



Kodiak Broadband PTT for the Utilities Industry

An Application Brief

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Overview of the U.S. Utilities Industry

The utilities industry comprises organizations engaged in the provision of electric power, natural gas, steam supply, water supply, and sewage removal. Within the electric utility sub-sector, there are three major segments: generators, energy network operators, and energy service providers/retailers. Natural gas and steam suppliers typically focus on distribution. Operations of water supply utilities include both treatment and distribution. Sewage removal activities include collection, treatment, and disposal of waste through sewer systems and sewage treatment facilities.

Most recent data from the U.S. Census Bureau and Bureau of Labor Statistics shows the following key facts for the utilities industry:

- Revenue: over \$566 billion
- Establishments: 26,459, including over 3,306 electric utility providers
- Employees: over 553,000

Key Communication Challenges for Utilities

The utilities industry has been going through significant changes, attributed to stringent regulatory requirements, volatility of energy prices, emergence of new technologies, increased customer demand, and competition in the retail energy market. In general, utilities face the following major challenges:

Overall Business Challenges	Communication Challenges
<ul style="list-style-type: none">• Regulatory compliance• Customer retention• Asset management• Fast response to emergency situations• Safety for employee and retail customers• Operating profit• IT/communications infrastructure	<ul style="list-style-type: none">• Communication with dispersed workers• Mobile access to real-time data and application integration• Mobile coverage within certain structures• Lack of system interoperability, especially across multiple organizations• Communication cost control

A key characteristic of electric and gas utilities is that they typically operate with many different types of disparate and dispersed workforces. Effective field workforce communication, therefore, is critical to utilities' operations. According to a whitepaper from Sierra Energy Group's Research & Analysis Division, *Mobility Innovations for the Next Generation Utility*, the future for utilities is defined as "pervasive mobility" as they move into the age of smart grid, and integration of mobile applications with real-time service optimization is the key to management

of the workforce in the field.

Fragmented and Siloed Communication Systems in the Utilities Industry

Utilities have used multiple mobile voice/data communication devices and services that include two-way radios, regular cellular voice service, tablets, and GPS devices. In addition, utilities also depend on various productivity applications, such as project management, work order management, ERP, etc.

Organizations within the utilities industry have faced the problem of different devices and systems for different applications that lack interoperability and application integration. Those who use cell phones for regular voice cannot communicate with workers carrying two-way radios. The existing LMR networks used for PTT cannot support mobile broadband data. Some employees must carry two devices: a two-way radio for PTT and a smartphone for data and voice communication with those without a two-way radio. In addition, when multiple utilities and Federal agencies are involved in the response to an emergency situation, it is difficult for their mobile workers to communicate with each other because two-way radios from Vendor A typically are not interoperable with radios from Vendor B at an application layer.

Fragmented and siloed communications systems lead to multiple consequences, including communication inefficiencies, negative impact of such inefficiencies on utility operations, the inconvenience and high cost of multiple devices to carry for certain employees, and the cost of managing disparate communication systems. The industry has been talking about convergence for years; however, utilities are still struggling with their disparate communication systems.

Kodiak Broadband PTT for Utilities

To solve the problem outlined, the utilities industry needs a new, high-performance PTT solution that interoperates with existing two-way radios and can integrate instant voice, group communication, broadband data, productivity applications, and business processes, all on a single platform. This type of solution can meet the diverse needs of the workforce, preserve existing investments, reduce communication costs, and increase operational efficiency. Broadband PTT solution from Kodiak, a Motorola Solutions Company, delivers this type of solution, and it supports the following key features and functionality:

- **Standards based.** The Kodiak PTT platform complies with the industry's OMA PoC standards, which represent the commercial-ready baseline of 3GPP's MCPTT standard. New features based on the MCPTT standard are being implemented.
- **Simplicity of service deployment and management.** Kodiak Broadband PTT is hosted service, which eliminates the need for on-site equipment installation, network management or maintenance, and in-house or outsourced user support.

- **Dynamic creation and update of contact list and group list.** Kodiak Broadband PTT comes with a powerful Web-based corporate administrator tool that allows a PTT address book to be created or updated on the fly and synched to individual users' devices wirelessly, in real time.
- **Broad device choices, including the latest smartphones, feature phones, tablets, and specialty devices.** Smartphone/tablet operating systems supported by Kodiak Broadband PTT include Android and iOS. Ruggedized specialty handsets with Intrinsically Safe feature and a dedicated PTT button are available. In addition, Kodiak Broadband PTT comes with numerous accessories, including car kits.
- **Advanced features that enhance safety.** With sub-second call set-up, there is no voice communication delay. This is critical during an emergency situation. The supervisory override feature (talker priority) allows a supervisor or any other designated personnel to take over the voice channel at any time. Other advanced features that can enhance safety include real-time presence, broadcast calling, and talk group scanning with priority.
- **Secure multimedia messaging and location tracking features that enhance operational efficiency.** Kodiak Broadband PTT supports secure multimedia messaging (with text, picture, video, file, and recorded voice), location mapping on device, and geofencing, all of which enhance operational efficiency. Users now can access different means of mobile communication through a single application.
- **Multiple application modes.** Kodiak Broadband PTT offers two application modes: PTT radio mode, which provides a single and easy-to-use screen that emulates experience with traditional radio, and a standard mode, which offers full client functionality interactions.
- **Interoperability between two-way radio and cellular networks.** The interoperability capability allows an energy company to continue to use existing two-way radios and expand coverage or capacity cost-effectively, with seamless interoperability between PTT devices operating on different networks.
- **Integrated dispatch.** Kodiak offers an integrated dispatch application, which can be PC-based or Web-based. The application supports PTT communications, location tracking, group monitoring, voice recording, etc.
- **Significant cost savings.** Kodiak Broadband PTT, through its carrier partners, provides two pricing options: a low-cost PTT-only plan or a small nominal fee on top of an existing cellular voice/data plan, giving end customers significant cost savings.

By using Kodiak Broadband PTT, a utility company can achieve the benefits of service consolidation, greater efficiency, high performance, and cost reduction:

- Minimizing the need to manage multiple communication services
- Continuing to use existing two-way radios
- Expanding PTT service coverage or capacity cost effectively
- Improving employee productivity and operational efficiency

- Leveraging the latest and greatest mobile applications on a single device

Key Use Cases for Kodiak Broadband PTT

Kodiak Broadband PTT delivers not only the traditional core capabilities of PTT (instant 1:1 and group calls) but also integration of mobile broadband data applications, delivered through the most diverse wireless networks to the broadest choice of devices. With Kodiak Broadband PTT, employees can reach the right person or group at any time anywhere and have real-time access to mobile data or productivity applications relevant to their role or functions, all on a single device.

	What PTT Voice Is Used For	Typical Device	Non-PTT Voice Application
Executives/ Directors	<ul style="list-style-type: none"> • Project Planning • Emergency situations • Status updates • Discrete communications 	<ul style="list-style-type: none"> • Smartphone 	<ul style="list-style-type: none"> • Messaging • Mobile data & productivity apps
Field Crew Supervisors	<ul style="list-style-type: none"> • Utilities Planning • Assigning Tasks • Status reporting • Driver and delivery monitoring 	<ul style="list-style-type: none"> • Smartphone 	<ul style="list-style-type: none"> • Messaging • Mobile data & productivity apps
Field Service/ Technicians/ Maintenance	<ul style="list-style-type: none"> • Receiving work orders • Task Assignments • Status reporting 	<ul style="list-style-type: none"> • Feature Phone 	<ul style="list-style-type: none"> • Messaging • Mobile data
Drivers	<ul style="list-style-type: none"> • Receiving work orders • General communications • Emergency situations • Status reporting 	<ul style="list-style-type: none"> • Smartphone • Feature phone 	<ul style="list-style-type: none"> • Messaging • Navigation • Mobile data
Construction Managers	<ul style="list-style-type: none"> • Assigning tasks • Status reporting • Communication with mobile workers • Emergency situations 	<ul style="list-style-type: none"> • Smartphone 	<ul style="list-style-type: none"> • Messaging • Mobile data & productivity apps
Quality Control	<ul style="list-style-type: none"> • Alerts/inspections • Communication with mobile workers • Assigning tasks • Status reporting 	<ul style="list-style-type: none"> • Smartphone • Feature phone • Tablet 	<ul style="list-style-type: none"> • Messaging • Mobile data & productivity apps
Dispatchers	<ul style="list-style-type: none"> • Communication with mobile workers/drivers • Assigning tasks • Emergency situations • Status reporting 	<ul style="list-style-type: none"> • PC 	<ul style="list-style-type: none"> • Messaging • Mobile data

Summary

Kodiak Broadband PTT is an ideal carrier-integrated mobile communication solution for the utilities industry. It allows users to access instant voice and mobile broadband data services on a single device, with ubiquitous network coverage. For more information, visit Kodiakptt.com.