

**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 ~~§22-1-15.~~ 22A-7-8.

1.3. Filing Date. -- ~~May 1, 1987.~~

1.4. Effective Date. -- ~~May 1, 1987.~~

§48-7-2. Definitions.

2.1. Electrical work -- The term "electrical work" ~~shall mean~~ 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 these rules:

- (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;
- (7) Electrical troubleshooting and testing.

(b) Listed below are examples of work ~~that is~~ which 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~~ **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 deenergized;
- (13) ~~Reinsulate or tape~~ Reinsulating or taping cables when ~~there are~~ no conductors or bare wires ~~showing~~ are exposed; and,
- (14) ~~Replace~~ Replacing blown fuses on trolley poles and nips.

2.2. Work Area -- The term "work area" means 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 ~~an individual~~ any person who is :

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

(b) has at least three (3) years of experience in performing electrical work underground in a coal mine, in the surface work areas of an underground coal mine, in a surface coal mine, in a noncoal mine, in the mine equipment manufacturing industry, or in any other industry using or manufacturing similar equipment, and who has satisfactorily completed a coal mine electrical training program approved 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-1A-1~~ 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 ~~Department of Energy~~ Office of Miners' Health, Safety and Training. (Refer to W. Va. Code §~~22A-1A-1~~ 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-1A-1~~ 22A-1-2(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 ~~Department of Energy~~ Office of Miners' Health, Safety and Training.

§48-7-3. Qualifications for Classifications of Electrical Certification.

3.1. ~~Qualifications~~ Classifications of Certification -- After the effective date of these rules ~~and regulations~~, electrical certification shall be ~~in the following categories~~ issued only for low, medium and high voltage.

(1) ~~Electrician (Low, medium and high voltage)~~

(2) ~~Electrician (Low and medium voltage)~~

Apprentice electricians may become certified electricians ~~in any or all of the above categories~~ by the methods of certification as provided in Section 4 of these rules ~~and regulations~~.

§48-7-4. Qualifications.

4.1. Apprentice Electrician. A person becoming an apprentice electrician ~~to be trained to perform work on electrical circuits or electrically operated equipment~~ shall be issued an apprentice electrician's card by the Office of Miners' Health, Safety and Training upon verification by the employer that the ~~individual person~~ individual person has attended an eight (8) hour classroom training course in the hazards of electricity; and is to be trained in accordance with these rules ~~and regulations~~ for the next twelve (12) months.

(a) During the twelve (12) month training period the apprentice electrician shall complete an approved forty (40) hour classroom training program ~~concerning the subjects of~~ 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 ~~directly~~ involved directly with electrical work.

(c) All ~~types of the apprentice electrician's~~ types of the apprentice electrician's training experience shall be logged and kept by the operator ~~specifically for apprentice experience~~ with the operator and apprentice both validating the experience by signatures. Records verifying an apprentice's electrical experience shall be presented prior to testing for electrical certification.

(d) All electrical work performed by an apprentice electrician in the work area 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 ~~such~~ 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 of the required electrical experience during the twelve (12) month training program shall be directly related to high voltage) and has satisfactorily passed a 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. Electrician (Low and medium voltage). A person may become certified as a low, medium, and high voltage electrician when such person has at least twelve (12) months experience in performing electrical work as an apprentice electrician, has worked with low, medium, and high voltage, (at least 20% of the required electrical experience during the twelve (12) month training program shall be directly related to high voltage) and has satisfactorily passed a certification examination.~~

~~(NOTE: The low, medium, and high voltage certified electrician is permitted to perform all types of electrical work at any mining operation).~~

On and after the first day of July, two-thousand one, the Office of Miners' Health, Safety and Training will no longer issue electrical certifications for the "low and, medium voltage" classification. Persons holding certification as "low and medium voltage" electricians must upgrade their electrician certification to "low, medium and high voltage" by the thirty-first day of December, two thousand one (December 31, 2001), either by the method provided in subsection four, section four (4.4) of this series, or by completing a high-voltage training program prescribed by the Board of Miner Training, Education and Certification and approved by the Director of the Office of Miners' Health, Safety and Training.

4.4. Low and Medium Voltage Certification to Low, Medium, and High Voltage Electrician Certification. A person certified as a low and medium voltage electrician shall have four (4) months of experience, at least ten (10) percent of which must be in performing high voltage work, and shall satisfactorily pass that portion of the "dangers of high voltage" portion of the electrician certification examination with a score of at least eighty (80%) percent. ~~period of time the low and medium voltage electrician is working on high voltage, he shall work under the direct supervision of a certified low, medium, and high voltage electrician. The high voltage electrical work performed by the low and medium voltage electrician shall be examined by a certified low, medium and high voltage electrician before the circuits or equipment are energized and returned to service. The high voltage electrical work performed by a certified low and medium voltage electrician shall be directly supervised by a certified low, medium and high voltage electrician who shall inspect the high voltage electrical work prior to energizing and returning the high voltage circuits or equipment to service.~~

The high voltage electrical experience of the low and medium voltage electrician shall be logged by the operator in a record book specifically for that purpose during the four (4) month training period.

4.5. 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 ~~(low, medium, and high voltage, or low and medium voltage)~~ when ~~such~~ the person has satisfactorily passed a the electrician certification ~~examined for such category~~ examination.

4.6. Electrical Training Programs Already in Effect. All person in training to become certified

electricians prior to the effective date of these rules and regulations, shall be allowed to continue training and become certified as an electrician after the completion of one 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.

Any person starting training to become a certified electrician on or after the effective date of these rules ~~and regulations~~, shall comply with the applicable provisions of these rules ~~and regulations~~.

4.7. Prior Certification. All valid electrical certifications issued by the Department of Mines or the Department of Energy prior to the effective date of these regulations 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 and medium voltage or low, medium, and high voltage as required in Section 5 of these regulations; rules; and,~~
- (3) successfully pass the hands-on (skill) portion of the electrical certification examination.

(EXAMPLE: ~~Prep plant to low, medium, and high voltage~~).

§48-7-5. Examinations.

~~5.1. Electrical examinations for Low, Medium Voltage. Examinations for low and medium voltage electrician certifications shall consist of seven 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 law;~~
- ~~(f) National Electrical Code; and~~
- ~~(g) Hands on (skill).~~

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

~~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 regulations, 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 these regulations.~~

~~5.2~~ 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).

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 ~~only~~.

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 ~~regulations~~ 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 these ~~regulations~~ rules.

§48-7-6. Certification Procedures.

6.1. Application for certification. Prior to taking an examination for certification ~~in any of the categories listed in Section 3.1 of these regulations~~, an individual must submit an application to the Department of Energy Office of Miners' Health, Safety & Training to take ~~such the~~ the examination ~~in the form provided in Appendix A of these regulations~~. ~~Such The~~ application must be submitted to the Department of Energy Office of Miners' Health, Safety and Training within thirty (30) days of completion of the apprentice training program.

Upon receipt of an application for examination, the Department of Energy 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 days from receipt of the application, and shall inform the applicant of the time and place for examination. Within fifteen days after the completion of the examination, the Department of Energy Office of Miners' Health, Safety and Training shall inform the applicant of ~~this~~ his or her score ~~upon the examination~~.

6.2. Certification. Upon determination that an applicant for certification has satisfactorily passed ~~an the~~ examination for certification ~~in any category listed in Section 3.1 of these regulations~~, and has presented proper documented electrical experience, the Department of Energy Office of Miners' Health, Safety and Training shall promptly issue electrical certification to ~~such individual a certificate indicating that he has been~~

~~certified in the particular category for which he has applied~~ the applicant.

6.3. Effect of certification. Except where otherwise provided in these ~~regulations~~ rules, no person ~~shall~~ 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.

This provision does not prohibit a person already being trained prior to the effective date of these ~~rules and regulations~~, to continue to perform electrical work under the direct supervision of a certified electrician until he has met the experience requirements. ~~(See Section 4.)~~

§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 Department of Energy, 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 ~~West Virginia Department of Energy~~ Office of Miners' Health, Safety and Training when applied for by the miner, with a statement from the mine operator stating that the ~~miner~~ applicant will be in an approved electrical training program for the next twelve (12) months. The apprentice electrician card will be issued for twelve (12) months and may be extended for valid reasons by the ~~Department of Energy~~ 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~~ will shall include electrical and mechanically related work, with twenty percent (20%) of the twelve (12) months being ~~directly~~ directly involved with electrical work. ~~(NOTE: Twelve (12) month training is at least eighty percent (80%) of all regularly scheduled days in twelve (12) months.)~~ The apprentice must attend at least eighty (80%) percent of all regularly scheduled days during the twelve (12) month training program.

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

§48-7-9. Annual Training.

9.1. Electrical ~~retraining~~ refresher training. In order to maintain electrical certification, an individual must complete ~~an annual~~ annually an approved eight (8) hour refresher course. The course ~~will~~ 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. ~~A minimum of eight (8) hours of refresher training will be required regardless of the number of cards held.~~

9.2. Failure to maintain electrical certification. An individual who fails to attend the required annual refresher training ~~annually will be~~ 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.

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