



# BLACK HILLS POWER

CASE STUDY



## Customer profile

Black Hills Power (BHP) is an investor-owned electric utility in South Dakota, USA.

## Applications

- Two TaitNet MPT 1327 Trunked Radio systems, comprising 13 sites and four sites and connected by a T1 facility
- Two Line Dispatch Terminals (LDT)
- Tait TN5100 Nodes each including a Digital Audio Switch (DAS)
- Tait mobiles
- Tait portables
- Network support

## Business benefits

- Incorporated system redundancy to minimize the risk of network failure
- Excellent radio coverage improves worker safety
- Assigned talk groups allow efficient response to outages
- Tait support provides peace of mind if things go wrong
- Future-proof system supports remote diagnostics, AVL and migration to digital

## THE CUSTOMER

Black Hills Power (BHP) is an investor-owned electric utility serving 63,500 customers in 20 communities located in western South Dakota, northern Wyoming, and south-eastern Montana. BHP employs over 350 people in nine offices and five electric power plants.

The radio system is also used by Cheyenne Light Fuel and Power in Wyoming, which serves 39,800 electric customers and 33,300 natural gas customers in the greater Cheyenne area.

## THE CHALLENGE

The need to replace an outdated simplex radio system was the catalyst for Black Hills Power investigating a new communications solution.

In addition to poor network performance, the old radio system proved a challenge for users and dispatchers who often had to search for the right channel to communicate with the workers in the field.

Black Hills was also tasked with providing the communications for Wyoming-based Cheyenne Light and Power. The two radio systems were incompatible, so any solution needed to allow radio users to roam within the Black Hills and Cheyenne coverage areas and communicate either peer-to-peer or through to dispatch.

The mountainous topography of Black Hills poses a challenge for radio coverage, with plains at 3000ft and peaks up to 7000ft. Extreme winter weather is common and up to 40 inches of snow can fall, meaning some radio sites are inaccessible for up to six months each year. Severe winter storms causing power outages are also not uncommon.

*"There's a hundred per cent confidence in the Tait system that people are going to be able to get through when they need to."*

**Rick Dobbe**  
Communications Engineer  
Black Hills Power

## THE SOLUTION

An independent consultant recommended a TaitNet MPT 1327 Trunked radio solution comprising a 13-site network to cover Black Hills and four sites to cover Cheyenne. Each stand-alone system has a node controller and the two systems are connected by a T1 facility.

The systems interface to an Avtec console at a single dispatch center, where calls can be dispatched to both Cheyenne and Black Hills. Radio users are able to roam within the two coverage areas using the same Tait mobiles and portables in both coverage areas. The primary purpose of the network is to help maintain a safe work environment on a daily basis. Anytime there's a schedule outage for maintenance communications are required to coordinate the crews involved.

With its TaitNet Trunked network Black Hills has been able to set up regional talk groups to enable dispatchers to communicate efficiently with specific teams of users on a day to day basis. Dispatchers no longer have issues searching for specific users and can now select a talk group to make calls to multiple users. In particular, outage teams have been assigned to talk groups for prompt response during storm restoration work.

Black Hills also invested in a series of Tait services including a support contract which offers 24/7 response for any issues that may arise with the network.

## THE OUTCOME

As a result of the additional sites chosen for the TaitNet network the coverage has improved significantly, exceeding the expectations of Black Hills staff.

Radio users had low confidence in the previous radio system. Once the new system was installed, users were amazed with the voice quality and the overall fidelity of the system.

## MORE INFORMATION

For news, product specifications, comprehensive technical information and contact details of your nearest Tait service facility, please visit [www.taitradio.com](http://www.taitradio.com)



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