



CRITICAL INFRASTRUCTURE 4.9 GHz POTENTIAL USAGE CASE STUDY

ENSURING A RELIABLE GRID: WHY ELECTRIC COMPANIES NEED SPECTRUM ACCESS

Electric companies, among the nation's largest communications users, operate vast private networks for a crucial mission: *powering our modern world*. Building a stronger, more resilient grid, vital for transitioning to cleaner energy, hinges on reliable communication. Securing sufficient spectrum is therefore essential.

SHARED OPPORTUNITY: PARTNERING WITH PUBLIC SAFETY IN THE 4.9 GHz BAND

The 4.9 GHz band offers a promising solution, with *shared access alongside public safety entities* like fire departments and police. This aligns perfectly with their shared purpose: protecting and serving our communities. Electric companies already work closely with public safety during emergencies, where restoring power is often a critical step. Their participation in federal, state, and local emergency teams further underscores this vital partnership.

UNLOCKING THE 4.9 GHz BAND'S POTENTIAL FOR GRID MODERNIZATION

Shared access wouldn't simply fill a spectrum gap; it would *unleash a wave of innovation in grid management*. Imagine high-speed data transmission enabling real-time remote monitoring and control of substations, distribution automation, and synchrophasor technology for enhanced power quality. This band offers point-to-multipoint connectivity and ease of deployment, ideal for neighborhood area networks, wireless hotspots, and even temporary emergency use. Mobile data applications would further empower field operations.

TAKING TO THE SKIES: UAS FOR GRID SAFETY AND RELIABILITY

The 4.9 GHz band also holds immense potential for Unmanned Aircraft Systems (UAS). Electric companies already rely on UAS to quickly locate grid issues, conduct detailed equipment surveys, and ensure faster repairs, all while enhancing worker safety and minimizing outage times. Currently, they depend on unreliable unlicensed or experimental licenses. Dedicated access in the 4.9 GHz band would boost flight safety and unlock further UAS innovation, benefiting both electric companies and public safety partners who also utilize UAS.

A WIN-WIN FOR ALL: SHARED SPECTRUM, ENHANCED OPERATIONS

Sharing the 4.9 GHz band isn't just about electric companies; it's about optimizing spectrum utilization for the greater good. Leveraging existing equipment from adjacent bands reduces costs for both parties. This shared approach enhances not only grid reliability and energy transition but also public safety capabilities.

Granting electric companies access to the 4.9 GHz band is not just an investment in our future energy infrastructure; *it's an investment in safer, more resilient communities*. Let's unlock the full potential of this critical spectrum and empower both electric companies and public safety to serve our nation even better.