




Safety and Health Tailboard

For leaders to discuss with their team

Safety and Health Tailboards provide topical information and guidance for individuals and teams, often supporting PG&E Standards, Procedures and Code of Safe Practices.

Topic:	PG&E Downed Powerline Safety & Emergency Procedures
Relevant Key to Life:	 <ul style="list-style-type: none"> 4. Follow electrical safety testing and grounding rules. 10. Follow hazardous environment procedures.
Date:	2/1/2024
Audience:	PG&E coworkers, contractors or those who may be in the vicinity of a downed powerline or equipment
Topic Overview:	Downed powerlines pose an electric shock hazard to PG&E employees, contract partners and the public.
Risks, Exposures & Impacts:	<p>Any powerline on the ground or hanging must be considered energized. Only a PG&E Qualified Electric Worker (QEW), including (PG&E-Contracted QEWs) can approach a downed powerline after isolating and ensuring circuit voltage de-energized by means of testing de-energized and applying temporary protective grounding. That includes telephone, cable TV and guy wires. If a burning powerline is on the ground, consider it energized even after the burning stops. Wire fencing in the vicinity of the downed powerline should also be considered energized. Coming into contact with or coming in close proximity with a downed powerline could result in a serious injury or fatality.</p>
Preventative Steps & Actions to Take	<p><i>What to do if you see a downed powerline:</i></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Always assume a powerline is live. <input checked="" type="checkbox"/> Stay as far away as possible from all downed powerlines. DO NOT APPROACH A DOWNED POWERLINE. <input checked="" type="checkbox"/> Keep anyone else away from a downed powerline. <input checked="" type="checkbox"/> Powerlines are not insulated like power cords. Don't touch downed powerlines or any other electrical equipment. <input checked="" type="checkbox"/> Don't touch anything or anyone in contact with a downed powerline. <input checked="" type="checkbox"/> Don't drive over a downed powerline. <input checked="" type="checkbox"/> Leave the area immediately. Call 9-1-1. Then call PG&E at 1-800-743-5000. <p><i>If a powerline falls on your vehicle:</i></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Remain calm. <input checked="" type="checkbox"/> Stay in your car, if you can safely drive the vehicle away, do so. If not, then: <input checked="" type="checkbox"/> Call out to those who are nearby and let them know to remain as far away as possible and <u>not</u> to approach or touch the vehicle. <input checked="" type="checkbox"/> Call 911. Then, call PG&E at 1-800-743-5000. <input checked="" type="checkbox"/> Stay in your car until help arrives unless there is an emergency, then: <p><i>If you are in danger and need to leave the vehicle while it's in contact with a downed power line (i.e., the vehicle catches fire):</i></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Never - contact the ground and vehicle at the same time. Life-threatening electrical differences of potential may be present. <input checked="" type="checkbox"/> Open the door and stand firmly on the edge of the vehicle,

- ☑ Cross your arms and leap away from the vehicle without touching the ground and the vehicle at the same time,
- ☑ Land squarely with both feet together at the same time and then shuffle-step or hop as far away as possible.

Vehicle/ Equipment Emergency Evacuation Options:

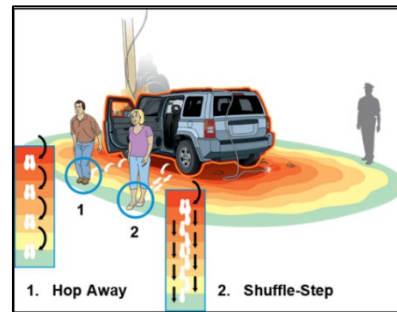
Hop Away:

With your feet together, take small leaps making sure to land both feet at the same time until you are at a safe distance.

Shuffle-Step:

With your feet together, take small slide-steps, keep your feet in contact with each other & the ground, don't pass the other foot with each step.

NEVER contact the ground and vehicle (or anything in contact with a downed powerline) simultaneously.



Why do you need to stay away from downed power lines?

- A downed powerline can create electric shock hazards that are referred to as **Electrical Touch Potential** and **Step Potential**.
- A downed powerline or an object in contact with a downed powerline and a ground source can be **FATAL**.

TOUCH POTENTIAL

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The potential difference between an energized downed powerline and a point on the earth's surface one meter away. When a person's hand touches an energized downed powerline, a hazardous voltage between the person's hand and the ground on which the person is standing can exist.

Anything touching a downed powerline should also be considered energized. Such as: trees, ladders, vehicles, fencing, heavy equipment, comm lines & guy wires.

STEP POTENTIAL

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The potential difference between two points on the earth's surface separated by one step (assumed to be 1 m). When current flows through the earth or surface material where a person is standing, step potential can be hazardous.

Example Below: to illustrate difference of electrical potential across the ground. Reference ONLY.

Meters	Volts
6 m	2KV
5 m	7KV
4 m	11KV
3 m	15KV
2 m	18KV
1 m	20KV
0 m	21KV

Meters, Volts

1 meter = 3.28 feet

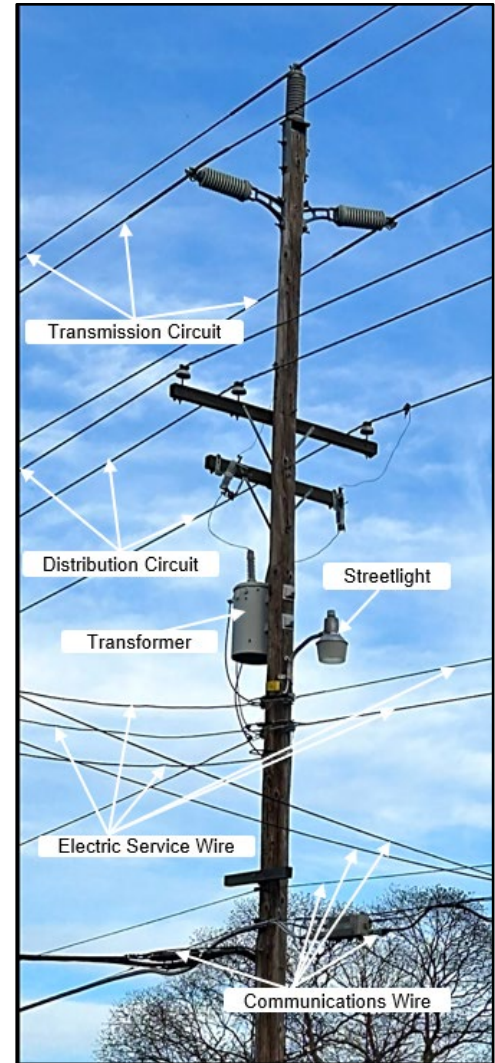
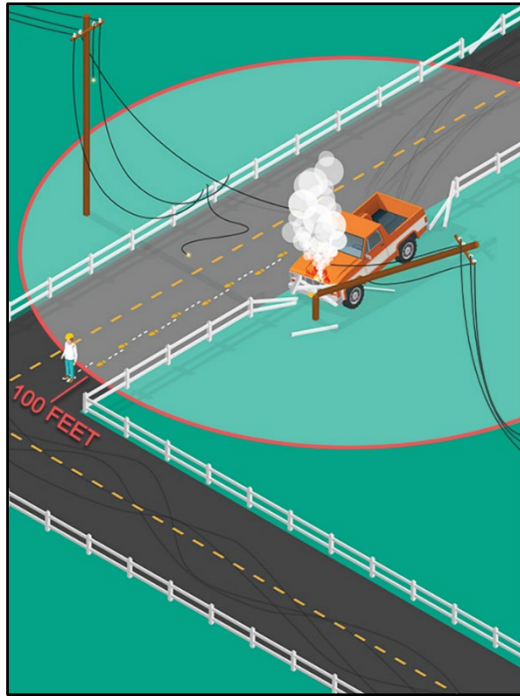
Safe Distance for Downed Powerlines:

STEP POTENTIAL SAFE DISTANCE:

CIRCUIT TYPE	DISTANCE
Distribution or Transmission	100 Feet

THIS IS A MINIMUM SAFE DISTANCE GUIDELINE FOR ELECTRIC STEP POTENTIAL HAZARDS AND MAY NEED TO BE EXTENDED BEYOND THE DISTANCE PROVIDED.

ALWAYS STAY AS FAR AWAY AS POSSIBLE FROM DOWNED LINES.



What's the difference between these two pictures?



Answer: Nothing. The same hazard exists. Any powerline on the ground or hanging must be considered energized. Only a PG&E Qualified Electric Worker (QEW), including (PG&E-Contracted QEWs) can approach a downed powerline after isolating and ensuring circuit voltage de-energized by means of testing de-energized and applying temporary protective grounding.

PPE:

Downed powerlines could potentially be encountered by anyone at any time. Personal Protective Equipment (PPE) may not be available or those on scene may not be trained to use certain PPE.

**Procedures,
Standards &
Resources:**

[OSHA 1910.269 App C - Protection from Hazardous Differences in Electric Potential \(osha.gov\)](https://www.osha.gov/SLHC/OSHA-1910.269-App-C-2019)
[Puget Sound Energy Downed Powerline Video \(youtube.com\)](https://www.youtube.com/watch?v=...)

Contact:

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