



Distribution Utility Solutions

Presented by: Tim Self – Live Line Training and Safety Specialist



Operational Practices Current State



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Live Line Practice Benefits

SAFETY

- Increase electrical insulation
- Line workers secured in buckets
- Products are designed to adhere strictly to safety standards

RELIABILITY

- Avoid scheduled outages
- Increase system availability
- Improve customer satisfaction
- Avoid revenue loss

PRODUCTIVITY

- Decreased time and people to complete distribution line maintenance tasks
- Increase working radius
- Increase mobility of workers to multiple work sites
- Emergency Response Management



Live Line Practice Benefits – In Depth

With Hot Line Maintenance Distribution Utilities Can:

- ❖ **Avoid Revenue Loss**
 - Reduce losses on account of feeder shutdowns for planned outage
- ❖ **Improve Customer Satisfaction**
 - Increase system availability
- ❖ **Establish a Heightened Safety Culture**
 - Increase worker's safety and productivity on line maintenance activity and availability of lineman on multiple sites
- ❖ **Reduce Loss Making Trajectories**
 - Strategize on the reduction in loss making trajectories as envisaged by various State Regulators
- ❖ **Disaster Mitigation**
 - Establish a robust disaster mitigation capacity to lessen the impact disasters have on people and property
- ❖ **Improve Team Efficiency**
 - Accomplish multiple maintenance tasks with the same crew
 - Attend breakdowns swiftly



Three Methods of Live Line Work



DISTRIBUTION

Gloving and Barrier



DISTRIBUTION
AND
TRANSMISSION

Hot Sticking



TRANSMISSION

Bare Handing



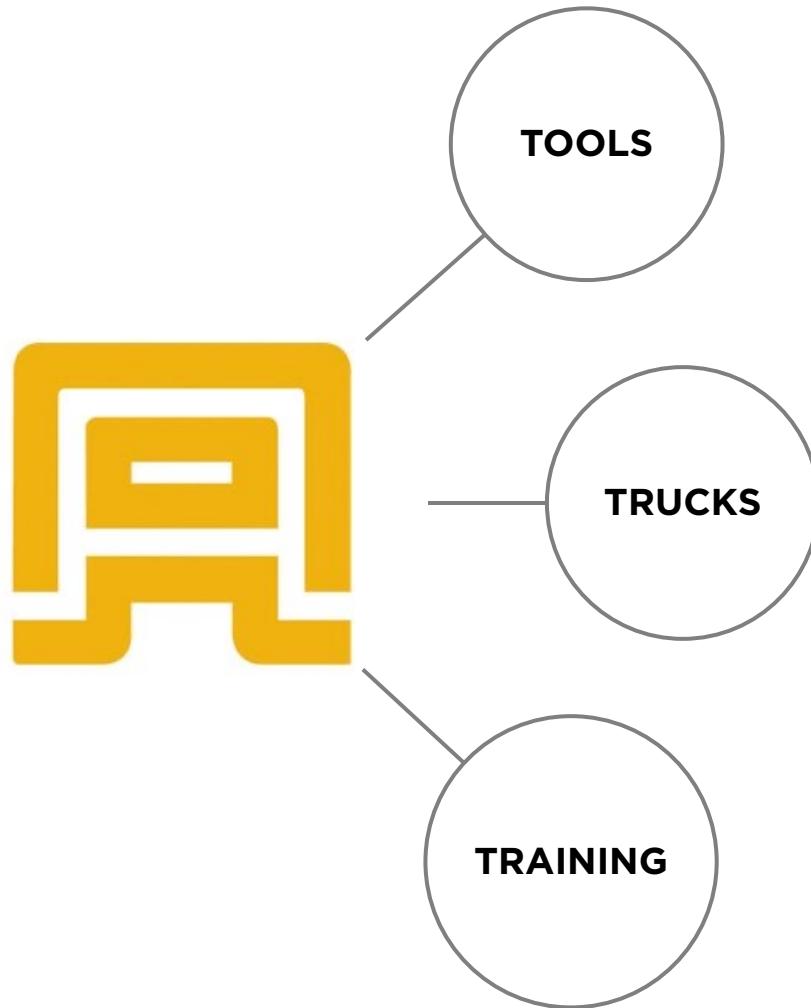
HLM Safety Standards

❖ Safety Standards

- OSHA (1910 – 1926)
- Human Performance-Based Safety
- Hazard Recognition



The Altec Advantage



Altec Supply



- ❖ Adding tools to trucks is how Altec Supply was started.
- ❖ As a full line tool supplier, Altec Supply has relationships with most major utility tool manufacturers which gives Altec Supply tremendous buying power.
- ❖ Able to work with individual customers to meet their requirements
- ❖ Local, knowledgeable sales staff
- ❖ Buy in volume
- ❖ Large inventory of tools and accessories
 - ❖ Hydraulic and battery-operated tools, hot sticks, safety products, truck accessories.
 - ❖ Single Source
 - ❖ Truck kits

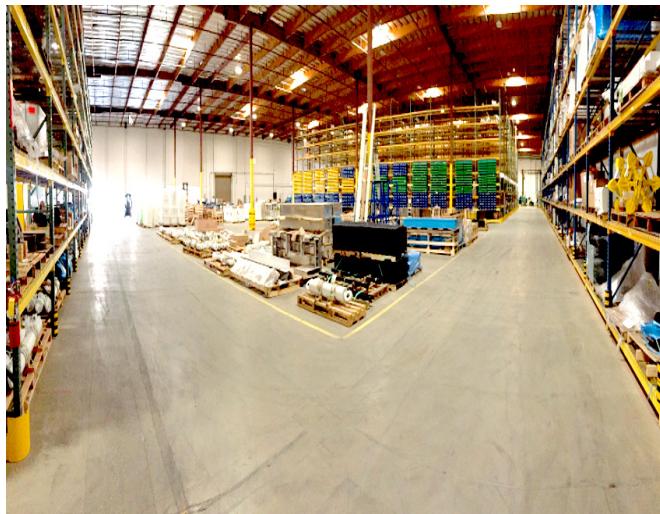
Altec Supply



St. Joseph, MO - Warehouse



Mount Airy, NC - Warehouse



Dixon, CA - Warehouse



Operator Training

Altec offers a variety of Instructor-Led and Online training courses for aerial devices, digger derricks, and cranes. Courses are available for product types as well as specific Altec models and cover basic safety and operation procedures. Altec training courses follow OSHA and ANSI standards, and a record of training is provided upon completion of each course.

Live Line Training

Altec recognizes the advancement and adoption of live line work practices varies country to country, we create customized lineman-training curriculums for each international utility company we work with. Through classroom learning and applied techniques on powerlines, Altec's Live Line Training program delivers skills to linemen and processes to management.



Altec Training in India

- ❖ Altec has been working in conjunction with India's Hot Line Training Center (HLTC) to conduct our live line training program.





Live Line Training

In addition to customized training programs, Altec has created the following live line training curriculums:

- ❖ Live Line Work Procedures
- ❖ Insulator Washing
- ❖ Transmission – Hot Stick Training
- ❖ Pole Top and Bucket Rescue
- ❖ Personal Protective Grounding & EPZ





Pole Maintenance



*Using Phase Lifters



Pole Maintenance



*Using Cross Arm Extension



Conductor Maintenance



*Using Gloves and Barriers



Fitting Line Spacers



*Using Gloves and Barriers



Gloving and Barrier Method



*Temporary Bypass Jumpers



Gloving and Barrier Method



*Insulator Maintenance



Transition to Live Line

DISCOMS
decide to go
into Live
Line

Establish the
requirement
of Tools,
Trucks, and
Training

Plan phases
of transition
and time
horizon

Phase I –
Identify
people for
Training /
Induct
Equipment /
Buy Tools

Phase II –
Train the
Trainer



Q&A



The World's Leading Live Line Work
Equipment Solution Provider