



2022 Power Line Worker Competition

FACT SHEET

Project Manager

Jonathan Sacks, Cianbro Corporation

For questions relating to the power line worker competition contact Jonathan Sacks at jsacks@cianbro.com. For all event questions contact Jarrell Jackson, National Craft Championships Director, (202) 595-1789 or jackson@abc.org.

Specific Competition Eligibility

The Power 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 competition. Please refer to overall eligibility requirements for all additional requirements.

Online Exam

Important news for 2022 - The online exam must be completed before competitors arrive on site. Exceptions will be made for extreme circumstances with prior approval of the NCC Director via email. If an exception is granted, the makeup exam will take place Tuesday, March 15, 8:30-11 a.m., and be proctored on site by NCCER. Only those competitors with prior approval from the NCC Director will be allowed to take the test on site. All competitors must sit for the online exam or face disqualification from the NCC. The online exam continues to make up 25% of one's overall competition score.

Competitors will complete the online exam at a local NCCER Accredited Training Sponsor or Assessment Center. It is the responsibility of the sponsor organization to schedule test sessions directly with NCCER by emailing a request to: NCCTest@nccer.org, with the subject line Schedule NCC Test.

NCCER will contact the sponsoring organization to provide access to the online test in NCCER's Testing System. Information on accessing the testing system will be provided, including requirements for the testing proctor.

All exams/tests are based on the standardized craft training process. In addition to the knowledge and skills required for each competition, all competitors should have completed the NCCER Core curriculum modules. A nonprogrammable calculator will be provided as part of the online exam, but no reference materials are permitted.

Practical Performance Test Description

Each competitor will rotate through three workstations. Each competitor will have 2 hours to complete assigned tasks, utilizing knowledge and skills at each station. Unsafe behavior will disqualify a competitor from completing a task. Each activity will require a competitor 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 a 15' structure as per standard drawings, which will be issued before the start of competition.

Task Two: Wiring 3-phase transformer banks

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

work will be done from the ground or step ladder.

Task Three: Terminating medium voltage cable and connecting riser to aerial line Each competitor will terminate medium voltage termination 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 step 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 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
- basic knots
- rigging techniques
- communication
- development of STA
- reading and following standard drawings
- medium-voltage underground cable terminations
- use of shotgun stick
- riser
- three-phase transformer wiring diagrams and wiring techniques
- pole climbing
- understanding of basic electrical concepts and terms
- understanding of common tools and equipment used for distribution line work
- safe operation of bucket truck
- electrical safety in energized space
- application of cover

Tools required to be brought by contestant:

- Lineman body belts with positioning strap
- Pole climbers
- Adjustable wrenches 10" and 12"
- High-leverage side cutters
- Insulating water pump pliers
- Square shank screwdrivers
- 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 contest. Any tools deemed to be unsafe will be taken out of service. Additional tools required will be provided by National Craft Championships committee.

Special safety requirements

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

- Lineman boots Lineman work gloves
- Long sleeve shirt for climbing

Competitors should bring their own personal fall protection device for pole climbing and body harness for bucket work. Fall restraint/protection equipment will be inspected prior to 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 over glasses. Competitors will be assessed as to their safe operation of the bucket. Unsafe operation will not be permitted.

Sample Score Sheet

The following sample score sheet is provided to give competitors an **example** of the criteria that may be included in the practical performance test. **However, this score sheet is only a sample and not intended to act as a study guide in preparation or to imply specific criteria that will be judged during the actual practical performance test.**

ABC National Craft Championships Power Line Worker Sample Score Sheet

Judging Criteria	Competitor Identification Numbers				
	Maximum 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					
SUBTOTAL:	50				
Task Two					
Grounding					
Correct configuration					
Wire stripping					
Wire routing					
Connections					
Workmanship					
Completion %					
Safety/housekeeping					
SUB TOTAL:	50				
Task Three					
Cable installation					
Wire stripping					
Grounding					
Top term					
Bottom term					
Crimp connections					
Workmanship					
Safety/housekeeping					
SUB TOTAL:	50				
GRAND TOTAL:	150				

