

HOW TO: Do **Fall of Potential** (FOP)

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1. Required Equipment:

- A. Megger DET 2/2
- (with ground rods, connectors and wire)



- C. Hammer
- D. Tape Measure

2. Safety Requirements for testing:

A. Before beginning testing, review the following items:

1. Become familiar with testing area. Review inverters locations and soil conditions
2. Job Hazard Analysis (J.H.A.)
 - a. Ensure voltage and current exposures are listed on JHA.
 - b. Have all required PPE.
 - c. Get JHA reviewed by E Light's Director of Safety and Loss Prevention.
 - d. Create a site specific procedure on how task will be accomplished.

Note: This document is not site-specific and only a general procedure on how to perform I. R. scans.

- e. Get procedure reviewed by E Light's Director of Safety and Loss Prevention.

3. Testing:

Note: Test will require two people (testing technician will be the tester and a laborer will be the spotter).

A. Inspect all equipment (Megger) and all accessories (leads, connectors, etc.).

B. Inspect Skid.

1. Insure all bonding ground cables are not connected to Pad/Skid
2. Open PAD/SKID equipment and ensure the ground cable is not connected.
3. Secure ground cables.
4. Select a ground, preferably the test well, and measure 150 feet in a straight line.

Note: chose north, south east or west, making note of compaction for least resistance readings

E. Make marks at 15 feet intervals until it reaches 150 feet.

1. Insert a ground rod 12 inches into the ground at every marked interval.
2. If the ground is hard, add water around rod.

F. Connect cables for Testing

1. Connect the P1 cable to the back of Megger and connect it to the zero feet rod.
2. Connect the C1 cable to the back of Megger and connect it to the zero feet rod.
3. Connect the C2 cable to the back of Megger and connect it to the 150 rod.
4. Connect the P2 cable to the back of Megger and connect it to the 15' rod.

G. Turn on the Megger DET2/2 by placing the dial on the LOCK setting.

1. Read resistance reading.
2. Record results on E Light form.

H. Repeat steps F-G for all rods

Note: Turn off Megger after each test.

I. Once all tests have been completed, turn off Megger DET2/2.

1. Remove all test leads from all rods.
2. Remove ground rods.

J. Replace original grounds.

K. Close Inverter and transformer doors.

L. Clean up area.

4. Troubleshooting:

If readings are off, re insert rods in other areas, maintaining 15' span, and retest
(lay out rods in different heading, again make note of soil compaction for least resistance)

5. Report:



A. Form

