

Helicopters used to string transmission line

Helicopters will be used to string conductor (wire) for portions of the CapX2020 transmission line projects. Conductor will be strung directly from the helicopter; as a result, most transmission line work will be performed without touching the ground or encroaching on the right-of-way.

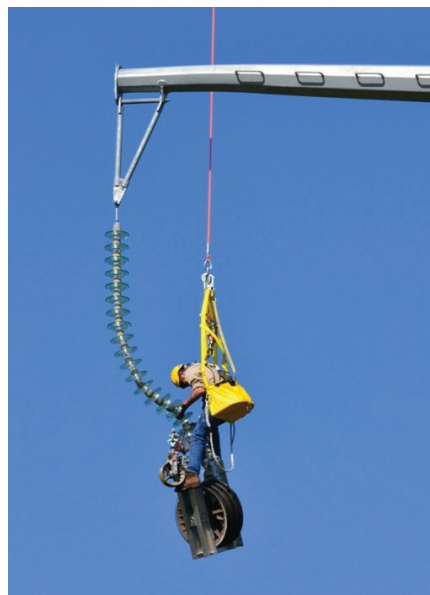
An aerial utility contractor will be hired as needed during each project's conductor installation phase. Helicopters will fly in close proximity to the new transmission structures.

Here's a step-by-step overview of the general process, which may vary by project.

1. Utility linemen will be transferred to each structure via the helicopter; they will then hang stringing wheels on each arm of the structure.
2. Rope is then hooked onto the helicopter and pulled through the stringing wheels for about 20,000 feet. Wire rope is then connected and pulled back the opposite way through the stringing wheels.
3. Conductor is then pulled back through the stringing wheels using a machine located on the ground (conductor is too heavy to be pulled by the helicopter).
4. Using the helicopter, the stringing wheels are removed from each arm while attachments, including dampers to minimize vibration on the conductor, bird diverters and spacers, are added.



Above. A utility lineman attaches a spacer between transmission conductor.



Left. A utility lineman suspended from a cable attached to a helicopter hangs a stringing wheel.



Working from a platform attached to a helicopter, a utility lineman attaches a spacer between transmission conductor.

Benefits

Stringing transmission conductor using helicopters has numerous benefits, including:

- Decreases total project construction time
- Allows work in remote or inaccessible locations
- Reduces environmental impact
- Minimizes right-of-way intrusion
- Minimizes matting in sensitive areas

Terms to know

Conductor: A wire made up of multiple aluminum strands around a steel core that together carry electricity.

Circuit: A continuous electrical path along which electricity can flow from a source, like a power plant, to where it is used, like a home. A transmission circuit consists of three phases with each phase on a separate set of conductors.

Single circuit: A circuit with three sets of conductors.

Double circuit: Two independent circuits on the same structure with each circuit made up of three sets of conductors.

Shield wire: A wire connected directly to the top of a transmission structure to protect conductors from a direct lightning strike, minimizing the possibility of power outages.

Structure: Towers or poles that support transmission lines.

Right-of-way: Land area legally acquired for a specific purpose, such as the placement of transmission facilities and for maintenance access.

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A utility lineman prepares to attach a spacer between transmission conductor.