

Appalachian Power Company Policy / Procedure No. 19:
Service Restoration

1) Statement of policy:

Employees patrolling outaged power lines shall contact the DDC to log onto the circuit before commencing patrol and employ all reasonable means to assure that nobody else is patrolling the line in question. An employee who is working alone on an extended foot patrol should, in addition to logging on to the circuit with the DDC, provide an estimated time for completion of the line patrol. Employees performing line-patrolling duties (including Hazard Assessors) shall use a PVD or other approved voltage detection device to warn them when getting near an energized line.

- The DDC must be contacted prior to energizing any line.
- Switching and tagging directives shall be followed before performing any work on the line once the outage cause is identified.
- Keep in mind that there is a difference between being qualified to find the trouble and being qualified to repair the trouble. Do not attempt any action that is beyond your capability or qualifications.

2) Discussion:

An employee's knowledge and skill at understanding outage patterns are used to correctly and safely determine the cause of circuit outages. Once the portion of the circuit that is involved in the outage is identified, skill and caution are necessary to allow the employee to find the cause of a circuit outage without injuring yourself or others.

Safety is priority number one in all jobs. The sheer magnitude of a large circuit outage tends to create a sense of urgency to restore service, particularly among workers with limited line patrolling experience. Forcing yourself to focus on your procedures helps to overcome this and avoid any sort of "act before thinking" type of restoration plan.

Damage to structures and conductors can create unsafe conditions for the employee looking for the cause of the outage therefore anyone patrolling lines must be aware of the location and conditions of facilities in their vicinity. Because an extra amount of attention is required to stay clear of hazards posed by our facilities, walking and tripping hazards could be ignored. Whenever patrolling lines where the location of our facilities cannot be observed, stay well away from those facilities and approach their vicinity very cautiously to be sure that their condition doesn't present a safety hazard. When patrolling at night, acquire a portable light of sufficient power to illuminate the line and other hazards.

3) Definitions:

Qualified electrical employee: Any employee who is knowledgeable of the task or work to be performed including the safety related work practices as outlined by the safety manual.

The following steps are appropriate for most cases of trouble:

1. **Analyze** the data available including circuit one-lines, locations of reported outages, and customer reports.
2. **Find** the likely device first by using the prediction provided by PowerON then by working your way through the circuit until the device that has operated is found.
Confirm the device that has operated in PowerON
3. **Use** hazard calls and other data to determine the part of the circuit that is likely to be damaged.
Patrol those areas to find the cause of the outage.
Check other hazard calls to be sure that all damages to the circuit are identified.
4. **Restore** service if within your capabilities do so. A restoration plan must include proper switching/isolating/tagging and the recognition and safeguarding of hazards present.
Finalize by verifying restoration with the customer.
Close the trouble order using Spectrum or by calling the dispatcher.

4) Attachments:

5) OSHA / Safety Manual References:

Qualified employees shall also be trained and competent in:

1910.269(a)(2)(ii)(A)

The skills and techniques necessary to distinguish exposed live parts from other parts of electric equipment,

1910.269(a)(2)(ii)(B)

The skills and techniques necessary to determine the nominal voltage of exposed live parts,

1910.269(a)(2)(ii)(C)

The minimum approach distances specified in this section corresponding to the voltages to which the qualified employee will be exposed, and

..1910.269(a)(2)(ii)(D)

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The proper use of the special precautionary techniques, personal protective equipment, insulating and shielding materials, and insulated tools for working on or near exposed energized parts of electric equipment.

Note: For the purposes of this section, a person must have this training in order to be considered a qualified person.

6) Date Adopted: May 2, 2006