

User name: COPEL Distribuição S.A.

Project name: Implementation of BIM Modeling for medium- and high-voltage substation projects

Location: Curitiba, Paraná, Brazil

Background:

- COPEL Distribuição S.A. has been responsible for energy distribution in the state of Paraná for over 69 years.
- They piloted collaborative BIM modeling for one of their 138-kilovolt substation projects.

Challenges:

- Required automating deliverables and integrating physical substation design with electrical design.
- Needed to ensure compatibility with other software applications used within the company.

Solution:

- After careful analysis, COPEL selected OpenUtilities Substation based on its interoperability with ProjectWise and MicroStation, which were already used by the company due to its ability to model the substation structure and electrical designs within one application.
- Using Bentley software facilitated real-time information sharing, streamlined multidiscipline design workflows, and ensured accurate material quantity takeoffs, avoiding rework and waste.
- The successful digitization of the pilot project ensures that future projects will be executed more quickly and sustainably, with better use of human and material resources.

Outcomes:

- Bentley technology helped the team collaborate and bring together data in a geospatial context and at scale, improving infrastructure delivery and performance.
- Over the course of one year for 15 substation projects of 138 kilovolts, they estimated a 30% reduction in project costs—an annual savings of USD 630,000.

Quote: “Bentley’s tools allow for better team integration, facilitating collaborative work and the real-time updating of design information. OpenUtilities Substation also ensures greater quality and confidence in deliverables, generating reliable reports and quantitative data, culminating in more efficient, faster and cleaner project execution.” – *Jean Michell de Bona Mattos, Substation Electromechanical Designer, COPEL Distribuição S.A.*

Image caption/courtesy 1: COPEL Distribuição S.A. piloted collaborative BIM modeling for one of their 138-kilovolt substation projects. *Image courtesy of COPEL Distribuição S.A.*

Image caption/courtesy 2: After careful analysis, COPEL selected OpenUtilities Substation based on its interoperability with ProjectWise and MicroStation. *Image courtesy of COPEL Distribuição S.A.*

Image caption/courtesy 3: Extrapolating their results over a period of one year for 15 substation projects of 138 kilovolts, COPEL estimated a 30% reduction in project costs—an annual savings of USD 630,000. *Image courtesy of COPEL Distribuição S.A.*

For more information, please contact Bentley PR at PR@news.bentley.com.