# Electrical Safety in the Home

**Learning Objectives**

By attending this session, participants will be able to:

* Cite codes and rules related to electrical safety that affect weatherization activities.
* Define common electrical terminology.
* Identify common electrical safety hazards in homes.
* State practical solutions to electrical code issues and express when to notify the proper authority.

**Key Terminology**

Codes

DOE Knob and Tube Memorandum 1988

Insulation Contact (IC) rated

International Residential Code (IRC)

Knob and tube wiring

National Electric Code (NEC)

Rules

**Supplemental Materials**

**Handouts & Resources**

Armanda, Larry. “Voltage Drop and Test Equipment.” WTC Technical Update 1.4 (Mar. 2004): Weatherization Training Center at Pennsylvania College of Technology. <www.pct.edu>.

Occupational Safety and Health Standards (OSHA). Regulations (Standards - 29 CFR) 1910 Subpart S.

Hard Copies of sections of Applicable Codes (NFPA, NEC, DOE Guidance).

Department of Energy. Knob and Tube Memorandum 1988. Oct. 21, 1988.

Relevant Standard Work Specifications

1.100.1 – Global Worker Safety  
1.600 – Electrical

**Classroom Props & Activities**

Voltage drop and test equipment

Typical wiring components, including:

* Knob and tube wiring and connections
* Frayed wiring
* Metal junction box

**Class Overview**

* Start lesson by asking students why they think it’s important to know about electrical safety as a weatherization worker.
* Show a short video or photos of the effects of someone who has been electrocuted to drive home the importance of safety when working with and around electrical equipment.
* Pass around electrical components such as various types of conductors (knob and tube wiring, modern house wire, etc.), junction boxes, fuses, and breakers. Describe their functions.