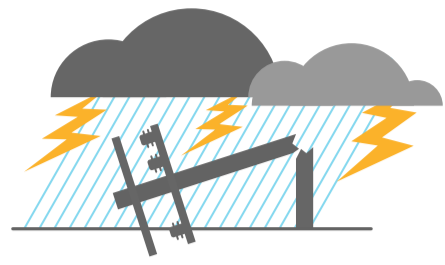


Monitoring Distribution Transformers

(and why it's the next logical step in a utility's smart grid evolution)

The facts are clear. The grid is aging and is facing **new, unprecedented challenges:**



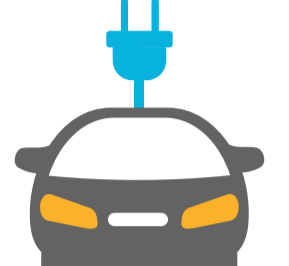
EXTREME EVENTS

4.5 million¹

CUSTOMERS
lost power in the 2021 Texas Freeze.

83%²

OF UTILITIES
expect extreme weather to impact future grid stability.



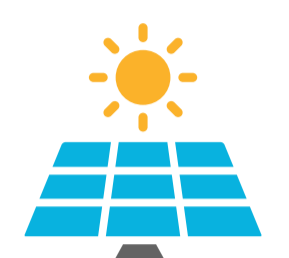
ELECTRIC VEHICLES

23%³

OF CARS SOLD
by 2025 will be EVs.

80%⁴

OF CHARGING
will happen at the home.



DISTRIBUTED ENERGY RESOURCES

1,408⁵

SOLAR INSTALLATIONS
per day in the US, in 2021.

387 GW⁶

OF CAPACITY
from DERs by 2025.

And the **implications** for utilities are unavoidable:



More than ever, utilities need accurate, **real-time information to manage extreme events.**



Changes in residential demand are overloading distribution transformers, **increasing failure risk.**



This complex ecosystem of generation and storage **requires visibility across the grid.**

What's more, there exists **a significant visibility gap**

between meter and substation:



An ideal solution would leverage already deployed grid assets **to close the visibility gap.**

What if your **existing** distribution transformers could do more than regulate voltage?

What if they could:



Monitor Asset Health



Improve Grid Visibility



Predict Future Failures

Just what can a **Distribution Transformer Monitor** do for you?

Provide Voltage Visibility

Oscillography for detecting current and voltage levels in real-time.

Detect Tilt & Vibration

Know if there is a problem with the pole before it becomes a bigger issue.

Monitor Bi-directional Energy

Identify fluctuating voltages and reverse power conditions from Distributed Energy Resources.

Pinpoint Faults

Accurately locate primary faults for faster restoration.

Detect Arc Flashes

Be alerted to the danger before the cabinet is opened.

Monitor Asset Health

Detect oil temperature and pressure problems before failure.

Understand Capacity

They need to be right-sized for today and the future.

Keep Precise Records

GPS helps maintain accurate record keeping within a utility's GIS system.

Protecting Revenue

Identify and address power theft quickly.

Prepare for Electric Vehicles

Understand the limitations of your distribution transformers before failure.

Faster Outage Restoration

Last gasp alerts help crews address outages with pinpoint accuracy.

ubicquia

To learn how monitoring distribution transformers can help your utility, visit

Ubicquia.com/dtm

1 <https://energy.utexas.edu/ercot-blackout-2021>
2 <https://www.tdworld.com/overhead-distribution/article/21215150/iggeo-how-utilities-can-protect-distributed-grids-from-increasing-extreme-weather-events>
3 <https://bnet.turtl.co/story/evo-2022/page/3/1>
4 <https://www.forbes.com/wheels/news/jd-power-study-electric-vehicle-owners-prefer-dedicated-home-charging-stations/>
5 <https://www.seia.org/research-resources/solar-market-insight-report-2021-year-review>
6 <https://www.woodmac.com/news/editorial/der-growth-united-states>