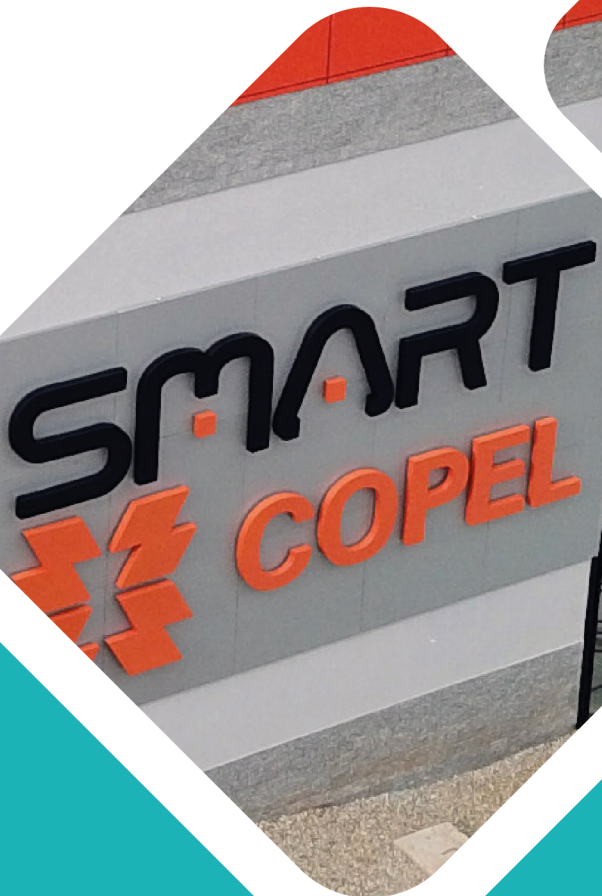


CASE STUDY

# BYNE



## Implementing radio satellite communication and integration with BYNE-ControlOne at COPEL-DIS

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## COPEL caters to 5 million consumer units in Paraná, Brazil. BYNE ensures its critical communication.

Photo: COPEL

### THE PROJECT

COPEL - Companhia Paranaense de Energia manages more than 210 thousand kilometers of distribution networks in the state of Paraná and supplies electricity to 5 million consumer units. To ensure service quality and continuity, the company operates more than 389 automated substations. A team of 8 thousand employees works in the installation, operation, and maintenance of distribution

networks, which demands an agile and simple-to-operate communications system.

BYNE has guaranteed operation center communication, including telephony and P25 VHF radio, since 2019. In December 2022, satellite radio communication was installed to enhance the reliability and agility of communication between the operations center and field teams.

### CHALLENGES

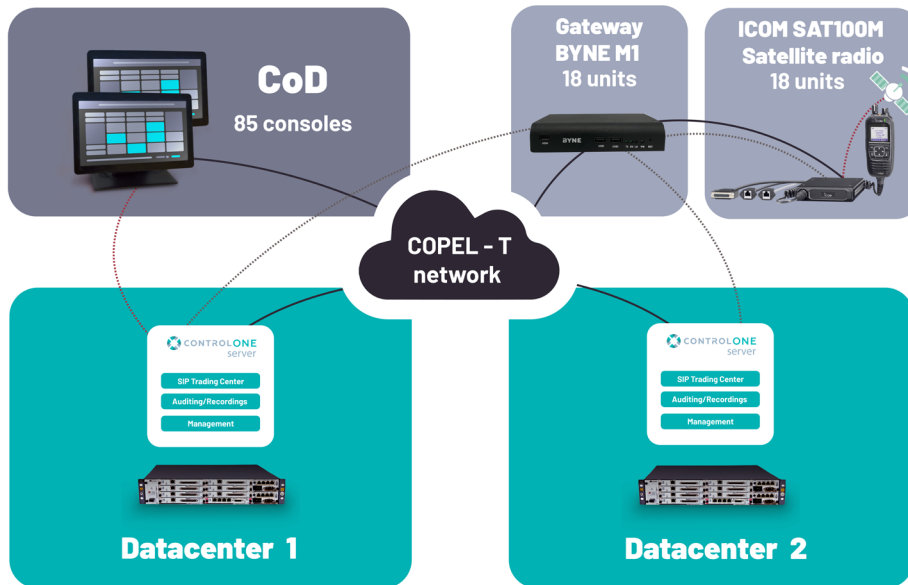
COPEL has more than 220 P25 repeaters in operation, resulting in one of the largest networks in Brazil. On some occasions, strong winds and rains can damage the towers where the VHF radio structures are located, which makes even cellphone communication impossible. In these cases, our satellite solution ensured communication with the field teams, which is essential for restoring services. Another issue that needed to be eliminated was the existing shadow areas in the VHF radio and telephony networks.

Satellite communication ideally achieves the resilience required for mission-critical operations because it does not require the use of infrastructure.

### PROJECT ARCHITECTURE

COPEL's Operations Center, in Curitiba, has 85 BYNE ControlONE consoles that integrate communications between the equipment used by field teams, which adopt the P25 radio transmission standard. The architecture of the solution has two servers that provide high operational availability for

the consoles and keep all the information synchronized between the systems, also integrated with the BYNE M1 gateways connected to the ICOM SAT100M terminals. More details about the project architecture:



## OUR SOLUTION

The solution implemented in COPEL's Operations Center meets the company's specific requirements for communicating with teams through satellite technology. Read also [Efficient communication in critical environments: how PTT technology can help](#). The main features include the following:

Web Interface for device management

Possible customization of equipment names and groups

Use of low-orbit satellites (below 2000 km) capable of operating anywhere

Agile voice communication services with PTT (push-to-talk), short text messages (SMS) and geo-positioning information (GPS)

Encryption and group and individual calls

Support for unlimited number of terminals

The solution integrated PTT radio communication via satellite with the communication consoles of the Operations Center and other means of communication, such as radio equipment in the P25 standard, allowing the two technologies (satellite and VHF) to talk to each other. BYNE also provided staff training for equipment handling, installation, configuration, operation, and maintenance.

The solution covered all the requirements to ensure efficiency and agility for COPEL's critical communication.



Photo: COPEL

## CUSTOMER BENEFITS

BYNE ControlONE's critical communication system has simplified the connection of the Operations Center with teams and field agents, providing more **speed and efficiency**. The user-friendly consoles also facilitate and streamline the **coordination of activities and operations**. Given the need to **audit calls**, the system allows quick access to recordings, which is a key operational requirement of mission-critical enterprises. The integration that BYNE ControlONE provides between the PBX and the digital radio frequencies, and now also satellite, **unifies all operational communication** on a single platform. To ensure service continuity, BYNE offered full support from pre-design and setup to support and maintenance.

## ABOUT THE CLIENT

COPEL - Companhia Paranaense de Energia directly serves 5 million consumer units, including homes, industries, commercial establishments, and rural properties. Its area of coverage includes 394 municipalities in the state of Paraná. To meet this demand, COPEL has more than 8 thousand employees. The quality of services was recognized in 2021, when the company received the Aneel Quality Award, in the Southern Region category, and ranked second in the national classification. The award reflects the reviews made by consumers.

With the BYNE solution, COPEL simplified the Operations Center and enabled the right people to work at the right times quickly and efficiently.

## SEE OUR OTHER PROJECTS:

