

# PUBLIC POWER CONNECTIONS

## CLIMB THE RUNGS OF LADDER SAFETY

Whether at work or at home, most people use ladders throughout the year for a variety of tasks and chores. According to a recent study by the Centers for Disease Control and Prevention (CDC), falls remain a leading cause of unintentional injury [deaths] nationwide – 43 percent of fatal falls in the last decade have involved a ladder.

Ladder accidents are extremely common even though they are entirely preventable. They result from a wide variety of issues.

### Tips for using ladders:

- Read and follow all labels/markings on the ladder.
- Avoid electrical hazards – look for overhead power lines before handling a ladder and avoid using a metal ladder near power lines or exposed energized electrical equipment.
- Only use ladders and appropriate accessories (ladder levelers, jacks or hooks) for their designed purposes.



- Ladders must be free of slippery material on the rungs, steps or feet.
- Do not use a self-supporting ladder (e.g., step ladder) as a single ladder or in a partially closed position.
- Do not use the top step/rung of a ladder as a step/rung unless it was designed for that purpose.
- An extension or straight ladder used to access an elevated surface must extend at least three feet above the point of support. Do not stand on the

three top rungs of a straight, single or extension ladder.

- The proper angle for setting up a ladder is to place its base a quarter of the working length of the ladder from the wall or other vertical surface.
- A ladder placed in any location where it can be displaced by other work activities must be secured to prevent displacement or a barricade must be erected to keep traffic away from the ladder.
- Be sure that all locks on an extension ladder are properly engaged.

## HOW IT WORKS: BUCKET TRUCK

Perhaps no tool of the lineworker's trade is as well-recognized by the public as a bucket truck. And whether it's being used for live-line work on high-voltage power lines or trimming branches in a right-of-way, bucket trucks have significantly improved workers' safety and efficiency.

### What is a bucket truck?

Put simply, a bucket truck is a utility vehicle that incorporates an extendible or articulating boom, topped with an enclosed platform, to raise workers to heights ranging from 20 feet to over 100 feet. Bucket trucks usually weigh about 15,000 pounds and carry a wide variety of tools needed by utility crews, including line hoses, jumpers, insulators and other equipment.

These trucks are all insulated to protect workers and typically are tested to safely withstand 100,000 volts. The booms

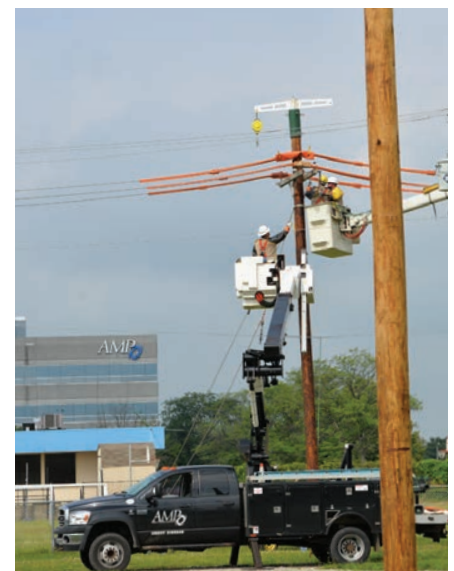
themselves are of fiberglass construction, which provides isolation from the ground for the worker in the bucket. Some bucket trucks also incorporate fiberglass bodies to reduce weight and increase insulation.

The booms of most bucket trucks are operated hydraulically and are powered by the truck's engine (hybrid models can operate the boom without need of the engine).

### How are bucket trucks used?

Insulated bucket trucks are used heavily by electric utilities across the country to service high-voltage lines, remove line obstructions, or even to hang town holiday lights. Similar vehicles are also employed in a wide range of professions and for numerous tasks.

No matter their purpose, bucket trucks are designed to withstand heavy use. A bucket truck deployed by American Mu-



nicipal Power, Inc. (AMP) can have an effective service life of around a decade, and in smaller communities where vehicles may not see daily usage, a bucket truck can last for as long as 20 years.

## LEARN THE LEADING CAUSES OF POWER OUTAGES

Weather events, trees and animals are the main culprits of power outages in public power communities.

If lightning strikes utility electric equipment, it can cause a power outage. High winds that often accompany storms can shake equipment loose, and wind and lightning can cause tree limbs to fall into power lines. Flooding usually only affects pad-mounted equipment (located on the ground – on a concrete slab locked inside a steel cabinet) and must be significant in order to cause a problem.

The freeze and thaw of ice can also loosen equipment – causing it to become brittle and break. Snow from winter storms makes tree branches heavy, increasing the likelihood of limbs falling on power lines.

The best way to combat branches falling on lines is trimming. Tree



trimming also reduces issues with squirrels, which are another main cause of the power going out. When a squirrel runs along power lines, it can come in contact with the energized parts of the equipment. This overloads the system similar to a lightning strike. While other animals can cause outages, the squirrel is the most common offender.

Accidents, while rare, can also cause a power outage. If a driver loses control of their car and hits a power pole, it can cause an outage. Construction accidents – such as a contractor unintentionally hitting buried facilities – can also result in customers losing power.

In the event of an outage, municipal electric system crews and staff work to keep a minimum amount of people without power for the shortest amount of time. They are always striving to provide reliable power to residents.

## WHO IS?: ELECTRIC SUPERINTENDENT

### The Buck Stops Here

Electric superintendents play an important role in the operations of municipal electric utilities. They put plans together on what needs to be done to maintain a reliable system and present these plans to their respective administrators and councils or boards for approval. Once approved, the superintendent then oversees and executes the plans.

Managing the electric system takes a combination of long-term and day-to-day planning. This covers everything from hiring and training personnel, budgeting, purchasing decisions, emergency repairs, project management, and compliance and regulation issues.

Depending on the size of a community, the electric superintendent often plays a role in designing and assisting in the infrastructure and meters for new customers in the service area.

### Many Hats

Superintendents can often spend more time in a hard hat than wearing a tie. In smaller towns or villages, for example, a superintendent may only have one or two employees, and may be on-site working as the foreman overseeing a repair, maintenance or installation project.

Departmental overlap in smaller municipalities can put the electric superintendent in a variety of roles – trimming trees with the parks department, ensuring electrical safety on water or street departments' work projects, or even answering the telephone when residents call to report an outage.

In small communities, utilities rely on the electric superintendent for a variety of other needs. These can include the type of training their employees under-

go, the specific materials they use and how their facilities are designed.

When it comes to larger communities, electric superintendents have more of a managerial role and duties focus on coordination, assigning work to multiple crews and prioritizing day-to-day work. For these bigger municipalities, the superintendent serves as the contact for the utility director.

When outages invariably occur, utilities big or small work closely with the electric superintendent as their position is an integral part of outage restoration. In the event of an outage, the superintendent plans and dispatches crews to areas in need.

The electric superintendent assists with the direction and implementation of an electric system and is a critical daily partner.