

# CANDELARIA-BRAZIL



## HOW TO RESTORE TRANSMISSION LINES IN THE EVENT OF A FLOOD ?

### CONTEXT

The river running through the small city of Candelaria had flooded. Located in the southern Brazilian state of Rio Grande do Sul, three 230kV power lines run across that river.

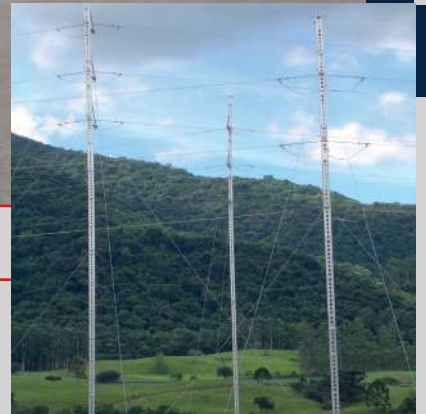
The water levels rose dramatically, and the force of the water flow pulled out the trees. The branches caught onto the lines and pulled down 14 towers. The towers closer to the river completely disappeared.

### SOLUTION

The utility company, CEEE, had acquired three sets of ERS towers for this situation.

They have received the field and software training required to give them a good knowledge base for the system.

**DURING THIS CRISIS, THEIR KNOWLEDGE WAS TESTED.** Since they had bought the ERS towers in fully arranged containers, they could quickly and efficiently mobilize the material to the site.



CEEE put up three teams and 9 ERS towers, and they could restore the power lines within one week of work.

The secret to lowering power shutdown time is the system's efficiency and minimal assembly downtime.

All the tools and components are available in the containers and easy to access and deploy because of the container storage system (CSS).



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## THE PROCESS

- 1 A first response team reaches the site early to assess the issue and plan for the emergency restoration.
- 2 The second team of three arrives on the scene to lay out the anchor positions set out by the engineers via software and technical drawings.
- 3 In the meantime, the assembly team gets instructions regarding which containers and items to bring to the site.
- 4 The ERS tower components arrive on site, and the material is deployed to be assembled. No heavy machinery is necessary.
- 5 Once the towers are complete, the stringing process begins, and new conductors are strung to the ERS towers.
- 6 A quick clean-up and all nine towers were energized within a week thanks to the excellent linemen's training and the ERS system's efficiency.



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