

Case Stories

High ohmic earth fault

Recurrent faults detected

In one of the feeders of a primary substation located in a rural area, 17 incidents of recurring high ohmic earth faults (>8 kΩ) were registered over the course of about 1 hour.



Investigation

A quick overview of the map identified a possible area as the source of the incidents. A team was dispatched to investigate the line going through the wooded area. At the scene, the team was able to quickly determine that an energy forest planted below

Directional earth fault protection ($I\phi > I_{oint}$)	
Parameter	Measured value
Operate delay time	0 s, 0%
Measured value U0	675.1 V (0.106 pu)
Measured value 3I0	0.6762 A
Fault resistance	8396.2 Ohm
Settings ▶	



the lines, had grown wild. At the slightest wind, the tops repeatedly touched the overhead line.

Action and result

A trimming of the treetops in the energy forest was conducted and a potential outage prevented.



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