Utilities & Power Lines: Live-Wire Risks for Field Crews Stats and Facts

FACTS

1. **Contact Electrocution:** Direct contact with energized overhead or underground lines can cause instant cardiac arrest, severe burns, or death.
2. **Arc Flash Exposure:** Electricity can arc through air without physical contact, producing extreme heat and pressure waves that ignite clothing and cause blindness.
3. **Induced Voltage:** De-energized lines near live conductors can still carry dangerous induced voltage, exposing workers who assume the line is safe.
4. **Equipment Encroachment:** Cranes, dump trucks, ladders, and elevated platforms can enter minimum approach distances and energize the equipment frame.
5. **Ground-Fault Risk:** Downed or damaged lines can energize soil or puddles, creating step- and touch-potential hazards around the site.
6. **Improper Lockout/Tagout:** Failure to verify de-energization before maintenance or repair exposes crews to unexpected re-energization.

STATS

- Electrocution remains one of the “Fatal Four” causes of construction deaths in the United States, with dozens of fatalities annually involving contact with power lines, according to the Bureau of Labor Statistics (2022–2023).
- Contact with overhead power lines accounts for a significant share of electrical fatalities in U.S. construction and utility work (BLS fatal injury data).
- The Occupational Safety and Health Administration reports that violations related to electrical hazards and unsafe distances from power lines consistently rank among the most cited safety violations each year.
- NIOSH investigations show that equipment contact with energized lines is one of the leading causes of occupational electrocution in the U.S. (National Institute for Occupational Safety and Health).
- In Ontario, Canada, powerline contact caused 44% of electrical-related fatalities from 2020-2024 (11 of 25 total), with utility-related electrocutions making up 48% of all electrical deaths over the past decade.
- Overhead power lines caused 45.7% of US electrical fatalities in recent

analyses (2020-2025 trends), with many non-electrical workers affected, but utility crews facing direct live-wire exposure risks.