![Bentley - Advancing Infrastructure]

Reality Modeling Workflow for Retrofitting Substations

iTwin® Capture, OpenUtilities® Substation

Around the world, demand for energy is surging, straining the electrical grid.

Existing substations often lack accurate documentation and do not adhere to the latest engineering standards, making upgrades to substations especially time consuming and often dangerous.

But now, it is possible to transform this process using reality models and 3D designs. Drones are used to capture field conditions with high-resolution images, and LiDAR data is collected. Reality models and point clouds are created to provide greater insight, visualize clearances, and produce automatic bills of material. And intelligent protection and control design reduces redundant data by automating schematics and wiring diagrams.

This seamless workflow improves efficiency and mitigates errors to improve design and documentation quality, while reducing site visits, improving safety, and modeling existing equipment and details with pinpoint accuracy.

Transform your world with precise digital capture, unified design, and frictionless collaboration.

CHALLENGE
Retrofitting brownfield substations to achieve greater capacity, compliance, safety, and grid reliability.

SOLUTION
Bentley's software solutions offer utilities an integrated set of capabilities that are proven to streamline the process of retrofitting brownfield substations, while providing greater project transparency and collaboration.

KEY BENEFITS
- Increases safety
- Ensures greater compliance
- Improves documentation quality
- Reduces design time
- Provides enhanced project transparency

Image Courtesy of Essential Energy