

# Hytera DMR Trunking Solution in NZ Electricity Utilities

**User**  
Powerco, New Zealand

**Market segment**  
Oil, Gas & Utilities

**Project time**  
2016

**Products**  
DMR Trunking Solution  
DMR Tier III system  
MD782G  
PD782G



## Introduction >>

Powerco operates and maintains the second largest network of electricity lines in New Zealand, with about 335,000 customers connected to its electricity networks. It strives to deliver reliable energy and keeps the lights on and gas flowing.

## Background >>

Powerco aims to provide a trusted service that evolves with changing technology, brings warmth, comfort and security safely and efficiently. When the supply is interrupted Powerco responds quickly. Also Powerco focuses on safety of its workers and customers from electrical & gas hazards. So after a long appraisal process, Powerco finally chose to implement a new Hytera DMR Tier III system.

## The Challenge >>

Powerco has its electricity distribution network comprising more than 27,000 kilometers of cables, overhead lines and sub-station assets. Naturally, such a critical and wide-ranging operation requires reliable communications.

Powerco had previously been using an analog radio system that was more than 10 years old. That system covered only about 65% of its electrical network, but the company needed greater than 95%. And it is very little coverage in outlying remote uneven terrain. 3G & 4G cellular coverage also very poor in some areas.





"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 cellphone coverage – losing all communication with the control room, which is dangerous, particularly in an emergency," Powerco Network Operations Manager, Phil Marsh said.

## The Solution

After understanding customers' operation background, cooperation needs and project objectives, Hytera actively provided appropriate solutions and products.

Hytera provided DMR Tier III Trunking system to achieve 95% coverage in the eastern region. With support from Hytera, 35 base station high sites had been established, which can solve the problem that their previous RT system can't get a wide reach.

Hytera also supplied the mobile vehicle radio models MD782G, and the handhelds PD782G. The advantages of DMR products are ensuring clear voice quality, reducing noise, longer standby time, higher spectrum utilization, lower equipment costs, safer with encryption protection and compatible with digital and analog intercom.

Hytera products offered a one-stop solution, IP-connected dispatching client and voice recording system. The new system had a new packet transport network based on Juniper tiered architecture, installed at over 60 comms and substation sites. And it was supported by upgraded power and environmental systems at 35 comms sites and installation of Hytera DMR Tier III.

## The Results

With the new DMR Tier III system, in the eastern region had achieved about 95% coverage, and testing is in progress in the west.

Hytera professional communication solutions greatly improved Powerco's working efficiency and ensured staff safety. Staff can now keep in touch with the command center at anytime, anywhere, and react immediately to orders. They are more convenient to contact each other. What's more, its wide signal coverage guaranteed reliable communication even in harsh condition. In addition to being used by its own staff, the DMR system is also used by maintenance staff from Downer New Zealand, Powerco's prime maintenance provider.

Now up and running, it is the largest, industry standard, private digital mobile radio network deployment in New Zealand, that helped Powerco keep the lights on for more than 330,000 connected customers.

## Voice from Customers

*"Powerco staff and contractors have been positive with the new systems, particularly knowing that now they have reliable comms."*

—Phil Marsh, Powerco's Network Operations Manager

*"There will be a huge culture change for our company. To keep up with it we need the best industry communications and data communications. And that was part of our focus when we decided to build a Hytera DMR 3 network because Hytera showed us the roadmap, the very advanced thinking.."*

—Peter Corston, Powerco's Senior Project Manager



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