

## **RATIO OF APPRENTICES TO JOURNEYMAN OR MASTER ELECTRICIAN**

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**House Bill 4813 as introduced**  
**Sponsor: Rep. Amanda Price**  
**Committee: Workforce and Talent Development**  
**Complete to 10-14-15**

Analysis available at  
<http://www.legislature.mi.gov>

### **SUMMARY:**

House Bill would amend Section 3e of the Electrical Administrative Act to increase the required ratio of electrical journeyman or master electrician to apprentice from one-to-one to one-to-two, and allow as many as three apprentices per electrical journeyman or master electrician if certain criteria are met. The bill would make other amendatory changes, as detailed below, and would take effect 90 days after it is enacted into law.

Three apprentices would be allowed if at least one of the apprentices had completed at least 432 hours of instruction in an apprenticeship training program approved by the Electrical Administrative Board and had at least 6,000 hours of experience obtained over at least three years related to the electrical construction or maintenance of buildings or electrical wiring or equipment under the direct supervision of an individual licensed under the act.

The bill also would remove a current provision that allows up to two apprentices per electrical journeyman or master electrician if the jobsite is a residential single family dwelling or a multifamily dwelling not exceeding eight units per building. (This would no longer be relevant with the general minimum two-to-one ratio in the bill.)

The bill also requires that the Electrical Administrative Board approve any bona fide apprenticeship training program that is equivalent to, or exceeds the requirements of, those imposed by the Office of Apprenticeship in the US Department of Labor.

The act currently defines the following terms:

"Apprentice electrician": an individual other than an electrical contractor, master electrician, or electrical journeyman, who is engaged in learning about and assisting in the installation or alteration of electrical wiring and equipment under the direct personal supervision of an electrical journeyman or master electrician.

"Electrical journeyman": a person other than an electrical contractor who, as his or her principal occupation, is engaged in the practical installation or alteration of electric wiring. An electrical contractor or master electrician may also be an electrical journeyman.

"Master electrician": a person having the necessary qualifications, training, experience, and technical knowledge to supervise the installation of electrical wiring and equipment in accordance with the standard rules and regulations governing that work.

## **BACKGROUND INFORMATION:**

To become licensed as an electrical journeyman, an individual must be at least 20 years old and do all of the following:

- File a completed application form provided by the Department of Regulatory Affairs (LARA).
- Pay a \$100 examination fee and pass an examination provided for by the board and the LARA.
- Pay the \$40 license fee.
- Meet either of the following:
  - Have at least 8,000 hours of experience obtained over a period of at least four years related to electrical construction or maintenance of buildings or electrical wiring or equipment under the direct supervision of an individual licensed under this act.
  - Served as an interior electrician or in an equivalent job classification while on active duty as a member of the armed forces; be honorably discharged from that military service in the one-year period preceding the date the license application is filed; and have, and provide with the application an affidavit signed by a commanding officer, supervisor, or military superior with direct knowledge of the applicant's service that states that he or she has, at least 8,000 hours of entry-level experience in and basic knowledge of each of the following:
    - General knowledge of the electrical trade, including terminology and the ability to make practical calculations.
    - The determination of system and circuit grounding and design and use requirements for grounding, including choosing proper size grounding conductors.
    - Knowledge of circuit classifications and ratings and design and use requirements for circuits, including branch circuit loads.
    - The determination of ampacity, type of insulation, usage requirements, methods of installation, protection, support, and termination.
    - Knowledge regarding the installation of motors and control circuits.
    - The calculation of electrical loads and determination of proper size, rating, and type of service and feeder conductors.
    - Knowledge regarding fuses, circuit breakers, and all types of protective devices for conductors and equipment.
    - Knowledge of all types of raceways and their uses, including determining proper size, conductor fill, support, and methods of installation.
    - Knowledge of circuits and equipment characterized by usage and electrical power limitations, including differentiating them from electric light and power circuits.
    - Knowledge of all types and applications of lighting fixtures, ratings, requirements for occupancies, special provisions, and clearances.

To become licensed as a master electrician, an individual must be at least 22 years old and do all of the following:

- File a completed application form provided by LARA.
- Pay a \$100 examination fee and pass an examination provided for by the board and department.
- Pay a \$50 license fee.
- Have at least 12,000 hours of experience obtained over a period of six or more years related to electrical construction, the maintenance of buildings, or electrical wiring or equipment under the supervision of a master electrician.
- Have held an electrical journeyman's license for at least two years.

**FISCAL IMPACT:**

The bill would have an indeterminately negative fiscal impact on the Department of Licensing and Regulatory Affairs (LARA) to the extent that LARA would have to develop and maintain a system and procedures for tracking and recording the number of hours of education and experience completed by the approximately 4,100 electrical apprentices registered in the state.

Furthermore, the bill could increase the number of individuals applying for registration as an electrical apprentice as more apprentice jobs at worksites become available; however, the fee for registration as an apprentice are apparently sufficient to offset LARA's costs to process the registration.

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■ This analysis was prepared by nonpartisan House Fiscal Agency staff for use by House members in their deliberations, and does not constitute an official statement of legislative intent.