



2018 Power Line Worker Competition

FACT SHEET

Project Manager: Jonathan Sacks, Cianbro Corporation

For questions relating to the line worker competition contact 2018 Line Worker Project Manager Jonathan Sacks, (207) 416-8264 or at jsacks@cianbro.com. For all event questions, contact Lisa Nardone, National Craft Championships director, (202) 595-1789 or nardone@abc.org.

Specific Competition Eligibility

The line-worker competition requires competitors to climb and perform work on poles and operate an aerial bucket lift. Competitors must be able to demonstrate that they have acquired these skills in order to safely participate in the contest activities. Please refer to overall eligibility requirements for all additional requirements. Before submitting an intent-to-compete for this competition, training sponsors should contact the NCC Director Lisa Nardone, (202) 595-1789 or nardone@abc.org to set up a brief interview with the project manager.

Written Exam

Every competitor should have a thorough understanding of the craft in which he/she is registered. All exams are based upon the standardized training process. Line-worker competitors should have completed Core, Power Line worker 1, Distribution Level 2. Some level 3 content may be included.

Practical Performance Test Description

Each competitor will rotate through four work stations. Each competitor will have 1½ hours to complete assigned tasks utilizing knowledge and skills at each station. Unsafe behavior will disqualify the competitor from completing the task. Each activity will require competitors to read and interpret drawings and specifications, build as per specs and demonstrate a basic knowledge of distribution systems and equipment.

Task One: Structure framing on hooks

Competitors will frame out 15' structure as per standard drawings that will be issued before the start of the competition.

Task Two: Working out of bucket on a simulated energized line

Each competitor will perform assigned tasks from a bucket on a simulated live line. Competitors will be judged on their observance of clearances, position of bucket, proper use of cover and line-rated tools as well as the installation of specific equipment.

Task Three: Wiring 3-phase transformer banks

Each competitor will wire a 3-phase transformer bank and associated equipment for the configuration assigned and as per standard drawings. The transformers will be mounted approximately 6' from the ground, work will be done from the ground or on platform ladder.

Task Four: Terminating medium voltage cable and connecting riser to aerial line

Each competitor will terminate 15kv load break elbow and on bottom end of riser and make up a high side termination and land and tie into aerial line according to given specifications. The riser will be mounted on a 6' pole, all work will be done from the ground or on a platform ladder.

Knowledge and Skills Required

The knowledge and skills for this competition are based on the NCCER Line Worker Curriculum Level One Power Line Worker, Level Two and Three Distribution. Competitors should be in at least the 3rd year of an apprenticeship program and should have had experience operating and working out of buckets as well as climbing and working on hooks. Though there will be no actual exposure to live line lines familiarity with live line techniques will be part of the assessment.

Knowledge and Skills which will be assessed include:

- pole framing techniques
- basic components of 15kv distribution line
- live line work practices
- basic knots
- rigging techniques
- communication
- development of JSA
- reading and following standard drawings
- 15kv underground cable terminations
- use of shotgun stick
- three-phase transformer wiring diagrams and wiring techniques
- riser
- pole climbing
- operating bucket
- application of protective cover
- understanding of basic electrical concepts and terms
- understanding of common tools and equipment used for distribution line work

Tools required to be brought by competitor:

- Lineman body belts with positioning strap
- Pole climbers
- Adjustable wrenches 10" and 12"
- High leverage side cutters
- Insulating water pump pliers
- Square shank screw drivers
- Lineman's double face hammer

- Ratcheting box wrenches 1/2" and 3/4"
- Tool bag
- Fiberglass folding rule
- Wire skinning knife

All tools will be inspected before the competition. Any tools deemed to be unsafe will be taken out of service. Additional tools required will be provided by NCC committee.

Special Safety Requirements

In addition to the standard safety and PPE requirement of the NCC, line worker competitors must provide and use the following:

- Lineman boots;
- Lineman work gloves;
- Long sleeve shirt for climbing; and
- Personal fall arrest device for pole climbing and body harness for bucket work.

Note: Fall restraint/protection equipment will be inspected prior to the competition, if equipment is not in safe working order it will be removed from service and competitor will use an NCC-provided Buckingham Super squeeze for climbing and a standard harness.

Hard hats and safety glasses will be provided and must be worn during the competition. Competitors must furnish prescription safety glasses or will be required to wear goggles.

Sample Score Sheet

	Competitor Identification Numbers				
	Max. Points				
Task One					
Communication w/GM					
Rigging					
knots					
Selection of hardware					
Climbing					
Tool use					
Arm installation					
Hardware installation					
De-construction					
Use of Hand-line					
Use of PPE					
safety					
Sub total	50				
Task Two					
Communication					

Bucket use					
Handling of tools					
Positioning					
Following spec.					
Cover install/remove					
Line hose install/remove					
clearances					
Hand-line					
Safety					
Sub Total	50				
Task Three					
grounding					
Correct configuration					
Wire stripping					
Wire routing					
connections					
workmanship					
Completion %					
Safety/housekeeping					
Sub Total	50				
Task Four					
Cable installation					
Wire stripping					
grounding					
Top term					
Bottom term					
Crimp connections					
workmanship					
Safety/housekeeping					
Sub Total	50				