



## Enhancing Utility Connectivity Through Secure Wireless Broadband Networks.

For a utility looking to modernize its grid, "A modern grid requires modern communications" is a good starting premise. Beyond that, a modern communications platform unlocks numerous additional opportunities to address a wide range of issues facing today's utilities.

### DER Integration:

The decarbonization driven proliferation of renewable energy generation resources is changing the paradigm for electric utilities. A home with a rooftop solar installation, for example, exhibits a kind of "prosumer" (producer-consumer) behavior. To safely and efficiently integrate DERs into the grid—whether they be owned by the utility or a third party—utility operators must have greatly improved grid visibility, control, and automation capabilities. The sensors, smart devices and applications that will provide utilities these enhanced capabilities depend upon connectivity via a private broadband data network.

### Cyber & Physical Security:

With the greater reliance upon data for grid control—and with cyber attackers growing more sophisticated, security of any new data communications network is of critical importance. LTE offers a particularly robust, up-to-date set of security features. LTE provides more granular control of the network and the connections between discrete network elements. In a private deployment, the utility has the control to implement any or all of LTE's advanced, optional security features, as well as any additional utility specific cyber or physical security management functionalities.

### EVs/VPPs:

When they are being charged (grid-to-vehicle, or G2V), electric vehicles (EVs) represent load to the utility; when their batteries are used as storage for power that can be supplied back into the grid (V2G), they are stored power distributed energy resources (DERs) for the utility. EV charging data would be useful to utilities that want to manage charging times in order to mitigate peak load conditions. Looking further into the future, utilities could treat EVs like any other DER, relying upon secure broadband connectivity to manage the time and amount of V2G power the EV provides. And with appropriate communications, a utility could even establish a virtual power plant from a multitude of EVs, saving the cost and environmental impact of firing up a peaking power plant to meet short-term spikes.

### Wildfire Mitigation:

To reduce the threat of wildfires and other risks of having downed wires, utilities are planning to deploy a technology from Schweitzer Engineering Laboratories (SEL) called Falling Conductor Protection (FCP) that, when enabled by a low-latency, high-bandwidth broadband network, can identify a power line when it breaks and, as it falls, cut its power before it hits the ground.





#### SECURITY

Maximum cyber security protection



#### RESILIENCY

Real-time visibility to support a proactive posture, quick response time, and ability to meet capacity demands



#### OPERATIONAL IMPROVEMENTS

Accessible data exchanged in real-time (without going into the field)



#### CLEAN ENERGY TARGETS

Support and proactively advance strategic electrification efforts



#### CUSTOMER IMPROVEMENT

Predict and prevent public safety threats, improve utility security and enable smart city technologies



## 900 MHz Private LTE is the Foundation for the Future

A communications infrastructure built on utility-grade 900 MHz Private LTE is a smart, long-term solution that enables utilities to achieve their goals—STARTING NOW.

## ANTERIX ACTIVE ECOSYSTEM AND ANTERIX SECURITY COLLECTIVE:

The Anterix Active Ecosystem brings one hundred leading technology companies together that are supporting 900 MHz Private LTE (PLTE) networks and shaping the future of private wireless broadband. Members enjoy technical assistance, collaborative tools and marketing support to develop products and services for 900 MHz PLTE networks enabling utilities and the critical infrastructure sector.

Anterix formed the seven-member Security Collective within the Anterix Active Ecosystem Program, to assemble cyber-physical solutions providers to deliver sector-specific knowledge and collaborations. Each Anterix Security Collective member is committed to collaborating with utilities and within the Collective to contribute to the broader effort of finding and implementing comprehensive solutions.

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