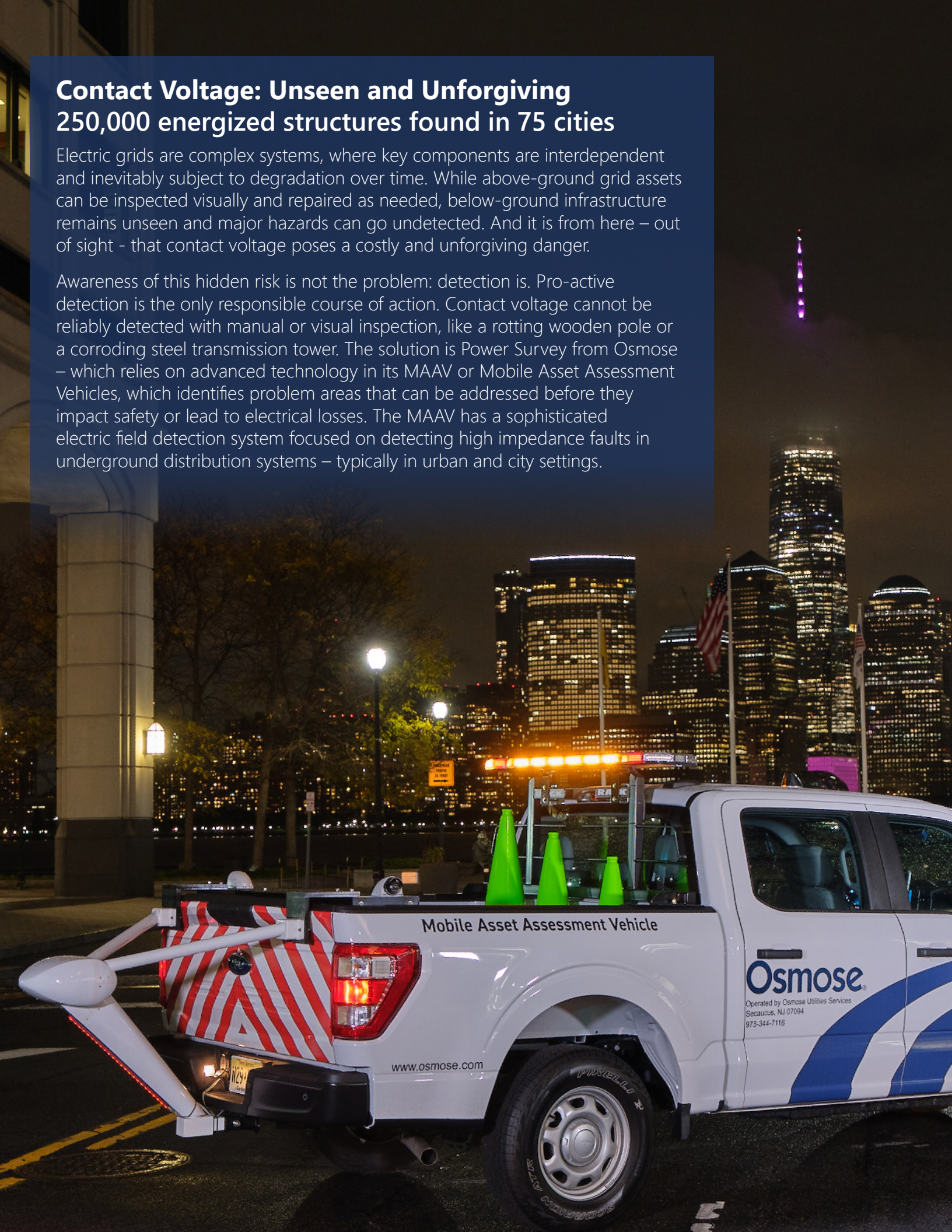
Contact Voltage Detection with POWER SURVEY™

Osmose®

Contact Voltage: Unseen and Unforgiving
250,000 energized structures found in 75 cities

Electric grids are complex systems, where key components are interdependent and inevitably subject to degradation over time. While above-ground grid assets can be inspected visually and repaired as needed, below-ground infrastructure remains unseen and major hazards can go undetected. And it is from here – out of sight - that contact voltage poses a costly and unforgiving danger.

Awareness of this hidden risk is not the problem: detection is. Pro-active detection is the only responsible course of action. Contact voltage cannot be reliably detected with manual or visual inspection, like a rotting wooden pole or a corroding steel transmission tower. The solution is Power Survey from Osmose – which relies on advanced technology in its MAAV or Mobile Asset Assessment Vehicles, which identifies problem areas that can be addressed before they impact safety or lead to electrical losses. The MAAV has a sophisticated electric field detection system focused on detecting high impedance faults in underground distribution systems – typically in urban and city settings.



Advanced Technology Detects Hidden Hazards

Public objects like streetlights, traffic signals, playground equipment and fences—even concrete—can become energized and dangerous. Osmose's Power Survey helps utilities manage this risk by scanning all essential underground assets and identifying problem areas, which can then be eliminated.

Power Survey was the first (and remains the only) mobile scanning system designed to detect contact voltage faults. Mobile electric field detection is the most sensitive and accurate non-invasive testing method available to locate faults in underground distribution systems. Osmose's Power Survey system is an industry benchmark that remains unequaled in sensitivity and performance.

Benefits of the Power Survey Process

Osmose can provide a Power Survey scan to help improve the performance of a utility system:

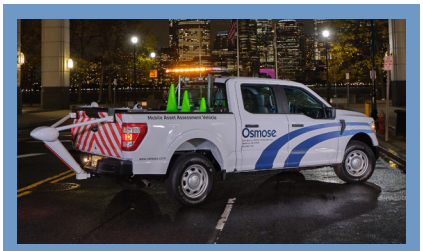
- **Public and Employee Safety** - The Power Survey process measurably impacts safety by scanning for contact voltage, reducing the number of dangerous underground events like manhole explosions or energized structures.
- **Company Liability** - Power Survey's groundbreaking technology is sensitive enough to pinpoint even the most minute system faults so utility workers can correct issues before they impact the public, reducing liability situations.
- **System Energy Efficiency** - Power Survey proactively identifies high impedance faults, saving utilities money and lowering costs for consumers. Losses for utilities in large cities can exceed 10 GWh annually.

Power Survey Supports Better Decisions

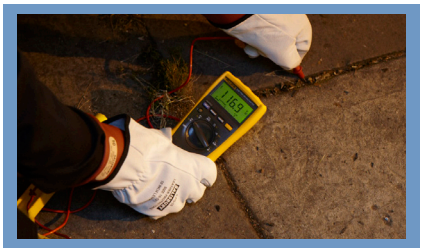
Osmose's Power Survey technology has performed accurate, real time, reliable electric field testing in more than 75 U.S. cities in the U.S., Canada, and Europe. Our technicians are highly trained and certified to perform consistent testing and troubleshooting procedures. Our detailed dashboards provide customers with up-to-date status reports delivered to their desktop via a web interface or to their mobile device via a custom dashboard interface.

By addressing unseen risks at scale, Power Survey helps utilities safeguard their grid infrastructure and the customers and communities they serve.

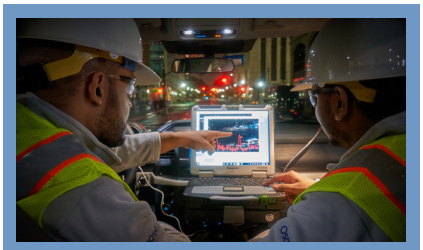
How Power Survey Works



Survey underground for fault conditions



Record observations and measurements at fault locations



Repair faults and analyze results

During the survey process, Osmose's truck-mounted Power Survey MAAV technology scans the target area to detect low-level electric fields emanating from structures that have been energized due to an underground fault. It simultaneously detects voltage on all surfaces in an area: streetlights, manholes, fences, roadways and sidewalks.

During the field measurement process, alerts from the MAAV are investigated using handheld measurement equipment. Route coverage data is collected automatically, and a "qualified reference" is used for the voltage and harmonic content measurements for each structure. Osmose provides relevant data via a 24/7 dispatch center, stand-alone or integrated into existing GIS and work management systems.

- All data and photos of the energized object and qualified reference are recorded and presented in event reports.
- Event reports are delivered in real time.

Osmose®

Resilient Grids. Strong Networks. Safe Energy.

For more information:

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