

# Osmose®



## Mobile Contact Voltage Detection

As underground cable and distribution systems age, electrical faults occur with increasing frequency due to damage, workmanship issues, and general deterioration.

Osmose's mobile detection solutions provide utilities with unmatched intelligence and visibility into the health of their underground distribution systems and assets. Using a combination of cutting-edge electric field detection technologies and purpose-built data systems, we proactively scan utility systems and detect electrical faults before they can impact utilities.

Our capital expenditure-based, programmatic approach to secondary system management provides accurate asset assessments, helping electric utilities:

- ✓ Improve public and worker safety
- ✓ Improve system reliability through intelligent asset management
- ✓ Reduce costly energy losses and carbon footprint
- ✓ Reduce emergency and unscheduled O&M costs
- ✓ Prevent risk and cost of failure or premature replacement of structures
- ✓ Avoid service interruptions

All data collected in the field is organized and accessible in real-time through both automated reports and our web-based geospatial software application. We also maintain a secure long-term historical repository of all customer scanning results and identified faults, including detailed event data, survey history, and imagery.





## Safety

Faults in utility cabling often energize utility structures and surrounding conductive surfaces such as street furniture, sidewalks, and roadways. These energized objects present a serious shock and electrocution hazard to workers, pedestrians, and pets. In some cases, faults will result in arcing across cable insulation, generating combustible gases which fuel smoking manholes, fires, and explosions. By proactively detecting these faults before an incident, Osmose reduces customer risk and exposure to both shock incidents and a multitude of manhole and underground safety concerns.

## Energy Efficiency

Energy losses are a preventable loss of a valuable commodity. Similar to water or gas leaks in plumbing, each of the faults we identify is leaking energy into the surrounding environment. Unrepaired, the losses will persist and accumulate indefinitely. In some cases, losses from persistent contact voltage faults can exceed 40 MWh/year per fault.

By identifying and mitigating these faults or leaks, Osmose enables your utility to proactively reduce energy losses, save money, and improve your carbon footprint and environmental impact. These savings are easily measured, and customers are provided precise real-time calculations of the energy and cost savings achieved through our services.

## Reliability

Underground electric distribution systems exist in a harsh environment, and as these systems age, cable and equipment quickly deteriorate. Most underground distribution cable is the original installed service cable. It has been in service beyond its intended lifespan, and its condition has never been tested or evaluated.

Proactive cable replacement programs typically seek to target the oldest cable first, neglecting critical service factors that affect insulation such as loading, installation damage, environmental conditions, and external damage. Consequently, such programs can allow failing cable to be left in service and functional cable to be prematurely removed and replaced.

Osmose's mobile fault detection solution enables utilities to deploy a targeted, condition-based strategy to manage and replace underground distribution cable systems. By identifying and replacing cable in the early stages of failure, we eliminate the opportunity for faults to evolve into safety or reliability events. Inversely, good performing cable is left in service until its condition begins to degrade. The result is improved safety, reliability, and meaningful, measurable cost savings.

**To learn more, contact your local Osmose professional, call 770.631.6995, or email [underground@osmose.com](mailto:underground@osmose.com).**