



**Fault Prevention
Capital Deferment
DER Management**

GRID MODERNIZATION WITH TXConnect MONITORING

The Distribution system is the largest part of the electricity system. Yet for utilities this has remained an operational blind spot.

Aging infrastructure, wildfire risk, and fast growing cities that absolutely need to keep the lights on in our digital economy are only the beginning of the challenges.

Now comes Electrification.

Base service loads will be 2-4 times that today. The auto companies are going all electric. Families increasingly wanting solar. Governments at every level are driving this change. These dynamics will quickly accelerate in ways that can't be forecasted today.

You can be ready.

Your team needs new capabilities. Advanced fault prevention, active load management, granular demand response, and actual DER hosting capacity. Efficient capital planning and asset replacement programs. All of these require distribution transformer monitoring.

Distribution asset monitoring has been talked about for more than a decade but has only recently become economically viable. The new real time information provided will fundamentally change the way your utility operates. From faster responses to outages, preventative maintenance programs, and asset replacement using real time information.

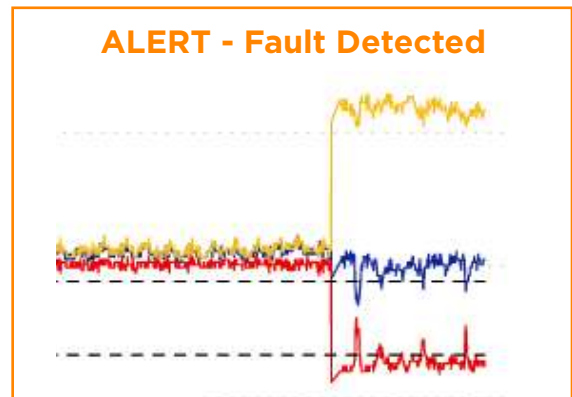
Why wait when this decision data helps your team today?



WMAAC monitoring products are specifically designed for our public utilities.

Our WMAAC solution uses the latest IoT technology, Cloud Computing, security envelope, and edge processing to identify critical information. We empower your team with actionable visibility while protecting them from data overload. TXConnect is purpose-built to monitor 4 currents and the 3 voltages, voltage and current harmonics, power factor, frequency, phase angle, temperature, audio and ultrasonic. TXConnect provides 10 min so you can see the real time impact of EV loads and DER. TXConnect alarming for voltage loss, restoration, and over-temperature of the transformer oil. Easily installed and a low cost to operate. We stand by your success at every step of the way.

Modernization requires distribution monitoring. Get started.



TXConnect FUNCTIONALITY

ALARMS

Alarms events are considered urgent and are sent via e-mail, text message and or connected directly to the SCADA systems via OPC or web services.

Voltage Alarm	Loss of Voltage	Immediate message when voltage on 1 phase drops continuously below 150V for 1 minute
Voltage Alarm	Voltage re-established	Message when all 3 voltages return above 190V for 1 minute after a voltage loss alarm
Temperature	Oil Temperature	When oil temperature exceeds 110C for 5 min.

REPORTS

Reports are information sent from the sensor on a regular basis. This information is stored and reported via daily or weekly via emails. These reports are user-configurable to ensure only useful information is brought to your attention.

Current	Report to the cloud service the 30min average currents for the 3 phases and neutral
Temperature	Report the hourly oil temperature
Over & Under Voltage	4 hourly event base reporting, based on over & under voltage thresholds. With Vmax and Vmin numbers for each phase
Voltage Harmonics	Event base reporting, based on voltage harmonic thresholds, daily reports on the number and duration of voltage harmonic events
Current Harmonics	Event base reporting, based on current harmonics thresholds, daily reports on the number and duration of current harmonic events
Power Factor	Event base reporting, based on power factor thresholds, reports on the number and duration of power factor events
Current Direction	Monitor and report daily total current follows per phase as a value in both directions based off 10 min averages (total import and export values).
Phase Angle	Event base reporting, the thresholds yet to be set
Audio & Ultrasonic	30 values which are monitored for change over time with voltage and current

RECORDS:

Data Set	Every 10 mins the following is stored to the sensors: 3 voltages, 4 currents, THD voltage and current. Total and for each phase plus 3, 5, 7, 9 and 11 harmonics, power factor, total and each phase, phase angle and frequency. Up to 14 months of 10 minute data can be stored on the TXConnect and accessed via the Android App.
Event Data Set	Each event's start and end times are stored along with the full data set at trigger, and then every 10 min data.