

CASE STUDY

# BYNE



## BYNE streamlines communication in the COPEL-DIS Operations Center

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**ICCA** **FINALIST**  
INTERNATIONAL CRITICAL  
COMMUNICATIONS AWARDS  
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# A company from the state of Paraná, Brazil, distributes energy to more than 5 million

Source: COPEL

## THE PROJECT

At the beginning of 2019, we were chosen, together with the integrator Wecom, to implement the communication system of the Distribution Operation Center of COPEL-DIS – Companhia Paranaense de Energia.

Initially, the project provided for the installation of 52 operating consoles, integrated with 120 radio repeaters. However, throughout the project, the scope was expanded to 85 consoles, and today, it has more than 200 integrated repeaters. More than 100 professionals were

involved and fully trained to use the consoles and system administration.

The operation center of the third largest distributor in Brazil rallied operations in Curitiba, in the Smart Copel building. Previously, these operations were also carried out in the cities of Ponta Grossa, Maringá, Cascavel, and Londrina. The goal was to centralize the management of smart energy grids and distributed generation and storage systems in a single location.

*With the development of the project, COPEL-DIS could use BYNE ControlONE, which fully integrates communications between the operation center and the field teams. BYNE's solution has facilitated connections and significantly streamlined contact between all professionals involved in mission-critical activities.*

## CHALLENGES

COPEL has more than 200 P25 repeaters in operation in one of the largest networks in Brazil. Intrinsicly, this infrastructure is vulnerable to intense weather events, such as heavy rains and winds, which can cause damage to the towers where the VHF radio structures are located, in addition to the rupture of power distribution cables, preventing even cell phone communication.

In these cases, communication with the field teams, which is critical for restoring services, was ensured using a satellite solution that does not depend on local infrastructure. Another issue that needed to be eliminated was the existing shadow areas in the VHF radio and telephony networks in the second largest state of southern Brazil, with an area of almost 200 thousand km<sup>2</sup>. Moreover, the solution had to include the following:

Storage capacity of 50,000 hours of recorded calls;

Connection via IP with the repeaters, without using gateways, using DFSI protocol;

TIA-102 BAHA, with BYNE software implementation;

Radio channel expansion to 450 channels;

Integration with scale and video wall systems, through the BYNE API, enabling real-time management of distribution data;

Future integration (in progress) with workforce management and automation systems;

Telephony channel expansion to 300 channels;

Full call recording.

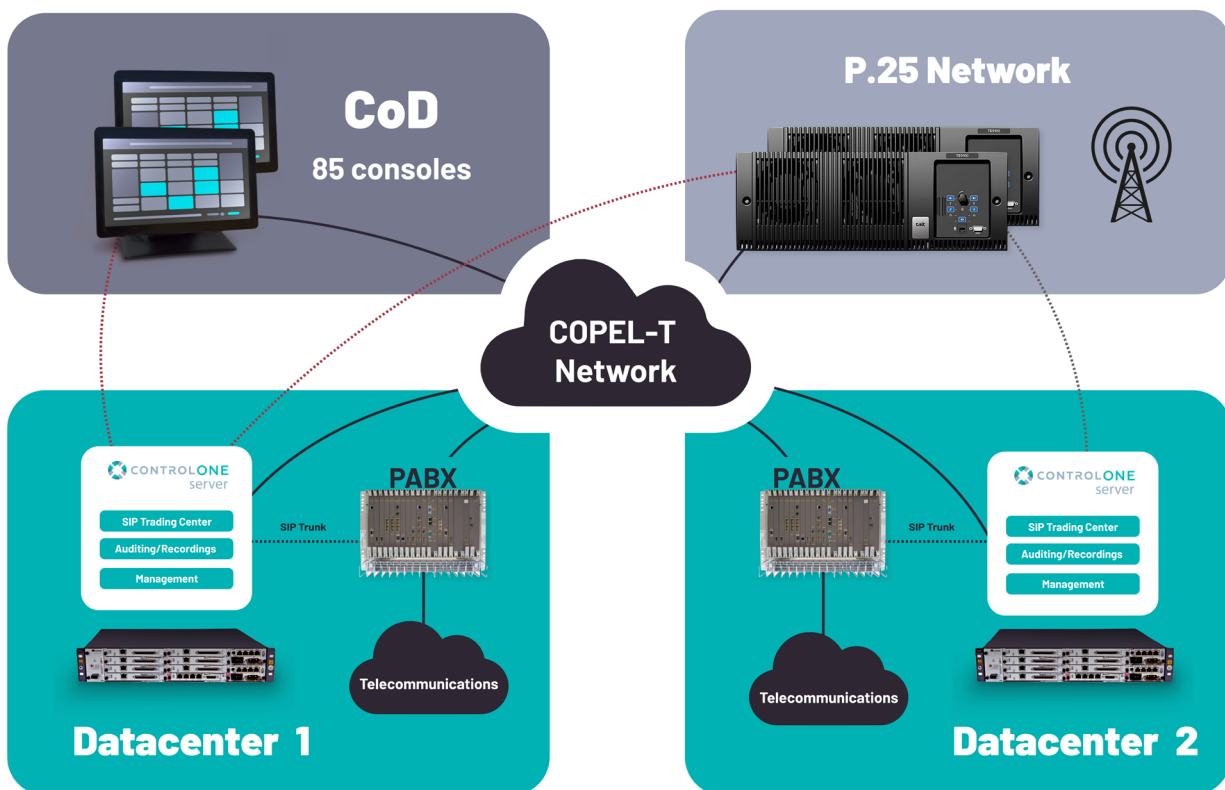


## OUR SOLUTION

We meet the criteria defined in the project and implemented an integrated communication system with the following modules and services:

- 85 consoles installed in the operation center in Curitiba;
- Hotline keys with programmed direct dial;
- 2 datacenters equipped with SIP Trading concentrator, PBX, audit, and recordings;
- IP connection with DFSI (Fixed Station Subsystem).

With the installation of BYNE ControlONE, COPEL-DIS unified voice and text communication in a single interface.



## CUSTOMER BENEFITS

BYNE ControlONE has a simple architecture that does not require the installation of different components for critical communication operations. Our solution simplifies system management, including integration with radio and hotlines. In addition, the project provides training and remote support via the service desk (during business hours) or 24-7 telephone support.



Source: COPEL

As a result, COPEL-DIS was able to provide more quality services to its clients. The benefits include the:

Best response time in operations;

Full and agile integration between existing operation centers;

Ease of integration with future operation centers and new P. 25 regions;

Ability to access any channel from any console, regardless of the call source location.

## ABOUT THE CLIENT

COPEL - Companhia Paranaense de Energia directly caters to more than 5 million consumers, including homes, industries, commercial establishments, and rural properties. Our area of coverage includes 394 municipalities in the state of Paraná and Porto União, in Santa Catarina. To meet this huge demand, the company currently employs around 5,000 workers.

The quality of service offered to customers has been awarded on several occasions. In the last decade, COPEL received the Abradee Award eight times in customer evaluation, and in 2021, it also won the main category, Best Distributor in Brazil. In 2022, COPEL received

the Valor 1000 Award as the best company in the Brazilian electricity sector, granted by the newspaper Valor Econômico.

The energy distribution arm of the COPEL group has 205,000 kilometers of lines, making it the third largest system in Brazil. In addition, COPEL operates 389 automated substations. This entire operational structure needs a cutting-edge communications system that is agile and simple to operate.

With our solution, COPEL DIS makes connections easier and simplifies the activation of the right people at the right times, with minimal effort.

## SEE OUR OTHER PROJECTS:



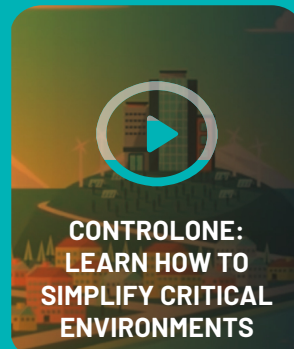
CASE: COMMUNICATION SYSTEM - ITAIPU BINACIONAL



CASE: ECU911 CALL CENTER - GUAYAQUIL



CASE: STATE GRID BRAZIL OPERATIONS CENTER



CONTROLONE: LEARN HOW TO SIMPLIFY CRITICAL ENVIRONMENTS