



U.S. Department of Labor  
Bureau of Labor Statistics

### Electricity-related Injuries at Work

Electricity illuminates homes and worksites, energizes machines, tools, and appliances, and under threatening skies may appear as flashes of lightning. It is one of the Nation's most important sources of power. But, contact with electric current can produce serious injury or death. The BLS nationwide Census of Fatal Occupational Injuries counted 347 work-related electrocutions in 1995; the BLS Survey of Occupational Injuries and Illnesses estimated over 4,700 nonfatal electric shocks and electric burns in private workplaces that year, each of those injuries resulting in time away from work.

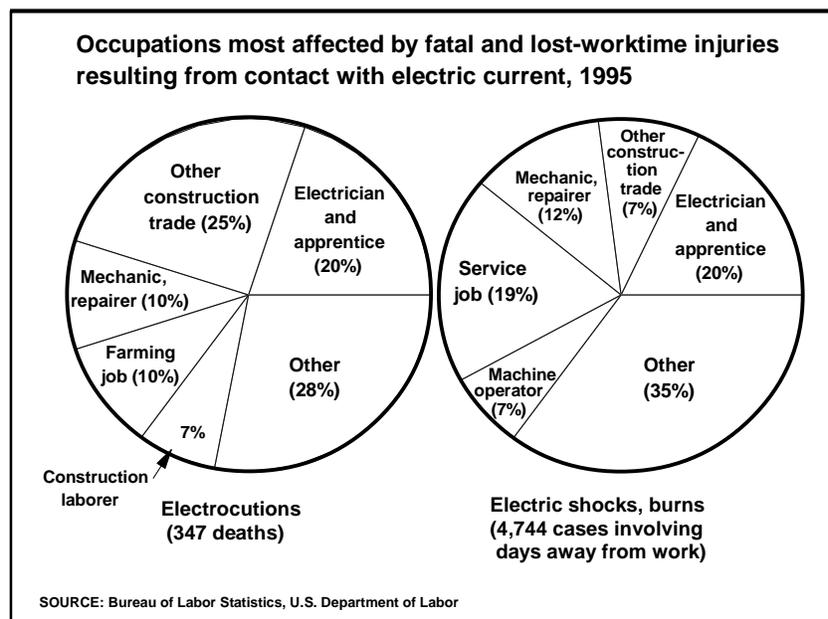
Construction trades led all other occupational groups affected by deadly and disabling contacts with electric current, accounting for nearly half the work-related electrocutions and just over a fourth of nonfatal electric shocks and burns reported by the 1995 BLS census and survey.<sup>1</sup> (See chart.) Among construction trades, electricians and their apprentices, by themselves, were a fifth of the fatal and nonfatal totals for electricity-related injuries. Outside those trades, mechanics, farming jobs,

and construction laborers accounted for a fourth of all electrocutions while mechanics, service jobs (e.g., janitors, maids, and kitchen workers), and machine operators combined were nearly two-fifths of the total for those who survived electric shocks and burns.

Contact with overhead power lines resulted in more work-related electrocutions (139 out of 347 counted in the 1995 BLS census) than contacts with any other energized source of power. (See table.) In some instances, electricians and other employees suffered fatal injuries when they touched "live" power lines. Many other electrocutions of this type, however, occurred indirectly when

objects contacted power lines, such as irrigation pipes lifted by farm workers, ladders moved by roofers and their helpers, and truck-mounted cranes and booms raised and lowered by truckdrivers and construction workers. The BLS survey estimated that 155 workers who survived their contacts with overhead power lines were injured seriously enough to lose a median of 13 days away from work, four times the typical loss of 3 workdays for workers suffering from nonfatal electric shocks or burns in 1995.

Contact with wiring, transformers, or other electrical components, and contact with the electric current of a machine, tool, appliance, or light



<sup>1</sup>Differences in the occupational distributions of fatal and nonfatal injuries resulting from contact with electricity reflect, in part, differences in workers covered by the BLS census and survey. The survey, for example, excludes the self-employed and workers on small farms, groups the BLS census includes. (See footnotes at bottom of accompanying table for more on this topic.)

**Fatal and lost-worktime injuries due to contact with electric current, 1995**

Energized source of power	Percent distribution		Median <sup>3</sup> workdays lost from disabling injuries <sup>2</sup>
	Fatal injuries <sup>1</sup> (n = 347)	Disabling injuries <sup>2</sup> (n = 4,744)	
Total .....	100	100	3
Machine, tool, appliance, or light fixture .....	16	32	2
Wiring, transformers, or other electrical components .....	27	33	5
Overhead power lines .....	40	3	13
Underground, buried power lines .....	1	1	10
Struck by lightning .....	5	4	2
Other or unspecified .....	11	27	-

<sup>1</sup>Based on data from the 1995 BLS Census of Fatal Occupational Injuries, which covered all workers in the private and public sectors: Wage and salaried, self-employed, and family members.

<sup>2</sup>Based on data from the 1995 BLS Survey of Occupational Injuries and Illnesses, which covered just wage and salaried workers in private industries, excluding private households and farms with fewer than 11 employees. Disabling injuries are defined as those that result in lost worktime beyond the day of the incident.

<sup>3</sup>Median workdays lost is the point at which half of the injuries involved more lost workdays and half involved fewer days. The dash indicates that a median was not computed.

fixture were two other ways in which workers sustained deadly or disabling injuries. Together, they accounted for slightly more than two-fifths of all work-related electrocutions and two-thirds of all electricity-related injuries resulting in days away from work. Among the fatally injured workers included in these categories were several electrocuted while repairing or installing air conditioning units or fluorescent lighting, and several others electrocuted after contacting live wires

while working in crawl spaces under houses or in attics. The categories were also cited for some 3,000 lost worktime cases, such as janitors and cleaners disabled by electric shocks while vacuuming and electricians disabled while installing switches and changing fuses. Typically, workers injured while contacting electric wiring, transformers, or other electrical components missed 5 workdays, compared with 2 workdays lost for those coming in contact with

the electric current of machines, tools, appliances, or light fixtures.

The balance of the electricity-related injuries resulted from workers digging near, and hitting underground or buried power lines; farmers and other workers struck by lightning; and a variety of other contacts with electric current for which the energized source of power was not documented or was not one of the five categories specified for use in the BLS census and survey of work-related injuries.

Data for this report were derived from the BLS Census of Fatal Occupational Injuries and its companion Survey of Occupational Injuries and Illnesses. For more information on electricity-related injuries, contact the Bureau of Labor Statistics, Office of Safety, Health and Working Conditions, Room 3180, 2 Massachusetts Avenue, NE, Washington DC 20212. Telephone: (202) 606-6175.

Information in this report is available to sensory-impaired individuals upon request. Voice phone: (202) 606-7828; TDD phone: (202) 606-5897; TDD message referral phone: 1-800-326-2577. This material is in the public domain and, with appropriate credit, may be reproduced without permission.