

Lyon-Lincoln Electric Cooperative

609-NEUTRAL TO EARTH INVESTIGATION GUIDELINES

I. Purpose:

To establish guidelines for neutral to earth voltage investigation.

II. Background:

The Cooperative provides electrical energy and service to its members using a multi-grounded current carrying neutral. The multi-grounding of the neutral is on both the primary and secondary. It greatly enhances the safe operation of the distribution system. This system is required by applicable electrical codes and standards.

The multi-grounded neutral carries current and voltage. The voltage is a normal system condition and can be measured on all primary and secondary neutral conductors. The level of voltage will vary depending on loads and the member's own electrical service including wiring, grounding, and electrical equipment.

This type of neutral connection has been, is, and will be the standard for all points of service.

III. Guidelines for Investigation:

If at any time the member suspects or is concerned about neutral to earth voltage, the member shall immediately notify the Cooperative. Upon inquiry or request from a member, the Cooperative shall conduct a stray voltage investigation. The Cooperative will respond promptly upon receiving a request. The Cooperative uses as testing guidelines the testing protocols and methods of the Wisconsin Public Service Commission, the United States Department of Agriculture's Redbook Handbook, Idaho Public Service Commission's testing protocols, and various publications from the Midwest Rural Energy Council. Testing will be limited to the testing prescribed in the guidelines referred to herein.

Various tests and re-testing may be required. Each member shall grant the Cooperative access to the farm and access to the secondary system for the purpose of testing and any re-testing as may be required. The Cooperative may bring in third parties to conduct or assist in the testing.

If the member has conducted testing, the member shall cooperate and provide the Cooperative with the test data obtained by the member or the member's consultants. The Cooperative shall also provide the member with its test data.

The Cooperative will endeavor to reduce animal contact voltages consistent with the guidelines referred to herein.

IV. Non-Standard Service:

After investigation, if the member seeks to reduce animal contact voltages below the guidelines referred to above, the Cooperative will separate the primary and secondary neutral and install a neutral isolator provided the member enters into an agreement for the non-standard service. The cost of installation of the non-standard service shall be borne by the member in accordance with a non-standard service agreement. The material and devices used in providing the non-standard service will be owned and maintained by the Cooperative.

Approved by the Board of Directors _____
Board President

Adopted: March 30, 2015