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• Feature Story

# GOLIGHT

Danger lurks in the dark. It is something that you have probably instinctively felt since childhood, that eerie sensation that something beyond your range of vision could harm you. Have you ever bumped into something in the dark?

Imagine the consequences if that something were a line transmitting 35,000 volts.

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#### **OVER 4 MILLION LADDERS PRODUCED SINCE 1971**

#### Feature Story

The job of a lineman is inherently dangerous, but work done at night is exponentially more so. And the fact that linemen are often called to duty in, not only low light conditions, but poor weather as well to repair downed line and restore power to the masses only aggravates the issue.

Studies indicate that accidents are 30% more likely to occur at night. According to the Bureau of Labor Statistics electrical power-line installers and repairers suffered 22 fatal injuries, with over half of those attributed to contact with electric current. and 2680 non-fatal injuries in 2010. 11.6% of those non-fatal accidents occurred between the hours of 8p.m and 8a.m. When one considers the proportion of day/night work that takes place, that statistic is even more alarming.

A study commissioned by NECA (National Electric Contractors Association) and performed by the University of Colorado set out to identify the risks associated with transmission and distribution work and the safety protocols associated with them in a cost/benefit framework. The study concluded that, though the costs associated with worker injuries and fatalities are substantial, certain safety interventions, most notably de-energizing line prior to work are not financially sound. The article also identified certain activities that are deemed to be the most dangerous. Of those, operating equipment near energized power lines, climbing poles and operating aerial lifts were at the top of the risk ladder.

The most effective injury prevention strategy, as defined by the aforementioned study, and one that happens to be a cost effective tool is "following safety procedures and regulations set by regulatory bodies", notably the NESC and OSHA. Considering the risk associated with operating equipment in the vicinity of power lines and the prevalence of night time injuries one would assume that these regulatory bodies would have ample verbiage concerning equipment lighting. A quick look at the literature,

however, proves the contrary. OSHA weighs in on lighting in regard to the transmission and distribution field with one succinct sentence: "Sufficient lighting shall be provided to enable the employee to perform the work safely."

Lighting on a vehicle easily satisfies the cost portion of the cost benefit analysis, especially when looked at in relation to an intervention like de-energizing line. And the actual cost of not selling power for the duration of whatever repair is taking place probably pales in comparison the onslaught of angry phone calls from customers who are accustomed to continuous electricity delivery. "Sufficient", though, is the tricky aspect of that well meaning if vague mandate. Light, it can be agreed upon, is important, but light and sufficient light are different animals. And sufficient light is only sufficient when it is directed properly and if the work area is large or varied, then light is only sufficient when it can easily be redirected.

Enter Golight.



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Golight, headquartered in rural Southwest Nebraska, is a company that, for eighteen years, has been designing lights that are "sufficient" for a multitude of applications. Golight manufactures a line of lights that, aside from being intense, can be positioned via a number of remote options. The immediate implication for linemen is that they can reposition the light from the bucket or from any position outside the vehicle. Working at night is made safer because "sufficient" light can illuminate multiple positions around the vehicle with just a touch of a button.

Golight offers a number of different light sources as well. The lights were originally based around a halogen system. However as technologies have advanced the company has utilized light sources alternative to halogen for various applications. For instance, Golight now offers the HID Stryker. The HID version of this light emits the most light in terms of intensity of any in the Golight line and meters out at an impressive Peak Beam Intensity of 550,000 candela with a Max Beam Distance of 4,865 ft.

Max Beam Distance is a pretty self explanatory statistic,

it simply measures the greatest distance at which a light source will illuminate an object. Candela may require a little more explanation. According to Colt Hosick, Product Development Director at Golight, "Peak Beam Intensity is the most important lighting statistic in terms of spotlights because it measures the effectiveness of the light source in its ability to project light onto an object. For a reference point, standard automotive headlights on high beam typically measure 100,000 candela."

Golight is a charter member of the Portable Light American Trade Organization (P.L.A.T.O.), the group that ratified the material to be presented to ANSI that led to the FL1 2009 lighting standard. A quick snapshot of those standards is as follows: Peak Beam Intensity and Max Beam Distance have been covered that leaves Lumens and Max Run Time. Lumens refer to the gross light output of a light source but have little bearing on the ability of that light source to illuminate an object at distance: that is where reflector and optics packages come into play. Max Run Time is simply the amount of time a light source will emit light under battery power.

Golight also offers a line of LED lights, both manually adjustable work lights and its proprietary line of remote control lights. LEDs are an important light source for a few reasons. First, LEDs have an extremely long life span, up to 50,000 hrs. Second, when harnessed effectively LEDs can provide an incredibly intense light source. And finally, by comparison to traditional light sources such as halogen, LEDs are very efficient in regard to power consumptions versus light output.

Power consumption on utility vehicles has long been a concern, but it is becoming ever more so as Hybrid Gas/ Diesel-Electric vehicles enter the utility market in the Medium and Heavy Duty market. Not only do such vehicle's manufacturers contend that they offer increased fuel efficiency, to the tune of \$6700 per truck per year, and pollution reduction, but the Federal Government may make hybrid-electric vehicles even more prevalent. Late last year the DOE issued a Notice of Proposed Rulemaking that will allow for electric and hybrid electric vehicles in qualifying fleets to be candidates for credit under the Energy Independence and Security Act of 2007.













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#### • Feature Story

Many large fleets are already experimenting with adding hybrids to their fleets. Pacific Gas and Electric, the country's largest utility fleet, already utilizes over 3,000 alternative fuel vehicles in its fleet of over 9000 vehicles and is currently incorporating hybrid electric aerial trucks. Since these vehicles rely on battery power for propulsion as well as accessories on the trucks there is increased competition for a dwindling amperage allocation. LED lighting is both popular and necessary. Golight has a 200,000 candela remote control spotlight that draws a mere 3 amps and a 6000 lumen flood light that draws only 5.5 amps.

The goal of management in any industry should be to keep its employees, the men and women in the field, as safe as reasonably possible and Golight offers functional and practical products to assist in doing just that.







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## Safer, More Effecient Solutions for Linemen

For many years, linemen and first responders have devoted valuable time and resources dealing with unruly vines and unexpected power disruptions. Fast-growing and hard-to-kill "potato" vines and various types of kudzu often wrap around utility poles and then get tangled up in primary and secondary conductors on top of transformers. When they go to ground, they often blow a fuse, knocking out power for customers.

Until now linemen relied on the end of extendo's and switch sticks. These tools only have one prong on the end of them and are not designed to pull down big clumps of vines safely or efficiently.

MADI has introduced the DEVINER<sup>\*\*</sup>, a vine removal utility tool that offers a quick and efficient way to safely remove vines and other vegetation away from power lines. Vines and other vegetation can cause serious power outages and service interruptions. It also works great for hooking tag lines, breaking ice, removing tree limbs, clearing vegetation at the pole base of a transmission tower, fishing down wires from trees and removing vacant bird nest debris.

The DEVINERTM is constructed of fiberglass reinforced nylon for maximum strength and safety and has an aluminum base for a strong secure fit. This tool is lightweight, non-conductive, corrosion resistant, and works with ALL universal tool fittings found on hot sticks.

Using the tool is simple, the linemen put the Deviner on the end of their switch stick or an insulated stick. They can then adjust to any angle depending on whether they are on the ground or are stripping vines out of a bucket. The linemen then use the tool to grab the vines at the top and pull them down. Once approved by safety and standard departments, the tool can be used immediately in the field due to its simplicity and versatility.

So far, the linemen have found that the tool is durable and has withstood heavy usage. In addition, it effectively grabs well, and it's not conductive, which is useful when working with energized conductors.

With this new tool, linemen are able to remove vines from utility poles quickly, safely and efficiently.

Catalog #: DV-1

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#### Company Profile

The PENTA-DRIVERTM range of products features the Tri-Penta WrenchTM. This underground utility wrench combines three everyday functions into one convenient tool. The three key applications that can be accomplished are:

1) opening penta bolt secured transformers or switch gears

2)lifting hand hole lids with the integrated hook, and3)opening secondary or primary doors.



The convenience of the Tri-Penta WrenchTM is complimented with the addition of a high visibility patent pending Speed SleeveTM which helps linemen open transformers and switch gears up to 2X faster than standard penta sockets or wrenches. The sleeve will also allow the lineman to keep steady pressure on the bolt while turning the Tri-Penta WrenchTM without interfering with the turning action. The bright green sleeve really stands out making it easier to find this underground tool in the boxes and storage bins.

Catalog #: TP-1

### MADI has also launched the Penta Socket Driver featuring the new Speed SleeveTM.

The Penta Socket Driver can be utilized in any ½" drive wrench. The Penta Socket Driver will remove or install any standard hand hole or switch gear penta bolt quickly and easily. This is perfect when space is limited and the tough angle calls for a ratcheting wrench or impact wrench. The socket is impact rated for torque and also comes with a 3/8" drill adapter enabling it to be used with any 3/8" or larger drill driver. The drill adapter snaps in place and is held securely in the tool, but is also removable when the driver is to be used with a ratchet wrench or impact driver.

When using the Penta Socket Driver with a power drill or impact driver, the Speed SleeveTM helps stabilize the operation and keeps your hand and gloves from experiencing any twisting or friction.

Catalog #: PSD-1

Information provided and written by Ralph Stinson, a lineman with over 40 years of experience at Tampa Electric in Tampa, Florida. MADI is a manufacturer and marketer of innovative utility tools for the lineman. MADI's game changing product portfolio includes the DEVINERTM and the new PENTA-DRIVERTM range featuring the Tri-Penta WrenchTM. More information can be found at www.madillc.com.

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#### N E W

## DUAL END WRENCHES COMBINE FLEXIBILITY & RELIABILITY.

Two new dual end ratchet wrenches from Lowell Corporation give high line utility workers multiple options in a single tool for greater flexibility when tackling a variety of common pole fasteners, lag bolts, and C clamps. Each wrench has a ratcheting socket at one end and a ratcheting box at the other.

The Models 101TDE and 103TDE are designed with the durability and turning power to meet the specific needs of linemen. To ensure longer tool life, each dual wrench uses the same solid construction as Lowell's proven 151T Lineman's wrench. In addition to being ready for tough duty, the wrenches can also generate the kind of torque necessary for loosening and tightening utility pole hardware.

The ratcheting socket end of each wrench is a triple square providing three sizes: 3/4", 1", 1-1/8". The socket is made of cast-iron for durability and painted fluorescent orange for easy visibility and tracking. The other end is a ratcheting box hex with a low-profile for use in tight spots. The two hex sizes are 9/16" and 3/4". The latter will also turn 5/8" square nuts.

The Model 101TDE is 8" long and weighs 1-3/4 lbs.; the 103TDE is 11" long and weighs 2 lbs. Both wrenches will fit most common holsters.

Both wrenches have rugged, fabricated steel handles. A bolt-thru feature allows long bolts and threaded rods to pass completely through the wrench head. Each wrench also has a large control lever on the side of the head to make reversing easy.

For more information about Lowell's dual end lineman's wrenches, or for a full-line catalog, call 800/456-9355 or 508/835-2900, email customerservice@lowellcorp.com, or visit the company's web site: www.lowellcorp.com..



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Announces Support for Tablets with Cloud-based Spectrum Construction Software



Construction management software provider Dexter + Chaney announced that their Spectrum<sup>®</sup> Construction Software is now fully compatible with tablet computing platforms. This announcement follows the recent release of Spectrum version 14, the industry's first construction management software to support a complete browser-based user interface. "Use of tablets and other mobile devices is accelerating in the construction industry," said John Chaney, president and co-founder. "In our redesign of Spectrum to support browser-based cloud deployment, we made a conscious decision to build a user interface that worked as well on a tablet in the field as it did on a workstation in the office."

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#### Product Spotlight

Tablet users sacrifice none of the functionality of Spectrum's complete suite of construction software modules. "Our tablet-friendly interface is a natural extension of our move to web-based technology," said Geoffrey Falk, Spectrum Product Manager. "Spectrum users can access their software from any Internet-connected device. So supporting tablets, one of the fastest-growing computing platforms, became a priority for our development team." According to the recent tablet sales forecast published by Forrester Research, tablet sales in the U.S. will grow to 44 million in 2015, surpassing laptop sales by about 5 million units.

Users can access Spectrum software from any connected device, and configure their screens for optimal use on the different devices they use. "All of our screens were designed with the dimensions of the most popular tablet platforms in mind," said Chaney. "The ability to expand, collapse, and resize windows let users experience Spectrum the way they want to, anywhere, on any device."

#### About Dexter + Chaney

Dexter + Chaney has been providing complete construction management software for more than 30 years. From the office to the field, from accounting to project management, Dexter + Chaney software is used by more than 1,000 companies. Their clients come from all segments of the industry - heavy highway and utility, general contractors, electrical, mechanical, and specialty subcontractors - and are companies of all sizes, from locally owned subcontractors to some of the world's largest construction firms. Every client is different, and the modularity and flexibility of Dexter + Chaney software allows customers to create a software solution that suits their needs and works the way they do. For more information about Dexter + Chaney's products and services, contact Wayne Newitts, Marketing Director, Dexter + Chaney, 9700 Lake City Way NE, Seattle, WA, 98115-2347; phone: 800-875-1400 or 206-364-1400; fax: 206-367-9613; email: info@ dexterchaney.com; www.dexterchaney.com.





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## New Terex TCX65/100 aerial devices join NESCO Sales & Rentals Fleet

Available in May this year, the new Terex<sup>®</sup> Hi-Ranger TCX65/100 non-overcenter material handling aerial device will be added to NESCO's fleet. The TCX65/100 is designed to allow operators to work in all three phases without repositioning. It is also designed to enable positioning the truck to work on "H" structures. A 24-in basket lift is available for the TCX65/100 to help operators maneuver into difficult positions.

With a working height up to 105 ft and a platform capacity up to 700 lbs in all positions, the TCX65/100 has 110° lower boom articulation to achieve 47 ft (14.3 m) of side reach. This aerial device is equipped with pilot closed center controls for smooth, intuitive operation.

Mounted on a 6X6 International 7500 chassis with front bumper winch and utilizes highstrength material for a low-weight design. Dual lift cylinders on each elevator tub give the TCX65/100 a compact stow height. See it online at: Terex TCX65/100.

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