

**Testimony to the House Workforce and Talent Development Committee
On Behalf of the International Brotherhood of Electrical Workers
Michigan State Conference
March 17, 2016**

Good morning Chairman Johnson and members of the committee. My name is Todd Tennis, and I am here today on behalf of the 15,000 members of the IBEW in Michigan to ask you to oppose House Bill 5436. This bill would expand exemptions contained within the Electrical Administrative Act that would have a negative impact on safety and quality construction in Michigan.

Twenty-five years ago, the issue of electrical licensing requirements for certain mechanical systems was hotly debated. The compromise that emerged at that time allowed for repair and maintenance of these systems to be done by non-electricians. However, the initial installation, which included the construction and design of electrical wiring and connections, would have to be done by a licensed electrician and subject to inspection to verify conformance with the National Electrical Code and in compliance with the NFPA-70E. This compromise has served the state well for over twenty years, and allowed for flexibility in who may perform the repair, alteration and replacement of these systems while preserving safety by ensuring that the initial wiring and construction would be done by a licensed electrician. This is especially important due to the fact that technology and codes in the electrical industry are constantly changing, and only licensed electricians are required to attend training on these changes – changes that non-electricians would not be aware of.

The systems described in this section of the Act go far beyond residential water heaters and furnaces. They include 480-volt industrial pumps and controls, high-voltage lighting panel tie-ins, and boiler emergency-stop wiring that could cause catastrophic accidents if improperly wired. Repair and maintenance on these systems do not normally alter the initial wiring and capacitors that were arranged and installed by licensed electricians – and therefore are less likely to cause accidents. However, allowing non-electricians to perform the initial installation of such systems would seriously undermine the safety and well-being of the owners and inhabitants of affected buildings. For instance, in the case of schools and hospitals, our children and the sick and injured would be at risk.

We sincerely urge the Legislature to retain the original compromise in this section of the law that has served the state well for two decades, and reject House Bill 5436.

Thank you for your consideration.

Entrance Wound

When you are shocked, electricity travels through your body. Severe injuries can show up where the electricity enters and leaves your body.

This picture shows how the resistance of the body turns electricity into heat. This man was lucky to survive since the electricity entered his body so close to his spinal cord.



Exit Wound

Here is a picture of where electricity exited a man's foot.

The charred hole is just the surface of the wound. As the electricity traveled through his foot, it created lots of heat and burned the inside of his foot so much that the doctors had to cut the foot off a few days after the injury.



Internal Injuries

In this picture, the worker was shocked by the metal tool he was using, such as a pair of pliers. The resistance of the metal made it heat up, causing the burnt skin below his thumb.

The visible part of the wound looks bad, but there were severe internal injuries that were not immediately visible. These internal injuries were from the current flowing through his hand.



Internal Injuries

This is the same hand a few days later. As you can see there was so much damage that skin had to be sliced open to make room for all the swelling.

The injury below the burn from the metal tool was caused from heat as well, but the heat in these areas was from the current going through his hand, not the heat of the tool.

