Supervision -- The term "immediate supervision" means the physical presence of a certified electrician with the apprentice electrician.

2.6. Certified Person -- The term "certified person" when used to designate the kind of person to whom the performance of duty in connection with the operation of a mine shall be assigned, means a person who is qualified under the provisions of the law to perform such duty. (Refer to W. Va. Code §22A-1-2(d)(3)).

2.7. Qualified Person -- The term "qualified person" means a person who has completed an examination and is considered qualified on record by the Office of Miners' Health, Safety and Training. (Refer to W. Va. Code §22A-1-2(d)(6)).

2.8. Approved -- The term "approved" means in strict compliance with mining law, or in the absence of law, accepted by a recognized standardizing body or organization whose approval is generally recognized as authoritative on the subject. (Refer to W. Va. Code §22A-1-2(a)(3)).

2.9. Apprentice Electrician -- The term "apprentice electrician" means an individual who is the holder of an apprentice electrician's card, and is in training to perform maintenance work on electrical circuits or electrically operated equipment.

2.10. Certification Examinations -- The term "certification examinations" means the examinations in specific categories within these regulations which have been approved by the Board of Miner Training, Education, and Certification, and which are administered by the Office of Miners' Health, Safety and Training.

#### § 48-7-3. Classifications of Electrical Certification.

3.1. Classifications of Certification -- After the effective date of this rule, electrical certification shall be issued only for low, medium and high voltage.

Apprentice electricians may become certified electricians by the methods of certification as provided in Section 4 of this rule.

#### § 48-7-4. Qualifications.

4.1. Apprentice Electrician. A person becoming an apprentice electrician shall be issued an apprentice electrician's card by the Office of Miners' Health, Safety and Training upon verification by the employer who verifies that the person has attended an eight (8) hour classroom training course in the hazards of electricity, has been issued an experienced miner card, and is to be trained in accordance with this rule or an alternative electrical training program

established and approved pursuant to 48-8-8.3, for the next twelve (12) months. Electrical contractors, employees of preparation plants and employees working on the surface areas which do not require a miners' certification may become an apprentice electrician provided they are enrolled in an approved electrical training program for a twelve (12) month period or in an alternative apprentice electrical program as set forth in 48-8-8.1. After becoming a certified electrician, if he or she obtains employment in a job that requires an underground miner or surface miner certificate he or she must perform electrical work under the direct supervision of a person who is a certified electrician and is also a certified miner. A written record shall be kept at the work site reflecting the electrical work performed. After the employee has obtained ninety six (96) hours in the related electrical work, worked at least six (6) months and one hundred eight (108) shifts, and successfully passed the miners' certification test then he or she would be qualified to perform duties as an unsupervised certified electrician.

(a) During the twelve (12) month training period the apprentice electrician shall complete an approved forty (40) hour classroom training program comprised of the following subjects:

- (1) State and Federal mining laws which apply to electricity;
- (2) Permissibility;
- (3) AC and DC theory;
- (4) Basic electricity;
- (5) Schematic reading;
- (6) Gas detection and fire prevention; and,
- (7) National Electric Code.

(b) Twenty percent (20%) of the twelve (12) month training shall be involved directly with electrical work.

(c) All of the apprentice electrician's training experience shall be logged and kept by the operator with the ~~operator~~ supervising certified electrician and ~~the~~ apprentice both validating the experience by signatures and certification numbers. Log sheets used for recording the required experience must be on a form approved by the Director of the Office of Miners' Health, Safety and Training. Records verifying an apprentice's electrical experience shall be presented prior to testing for electrical certification.

(d) All energized electrical work performed by an apprentice electrician shall be done under the immediate supervision of a certified electrician. All other electrical work performed by an apprentice electrician shall be done under the direct supervision of a certified electrician. ~~in-All work area to be performed by the apprentice electrician shall be examined by a certified electrician prior to any work being performed, and again prior to the circuits or equipment being energized and returned to service. Testing and/or troubleshooting electrical problems on~~

~~energized electrical circuits may be performed by an apprentice electrician under the immediate supervision of a certified electrician.~~

4.2. Electrician (Low, medium and high voltage). A person may become certified as a low, medium, and high voltage electrician when the person has at least twelve (12) months of experience in performing electrical work as an apprentice electrician, has worked with low, medium, and high voltage, (at least twenty ~~(20%)~~ percent (20%) of the required electrical experience during the twelve (12) month training program shall be directly related to high voltage) and has satisfactorily passed the electrical certification examination. The low, medium and high voltage certified electrician is permitted to perform all types of electrical work at any mining operation.

4.3. If an apprentice electrician is unable to obtain the experience that is directly related to high voltage due to the lack of high voltage equipment that is available, the apprentice may at the discretion of the Director complete a high voltage training program prescribed by the Board of Miner Training Education and Certification and approved by the Director of the WV Office of Miners' Health, Safety and Training.

4.4. Degree in Electrical Engineering. A person who has a Bachelor's Degree or Associate Degree in electrical engineering from an accredited college or university, and has at least six (6) months of experience in performing electrical work under the supervision of a certified electrician may be permitted to become certified as an electrician when the person has satisfactorily passed the electrician certification examination.

4.5. Electrical Training Programs Already in eEffect. All persons training to become certified electricians prior to the effective date of ~~these~~ this rules ~~and regulations~~, shall be allowed to continue training and shall become certified as an electrician after the completion of one (1) years experience in performing electrical work under the supervision of a certified electrician and after successful passage (at least eighty (80%) percent score) of the certification examination. Experience log sheets verifying electrical work performed prior to the effective date of this rule shall be accepted so long as they comply with the requirements of the prior rule. However, all electrical work performed on or after the effective date of this rule, shall be verified on log sheets that comply with the requirements of this rule. Any person ~~starting~~ who begins training to become a certified electrician on or after the effective date of these rules, shall comply with the applicable provisions of this rule.

4.6. Prior Certification. All valid electrical certifications issued by the Department of Mines or the Department of Energy prior to the effective date of this rule shall remain valid. Any person holding a prior certification and wishing to be certified in another category must:

- (1) document his experience;
- (2) successfully pass any other portion of the electrical certification examination not previously taken for low, medium, and high voltage as required in Section 5 this rule; and,
- (3) successfully pass the hands-on (skill) portion of the electrical certification examination.

4.7. Similar Experience. A person who has at least three (3) years of experience in performing electrical work in an underground coal mine, on the surface work areas of an underground coal mine, on a surface coal mine, in a non-coal mine, in the mine equipment manufacturing industry, or in any other industry using or manufacturing similar equipment may file an application and challenge the electrical certification test to become a certified electrician. If the experience is properly documented and approved by the Director or his authorized representative then the applicant may test to become a certified electrician.

§ 48-7-5. Examinations.

5.1. Electrician examination for low, medium, and high voltage. Examinations for low, medium, and high voltage electrician certification shall consist of eight (8) parts:

- (a) Direct current theory and application;
- (b) Alternating current theory and application;
- (c) Electric equipment and circuits;
- (d) Permissibility of electric equipment;
- (e) Legal requirements -- State and Federal laws;
- (f) National Electric Code;
- (g) Dangers of high voltage; and
- (h) Hands-on (skill).

5.2. In order to pass the electrical certification examination, the applicant must score at least eighty percent (80%) in parts (a) through (g), and must pass part (h). The hands-on (skill) part (h), is graded on a pass/fail basis.

5.3. An applicant who fails to pass the examination must reapply to take the examination within thirty (30) days after notification of a failing score. An applicant who fails the examination two (2) times must receive at least forty (40) hours of additional classroom training as provided in Section 4.1(a) of these rules prior to retaking the examination. An applicant who fails the examination the third time must repeat the twelve (12) month apprentice program as required in Section 4.1 of this rule.

§ 48-7-6. Certification Procedures.

6.1. Application for certification. Prior to taking an examination for certification an individual must submit an application to the Office of Miners' Health, Safety & and Training to take the examination. The application must be submitted to the Office of Miners' Health, Safety and Training within thirty (30) days of completion of the apprentice training program.

6.2. Upon receipt of an application for examination, the Office of Miners' Health, Safety and Training shall provide for the applicant to be examined at the next available examination, which is at least fifteen (15) days from receipt of the application, and shall inform the applicant of the time and place for examination. Within fifteen (15) days after the completion of the examination, the Office of Miners' Health, Safety and Training shall inform the applicant of his or her score.

6.3. Certification. Upon determination that an applicant for certification has satisfactorily passed the examination for certification, and has presented proper documented electrical experience, the Office of Miners' Health, Safety and Training shall promptly issue the electrical certification to the applicant.

Effect of certification. Except where otherwise provided in this rule, no person may perform electrical work:

- (a) until such person has become a certified electrician to perform such work; or,
- (b) unless such work is performed by an apprentice electrician under the direct supervision or immediate supervision of a certified electrician; or,
- (c) unless such work is performed on circuits of forty (40) volts or less.

6.4. This provision does not prohibit a person already being trained prior to the effective date of these rules, to continue to perform electrical work under the direct supervision of a certified electrician until he has met the experience requirements.

#### § 48-7-7. Exceptions.

7.1. Mining equipment manufacturer's service representatives are not required to be certified as mine electricians or apprentice electricians in order to perform work on equipment which is manufactured or serviced by the company they are representing. Such individuals are considered to be persons trained to perform electrical work and to maintain electrical equipment. When work is performed by manufacturer's service representatives who are not a certified electrician or an apprentice electrician, such work shall be performed under the direct supervision of a certified electrician and the completed work is to be examined by a certified electrician before the machine or equipment is placed in service.

7.2. Certification from other States. Any person holding a mine electrician certification issued by any other state may act in the capacity of electrician until the next available electrical certification examination is held by the Office of Miners' Health, Safety and Training, but for a period not to exceed a maximum of ninety (90) days.

#### § 48-7-8. Criteria for Apprentice Electrical Training Program.

8.1. Apprentice electrician card. An apprentice electrician card shall be issued by the Office of Miners' Health, Safety and Training when applied for by the miner, with a statement from the mine operator stating that the applicant has attended an eight (8) hour classroom training course in the hazards of electricity, has been issued an experienced miner card, and will be in an



approved electrical training program or in an alternative electrician training program established and approved pursuant to Section 8.3., for the next twelve (12) months. The apprentice electrician card will be issued for ~~twelve (12) months~~ eighteen (18) months and may be extended for valid reasons by the Office of Miners' Health, Safety and Training.

8.2. Approved electrical training program. A minimum of forty (40) hours of classroom training is required, and shall cover the following subjects:

- (a) State and Federal laws which apply to electricity;
- (b) Permissibility;
- (c) AC and DC theory;
- (d) Basic electricity;
- (e) Schematic reading;
- (f) Gas detection.

The twelve (12) month training program shall include electrical and mechanically related work, with twenty percent (20%) of the twelve (12) months being involved directly with electrical work. The apprentice must attend at least eighty ~~(80%)~~ percent (80%) of all regularly scheduled days during the twelve (12) month training program.

8.3. Criteria and standards for alternative electrical training programs must be adopted by unanimous approval of the Director and the Board of Miner Training, Education and Certification. An alternative electrical training program will not become effective until approved by the Secretary of State as an emergency rule or by the Legislature as an amendment to this rule.

8.4. Failure to complete apprentice training. If for valid reasons accepted by the Director, an apprentice electrician is unable to complete the twelve (12) month apprentice training program within twelve (12) consecutive months, the Director may permit the individual a time extension to complete the required training: Provided, that the time period extension may not exceed two (2) years.

#### § 48-7-9. Annual Training.

9.1. Electrical refresher training. In order to maintain electrical certification, an individual must complete annually an approved eight (8) hour refresher course. The course shall include but not be limited to permissibility, state and federal law, safety in job performance and training on equipment applicable to the card holders' work.

9.2. Failure to maintain electrical certification. An individual who fails to attend the required annual refresher training is required to retake the electrical certification examination and the hands-on (skill) portion of the examination. Upon scoring at least eighty percent (80%) on

each subject of the initial examination, and successful passage of the hands-on portion of the examination, the individual will be issued a new electrical certification card.

9.3. This provision will not apply to an individual who was unable to take the annual electrical refresher training for valid reasons accepted by the Director. The individual must, however, complete eight (8) hours of refresher training within ninety (90) days after returning to work.