

# Safety at heights

**We are leaders in caring for life thanks to our occupational safety and health (OSH) culture. Line maintenance and tower mounting: two examples of this exemplary policy.**

**L**uis Carlos Urrego's knees finally stopped shaking. He confesses that this used to happen 20 years ago, when the first electric energy distribution towers were his new office. "In those days we did not go up with the current equipment and safety measures. We used a belt or a harness. You worked up there like you wanted to". But things changed 14 years ago with the transmission towers.

It is cold in the outskirts of Gachetá, in Cundinamarca, Colombia, at the base of Tower 77, Circo-Guavio line. Urrego checks his equipment next to a 40-meter-high structure, known as a "cat face" because of its shape. It takes him seven minutes to ascend, anchored with two "life hooks" to a piece of galvanized steel. At the top comes the remaining route: walk 1,300 meters to tower 76 twice on the same day to do maintenance on two spans or lines.

The 40 year-old lineman from Antioquia works for Instelec, a Grupo Energía Bogotá supplier. He calculates that in two decades he's climbed 15,000 towers, the tallest of which was 100 meters tall. Luis Carlos is not alone in this day of line maintenance: he is accompanied by six other officials in the air, plus personnel from the Group's Occupational Safety and Health (OSH) and Instelec, electrical engineers and floor officials. Twenty-five people in total.

The person that coordinates and gives the final instructions, one hour before leaving Gachetá to the site, is María Victoria Díaz, transmission lines supervisor for our company. "Every week we hold an operational maintenance meeting at the Bogotá office. Two spans will be repaired today. We leave nothing to chance", she says. By her side, Luis Mauricio Herrera, an OSH Management professional, who supervises each worker's compliance with safety requirements.

Also accompanying them is Fabián Rivera, Instelec OSH coordinator who explains the protocol in the event of an incident. "When the linemen move along the "bicycle" (a



A lineman spends an average of eight hours a day working at heights during maintenance of the transmission lines; Tower 77 of the Guavio, Circo line

seat adapted to propelling oneself along the spans), it is not normal to flip over because of wind or rain. But if that were to happen, the lineman would not fall because he is secured in place and always anchored to the conductors. He would be rescued from the floor below".

## This is how a tower is raised

In addition to line maintenance tasks, the Group has the duty of pre-assembling and mounting the towers. While Luis Carlos is doing maintenance on tower 77, in Pradera (Valle del Cauca, Colombia), another work team is getting ready to mount the tower 309 of the Tesalia-Alfárez project.

The time to pre-assemble and mount the tower depends on the difficulty of access: it varies between two and four days, in eight-hour shifts. In Candelaria, 30 minutes from the site of the new tower, Esperanza Rincon, OSH coordinator at GEB's Southern Region, gives the last instructions to the group of 25 contractor workers. "The same way we arrive, that's how we have to leave in the afternoon. We have family members waiting for us at home, whether it's a week, ten days, two weeks, however long it

takes to come back", Rincón explained. An uncovered 35-minute drive is the team's penultimate stop. Now they have a 40-minute walk up a steep slope. Demining went on a few months ago right here. You must not deviate from the trail. The winch, a device for tensioning and lifting pieces that weigh up to 1.5 tons, has to be loaded by a kind of rope cableway. It is the heart and soul of the operation.

"After bringing up the equipment, we get the pre-assembled parts, which had been previously unloaded. The officers bring the column in three parts, which is a cylindrical structure that acts as the backbone and base for the 'plumero' (leader lineman that coordinates the lifting), and it is raised in the center of the tower to assemble the parts," says Jhon Pino, OSH technical analyst for the Group.

Tower 309 is finished. It is 60 meters high (like a 20-story building) and weighs 18 tons. Nothing is left to chance. Occupational safety and health takes precedence at every tower, every line, for every employee.

**Thanks to good Occupational Safety and Health practices, we had zero fatalities in 2019 among employees and suppliers of the Group and its affiliates.**