

TREE TRIMMING OPERATIONS, 16VAC25-73

16VAC25-73-50. Electrical hazards.

A. General.

1. All overhead and underground electrical conductors and all communication wires and cables shall be considered energized with potentially fatal voltages. This section does not apply to line-clearance tree trimming as defined in 16VAC25-73-20, that shall be conducted in accordance with 16VAC25-90-1910.269. Nonline-clearance tree trimming work around overhead high voltage lines covered by §§ 59.1-406 through 59.1-414 of the Code of Virginia, Overhead High Voltage Line Safety Act (Act) (voltage in excess of 600 volts as defined in the Act), shall be conducted in accordance with the Act. Nonline-clearance tree trimming work around overhead electrical lines of 600 volts or less not covered by the Act shall be conducted in accordance with 16VAC25-90-1910.333(c)(1).

2. The employer shall certify in writing that each employee has been trained to recognize and is appropriately qualified to work within proximity to electrical hazards that are applicable to the employee's assignment.

3. Arborists and other workers shall be instructed that:

a. Electrical shock will occur when a person, by either direct contact or indirect contact with an energized electrical conductor, energized tree limb, tool, equipment, or other object, provides a path for the flow of electricity to a grounded object or to the ground itself. Simultaneous contact with two energized conductors phase to phase will also cause electric shock that may result in serious or fatal injury.

b. Electrical shock may occur as a result of ground fault when a person stands near a grounded object (for example, if an uninsulated aerial device comes into contact with a conductor with outriggers down).

c. In the event of a downed energized electrical conductor or energized grounded object, there exists the hazard of step potential.

B. Working in proximity to electrical hazards.

1. The items contained in subsection A of this section shall always be included in the review of this section. Sections 59.1-406 through 59.1-414 of the Code of Virginia, Overhead High Voltage Line Safety Act (Act), are hereby incorporated by reference, and apply as specified in the Act anytime the voltage of overhead high voltage lines exceeds 600 volts as defined in the Act. The Act does not apply anytime line-clearance] activities are performed by the employees of the owner or operator of the electrical or communication systems, or independent contractors engaged on behalf of the owner or operator of the system to perform the work.

2. An inspection shall be made by a qualified arborist to determine whether an electrical hazard exists before climbing, otherwise entering, or performing work in or on a tree.

3. Only qualified line-clearance arborists or qualified line-clearance arborist trainees shall be assigned to work where an electrical hazard exists. Qualified line-clearance arborist trainees shall be under the direct supervision of qualified line-clearance arborists. A qualified line-clearance arborist trainee shall not serve as a ground observer for another qualified line-clearance arborist trainee who is engaged in line clearing operations aloft, unless a qualified arborist is also present at the work site.

4. All other arborists and other workers shall maintain a minimum approach distance from energized electrical conductors in accordance with Table 1.

TREE TRIMMING OPERATIONS, 16VAC25-73

16VAC25-73-50. Electrical hazards, CONTINUED

Table 1. Minimum approach distances to energized conductors for persons other than qualified line-clearance arborists/trainees

Nominal voltage in kilovolts (kV) phase to phase*	Distance	
	ft-in	M
0.0 to 1.0	10-00	3.05
1.1 to 15.0	10-00	3.05
15.1 to 36.0	10-00	3.05
36.1 to 50.0	10-00	3.05
50.1 to 72.5	10-09	3.28
72.6 to 121.0	12-04	3.76
138.0 to 145.0	13-02	4
161.0 to 169.0	14-00	4.24
230.0 to 242.0	16-05	4.97
345.0 to 362.0	20-05	6.17
500.0 to 550.0	26-08	8.05
785.0 to 800.0	35-00	10.55

*Exceeds phase to ground per 29 CFR 1910.333.

5. Branches hanging on an energized electrical conductor shall be removed using nonconductive equipment.

6. The tie-in position shall be above the work area and located in such a way that a slip would swing the arborist away from any energized electrical conductor or other identified hazard.

7. While climbing, the arborist shall climb on the side of the tree that is away from energized electrical conductors while maintaining the required distances shown in Table 1 .

8. Footwear, including lineman's overshoes or those with electrical-resistant soles, shall not be considered as providing any measure of safety from electrical hazards.

9. Rubber gloves, with or without leather or other protective covering, shall not be considered as providing any measure of safety from electrical hazards.

10. A rope that is wet, that is contaminated to the extent that its insulating capacity is impaired, or that is otherwise not to be considered insulated for the voltage involved shall not be used near exposed energy lines.

11. Ladders, platforms, and aerial devices, including insulated aerial devices, shall be subject to minimum approach distances in accordance with Table 1.

12. Aerial devices with attached equipment (such as chippers) brought into contact with energized electrical conductors shall be considered energized. Contact by people and/or equipment shall be avoided.

13. Emergency response to an electric contact shall be performed in accordance with 16VAC25-73-40.C.