

October 2007

## LICENSURE, TRAINING, AND CLASSROOM EDUCATION REQUIREMENTS FOR ELECTRICIANS - BACKGROUND MEMORANDUM

Section 2 of House Bill No. 1218 (attached as an [appendix](#)) provides for a study of the licensure, training, and classroom education requirements for electricians in this state; reciprocity agreements with other states and the effect of those agreements on standards in this state; and the effect of the licensure, training, and classroom education requirements and reciprocity agreements on the availability of qualified electricians in North Dakota.

House Bill No. 1218 also changed the requirements for licensure as a journeyman electrician from four years' experience in installing and repairing electrical wiring and equipment to completion of 8,000 hours' experience, which may not be obtained in less than three years. The bill further provided that effective for an applicant for licensure as a journeyman electrician who registers with the State Electrical Board as an apprentice after January 31, 2008, the applicant must have either successfully completed apprenticeship and training approved by the Federal Bureau of Apprenticeship and Training and completed 8,000 hours' experience in installing and repairing electrical wiring, apparatus, and equipment or successfully completed an appropriate course of study, which may not be less than two years or the equivalent of two years, at a board-approved institution of higher education and completed 8,000 hours' experience. The bill authorized the State Electrical Board to determine equivalent hours of education that may be applied as a credit against the 8,000 hours' experience requirement.

### BACKGROUND

North Dakota Century Code Chapter 43-09 provides that the State Electrical Board is responsible for licensing electricians. The State Electrical Board consists of five members appointed by the Governor. Section 43-09-02 provides that one member of the board must represent the public and may not be directly associated with the electrical industry. That section also requires that the board include a master electrician who is a contractor, a journeyman electrician, a consumer member of a rural electric cooperative, and an individual associated with an investor-owned utility.

Section 43-09-09 requires any person that undertakes or offers to undertake with another to plan, lay out, supervise, install, make additions, make alterations, or make repairs, in the installation of wiring, apparatus, or equipment for electric light, heat, or power to apply to the board for a license. The board is required to examine applicants and issue licenses to applicants that meet the qualifications established for that class of licensure.

Section 43-09-11 establishes three classes of licensure and provides the experience and training requirements for those classes. That section provides that an applicant for licensure as a master electrician must have completed one year's experience as a licensed journeyman electrician. The experience requirement for an applicant for a journeyman electrician license, as amended by the Legislative Assembly in 2007, mandates completion of 8,000 hours' experience, which may not be obtained in fewer than three years. An applicant for licensure as a journeyman electrician who registers with the State Electrical Board as an apprentice after January 31, 2008, must have either successfully completed apprenticeship and training approved by the Federal Bureau of Apprenticeship and Training and completed 8,000 hours' experience in installing and repairing electrical wiring, apparatus, and equipment or successfully completed an appropriate course of study, which may not be less than two years or the equivalent of two years, at a board-approved institution of higher education and completed 8,000 hours' experience. An applicant for licensure as a Class B electrician must have 18 months' experience in farmstead or residential wiring.

Section 43-09-13.1 requires an apprentice electrician to register with the State Electrical Board within the first six months of employment. That section limits an apprentice electrician to working on installations only under the personal supervision of a licensed electrician. Under administrative rules adopted by the board, an electrical contractor is required to maintain records of all employees providing electrical work for that electrical contractor.

A license issued to an electrician is valid for one year and may be renewed upon payment of the license fee and proof of successful completion of continuing education as prescribed by the board but not to exceed 16 hours each biennium.

Section 43-09-20 limits the scope of work of a Class B electrician to the installation of farmstead electrical wiring or residential electrical wiring in one or two family dwellings located in municipalities of 2,500 or fewer population, and the installation of electrical equipment, appliances, and apparatus used on farmsteads and one or two family residences in those municipalities.

Section 49-09-25 authorizes the State Electrical Board to grant licenses to licensed electricians from any other state if that state similarly licenses electricians from this state and the other state has licensing qualifications equal to the qualifications required in this state.

## **ELECTRICIAN LICENSING IN OTHER STATES Minnesota**

Under Minnesota law, an applicant for licensure as a journeyman electrician must have completed four years of training. However, the Minnesota Board of Electricity is authorized to provide for the allowance of one year of experience credit for successful completion of a two-year post-high school electrical course approved by the board. An applicant for a license as a master electrician must be a graduate of a four-year electrical course in an accredited college or university; have had at least one year's experience, acceptable to the board, as a licensed journeyman; or have had at least five years' experience, acceptable to the board, in planning for, laying out, supervising, and installing wiring, apparatus, or equipment for electrical light, heat, and power. Minnesota law also provides for the licensure of a power limited technician. To be licensed as a power limited technician, an individual must be a graduate of a four-year electrical course in an accredited college or university; or must have had at least 36 months' experience, acceptable to the board, in planning for, laying out, supervising, and installing wiring, apparatus, or equipment for power limited systems. However, the board may by rule provide for the allowance of up to 12 months (2,000 hours) of experience credit for successful completion of a two-year post-high school electrical course or other technical training approved by the board. Minnesota law requires that a master electrician must directly supervise the work of a power limited technician.

### **Montana**

Under Montana law, an applicant for licensure as a journeyman electrician must have completed at least four years of apprenticeship in the electrical trade or four years of legally obtained practical experience in the wiring for, installing, and repairing of electrical apparatus and equipment for light, heat, and power. Montana law also provides a class of licensure designated as a residential electrician. An applicant for a residential electrician's license is required to furnish written evidence of at least two years of apprenticeship in the electrical trade or two years of legally obtained practical experience in the wiring for, installing, and repairing of electrical apparatus and equipment for light, heat, and power in residential construction consisting of less than five living units in a single structure. An applicant for a master electrician's license is required to provide written evidence of being a graduate electrical engineer of an accredited college or university and of having one year of legally obtained practical electrical experience or that the applicant is a graduate of an electrical

trade school and has at least four years of legally obtained practical experience in electrical work or has had at least five years of legally obtained practical experience in planning, laying out, or supervising the installation and repair of wiring, apparatus, or equipment for electrical light, heat, and power. An apprentice electrician may work only under the supervision of a licensed electrician.

### **South Dakota**

The South Dakota State Electrical Commission has adopted rules establishing experience requirements for electricians. The rules provide that for advancement from an apprentice electrician to a journeyman electrician, an applicant must complete four years of electrical training under the employment and supervision of a licensed electrical contractor or Class B electrician. A journeyman electrician seeking to become a Class B electrician must complete two years of electrical training under the employment and supervision of a licensed electrical contractor or Class B electrician. The rules require that the training must include a minimum of one year in residential or farmstead wiring. To advance from a journeyman electrician to an electrical contractor, an individual must complete two years of electrical experience under the employment and supervision of an electrical contractor in commercial and residential or farmstead wiring and additional training, including the technical knowledge to plan, lay out, and supervise the installation of electrical light, heat, and power in accordance with the National Electrical Code. Under South Dakota law and rule, an apprentice electrician must be personally supervised by a licensed electrician.

## **SUGGESTED STUDY APPROACH**

In conducting this study, the committee may choose to:

1. Review the licensing, training, and classroom education requirements in this state and other states.
2. Receive information regarding training and classroom programs available in this state.
3. Receive information regarding reciprocity in licensing with other states and how changes in training and education requirements in this state affect reciprocity.
4. Receive information regarding the availability of electricians in this state.
5. Develop recommendations and draft legislation, if necessary to implement the recommendations, to provide solutions to any concerns that may be identified.

ATTACH:1