

NATF Redacted Operating Experience Report

Conductor Broke When Increasing Tension

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Topic

Conductor Broke When Increasing Tension

Description

A conductor broke while a line crew was working on a 161 kV line. No one was injured.

The crew's task was to add 18 inches of slack in a span that had increased in tension due to one of the structures slowly sliding or moving over the past 40+ years. The linemen had the wire held at the dead-end structure with a 6-ton hoist and conductor grip. The crew was about to disconnect the insulator string and add the hardware for 18 inches of slack when the conductor broke near the conductor grip. The linemen were working from a bucket truck and were not positioned in the bite of the conductor when it broke.

It was determined that the conductor tension was near its breaking strength and was too high to remove with traditional rigging methods. Our company decided to hire a specialized blasting company to implode the remaining conductors from the tower.





Lessons Learned

1. Evaluate line equipment (e.g., hoists, clamps, come-along, etc.) to ensure rated capacities are correct.

Actions Taken

1. Stopped work on the line and investigated the incident.
2. Worked with management to keep the circuit energized, which created heat in the conductor to reduce the actual tension until the lines could be replaced safely.
3. Coordinated with appropriate groups to ensure the remaining lines were safely removed.

Extent of Condition

No additional lines were identified that were close to this type of tensile strength.