Electrical safety position/guidance paper 2018-02

ISSUED August 30, 2018

This guidance represents the consensus understanding of the Electrical Safety Task Group of the EFCOG Worker Safety and Health Subgroup

REFERENCE

NFPA 70E- 2018 Section 120.5(8)

BACKGROUND

NFPA 70E – 2018 section 120.5(8) states: "Where the possibility of induced voltages or stored electrical energy exists, ground the phase conductors or circuit parts before touching them. Where it could be reasonably anticipated that the conductors or circuit parts being de-energized could contact other exposed energized conductors or circuit parts, apply temporary protective grounding (TPG) equipment in accordance with the following:"

QUESTION

Can you clarify the terms "ground" and "temporary protective ground" (TPG) and under what circumstances a ground is installed versus a temporary protective ground?

ANSWER

The term "*ground"* as used in the first sentence of NFPA 70E – 2018 section 120.5(8) refers to a conducting connection between an electric circuit or equipment and earth; installed as a means to remove induced voltages, or stored electrical energy and is not a temporary protective ground as referred to in the second part of 120.5(8).

A "*temporary protective ground"* (TPG) as used in the second sentence of NFPA 70E – 2018 section 120.5(8) refers to a grounding method installed where it could be reasonably anticipated that the de-energized conductors or circuit parts could contact other exposed energized conductors and circuit parts or become re-energized by its normal source or any other source that could introduce a hazard due to a short circuit and an associated fault current.

- A TPG is not required where de-energized conductors and circuit parts are isolated using an approved lockout tagout (LOTO) process and it is not reasonably anticipated that the conductors or circuit parts could contact other exposed energized conductors or circuit parts. A TPG used in utilization equipment is uncommon due to all sources of energy being isolated under LOTO.
- However, a ground as defined above (not a TPG) may be installed at times to remove induced or static voltages and is not subject to the requirements of NFPA 70E – 2018 section 120.5(8)(a), (b), or (c).

Note: Additional measures may be needed to protect the employee from a startle or reaction hazard if contact with induced voltages or stored energy is likely.

Note: This guidance addresses facility utilization equipment under the jurisdiction of NFPA 70E only and does not supersede nor negate the temporary protective grounding requirements found in 29 CFR 1910.269(n) - Electric power generation, transmission, and distribution.