



ProjectWise[®], Powered by iTwin[®]

Enable Full Digital Project Delivery for Electric Utilities

Bentley has extended the digital capabilities of ProjectWise, powered by iTwin, from engineering work-in-progress to full digital delivery for collaborative electric infrastructure design.

The demand for electric capacity is increasing, energy supplies are transitioning toward clean and renewable sources, and climate change has utilities grappling with both mitigation and recovery of assets. Utilities face many challenges to modernize the grid and make it more sustainable and resilient.

FUTURE-PROOF INNOVATION

As infrastructure is updated to accommodate new technologies, utilities must ensure the capability and integrity of their generation, transmission, and distribution systems—removing information silos to create greater visibility, improved productivity, and increased collaboration.

DIGITAL DELIVERY

To maximize productivity, electric utilities need to leverage existing resources and knowledge across disparate teams. Utilities will need to embrace digital innovations—helping attract and retain the next generation of vocationally trained employees—to improve information sharing and collaboration.

MULTIDISCIPLINE COLLABORATION



The South Street Substation in Providence, Rhode Island presented numerous design and coordination challenges. Required to keep the original substation operational during construction, Transportation and Consulting Engineering Services (TRC) turned to ProjectWise for file sharing and secure storage. The system enabled collaboration on over 2,000 CAD files and incorporation of critical information from the files within various 3D design platforms. The model helped them realize several areas requiring redesign prior to installation or construction. [View Project](#)

ACCELERATED DESIGN REVIEWS



Leveraging Bentley's 3D and reality modeling applications with ProjectWise, POWERCHINA Hubei Electric Engineering Co., Ltd. (HEEC) developed a digital, data-driven lifecycle solution to plan the substation layout, eliminating the need to demolish six surrounding houses and reducing the total land area. Performing clash detection avoided over 90% of collisions and 50 reworks, saving CNY 3 million. By establishing collaborative digital design and construction workflows, HEEC reduced the construction period by 30 days. [View Project](#)

LEVERAGE INSIGHTS FROM YOUR DATA



Essential Energy implemented digital solutions among small capital energy projects across New South Wales, Australia. They chose ProjectWise as the single source truth, creating a low-cost intelligent reality modeling-based solution to overcome data acquisition, compatibility, and construction drawing accuracy challenges. The solution helped realize an overall reduction of 50% of project costs attributed just to the design component, and a reduction in travel of 80%, which helped reduce their carbon footprint and improve site safety. [View Project](#)

OUR ELECTRIC UTILITY USERS HAVE REALIZED THE FOLLOWING BENEFITS:

2,000+

CAD FILES COLLABORATED¹

90%

OF COLLISIONS AVOIDED²

50%

REDUCED PROJECT COSTS³

¹ New South Street Substation, Utilities Transmission and Distribution

² Wuhan's Underground Substation, POWERCHINA Hubei Electric Engineering Co., Ltd.

³ Intelligent Substation Design, Essential Energy



HOW CAN PROJECTWISE, POWERED BY ITWIN, HELP YOU...



IMPROVE COLLABORATION?

- ◆ Create and synchronize data across your multidiscipline teams during the design lifecycle to minimize project risk early on and resolve issues with collaborative design reviews, using our digital twin technology.
- ◆ Share large, complex models with the entire project ecosystem securely, regardless of authoring applications, facilitating early supply chain involvement to ensure best practice and value.
- ◆ Collaborate with supply chain partners using clearly defined data access, roles, and tasks lists to maintain consistency across fluid teams.



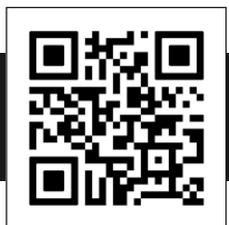
ACCELERATE DESIGN REVIEWS?

- ◆ Bring real-world context to projects by combining engineering and reality data in models, enabling utilities to inform their designs with up-to-date information. For instance, substations often lack accurate documentation and do not adhere to the latest engineering standards making upgrades to substations tedious work. By capturing field conditions and combining it with engineering data, designs can be quickly optimized and validated.
- ◆ Perform virtual interactive flythroughs, query model information, and analyze embedded business attribute data, simply by using a web browser.



LEVERAGE INSIGHTS FROM YOUR DATA?

- ◆ Enforce information standards, such as ISO 19650 BIM, right from the start with automated workflows and processes, reducing inconsistencies and the need for manual interventions.
- ◆ Navigate and search intuitively to quickly access the right information and share the latest real-time data.
- ◆ Use ProjectWise Components Center, a cloud-based library of digital objects, for regularly encountered assets such as a transformer. Before inserting it in the required locations within a design model, it can be shared within other applications, such as OpenUtilities® Substation, reducing design time from days to hours.
- ◆ Select these quality assured components based on whole life costs, as well as incorporating their data into a dashboard to track carbon reduction goals, dramatically increasing the efficiency, safety, and quality of current and future projects.
- ◆ Leverage your portfolio to share knowledge and drive best practice, as well as glean timely insights, which enable you to make decisions better and faster to drive efficiencies and savings.



TO LEARN MORE ABOUT HOW OUR USERS HAVE REALIZED THE BENEFITS OF PROJECTWISE, SCAN THE QR CODE OR VISIT <https://qrco.de/beGZsj>