

## Case Study

**Organization:** Powerco

**Location:** New Zealand

**Featured Solution:** ACOM Command & Control

**Market:** Utilities



# The Future of Utilities Field Crew Safety - Powerco's New Digital Mobile Radio (DMR) Platform

## Bringing warmth, comfort, and security to 1.1 million utility customers

Keeping the lights on and the gas flowing to 442,000 homes, businesses, and organizations across New Zealand's North Island is no easy task. However, as the country's second largest utility provider, Powerco prides itself on safety and reliability for all. That includes fault crews in the field every day working alongside nine networks of electricity and gas lines.

But as the company's needs changed, emergency communication became an issue with the electricity network. Powerco Network Operations Manager Phil Marsh explains, "In the past, when we used the RT system that had a far smaller reach, we had fault

staff needing to drive for half an hour to the top of a hill to get coverage so they could contact the control room. There were places in areas such as the Tararuas, Wairarapa and Rangitikei where they simply didn't have any comms or cell phone coverage – losing all communication with the control room, which is dangerous, particularly in an emergency."

Echoing Marsh's statements, Powerco's primary field services provider also understood the need to act. "When working with electricity, it is vital to be able to quickly and reliably contact those controlling the electricity network if there is an emergency, without worrying about black spots affecting radio coverage," said John Batchelor, General Manager Power and Gas, at Downer New Zealand.

Since deploying the new ACOM system, NOC operators have increased their overall call handling efficiency by 50% to 70% percent.



## Mitigating the hazards for field personnel with clear, reliable, communications coverage

With the vision of providing a safer working environment as a clear goal, Powerco set out to design a digital radio system capable of ensuring at least 90% coverage across the company's expansive work zones. Other key criteria included enabling the company to retain control over the network, and improve efficiency, while ultimately prioritizing its field staff's access to communications at Powerco's Network Operations Center.

## Partnering with technology innovators to develop New Zealand's largest industry standard, private digital mobile radio network

After evaluating equipment options from multiple communications providers, Powerco chose Zetron's ACOM Command & Control System to drive the company's 32-position console system and complement its new fleet of Hytera DMR 3 VHF radios. While there were other solutions the company considered, the ACOM system checked all the boxes. Aside from its highly customizable touch screen display, the system supported multiple simultaneous active calls, included visual and audio alerts, and provided Powerco staff the ability to leverage advanced features, such as Bluetooth, encrypted messaging, and SIP gateways, in addition to request-to-talk (RTT) and press-to-talk (PTT) communications. Adding an Eventide Voice Recorder and Surveyor Manager Reporting System added extra desired functionality to the overall solution.

"Zetron performed a proof-of-concept at Powerco's site, which gave the Powerco evaluation team the insight and confidence that Zetron was the right fit," explained Marsh.

## Deploying 32 position ACOM-supported connections

The project kicked off with Zetron and Hytera establishing a regional joint testing facility in nearby Brisbane. Technicians from both companies worked to install and integrate the new DMR system with the assistance of Powerco's engineers and lead project manager. Upon successful testing, the equipment was shipped and deployed to Powerco facilities in New Plymouth and Tauranga.

From there, Zetron led training workshops for Powerco staff, including two "super user" members of the company's original design team.

The system went live with zero unplanned customer or service outages. Powerco executives described the implementation as "round smooth," with minor challenges promptly addressed and successfully managed by the Zetron team and other suppliers.

## Boosting safety and efficiency across New Zealand's North Island

Soon after deployment, the ACOM system underwent its first real test. Major storms battered the North Island and cut power to thousands of Powerco customers. But this time was different. Because of the new Digital Radio System, the company was better prepared to navigate the challenges.

In the past, the company's Network Operation Center would activate a storm room with additional operators on-hand to manage the call overflow. But with the increased operational efficiencies provided by the new system, Powerco staff members were able to tackle the call volume without incident, and without needing to activate the storm room.

"There were four separate storm events in December, and three of those were after we moved in. It was probably the worst December I can remember for lightning strikes. We had 700 strike faults to take care of and had to replace 75 transformers," Marsh recalled.

In fact, since deploying the new ACOM system, the company reports NOC operators have increased their overall call handling efficiency by 50% to 70% percent.

"Powerco now has coverage in some remote parts of New Zealand that no other provider of mobile or radio has. We are set up for the future," Marsh said.

Going forward, Powerco plans on exploring AVL technology. But for now, the company's customers, executives, staff members, and line crews can rest easy knowing the ACOM system and new digital radios provide a safer and more efficient working environment for all while empowering the company mission of delivering New Zealand's energy future.

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