Bentley®
Advancing Infrastructure

CONNECT Edition

OpenUtilities™ Design Optioneering (Powered by Siemens' PSS®SINCAL)
Streamlined Distribution Design and Integrated Planning for Network Reliability

Utility network planners, designers, and GIS experts need close collaboration to ensure network reliability. Engineers analyze many system scenarios to optimize network performance, mitigate operating issues, and provide design reviews for complex designs. Optimizing equipment size and estimating costs is critical for both designers and planners to design and plan complex networks based on thorough infrastructure analysis.

Accelerate Planning and Design with Engineering-precision Capabilities

OpenUtilities Design Optioneering permits designers and planners to better collaborate so that network models are cost-effective, reliable, and smart. This application optimizes equipment sizing and cost, analyzes designs for feasibility with existing infrastructure, and plans system upgrades with cost information in mind so you can make more economical decisions. OpenUtilities Design Optioneering advances OpenUtilities Analysis capabilities one step further with cost-based decision support for planning and designing multifaceted utility networks, including the integration of distributed energy resources (DER). The application provides the ability to analyze both planned and existing infrastructure, optimize equipment sizing, and estimate current materials and labor costs for projects with integrated DER.

Planning engineers can readily perform simulations and study various scenarios in terms of capacity, connections, compliance, and load. Designers can create and validate their designs based on simplified power flow and hosting capacity analysis to ensure feasibility of their designs. In addition, designers can confirm that existing infrastructure can reliably handle the additional loads imposed by future infrastructure and identify potential operating issues. By identifying the issues early, planners can proactively manage the grid to ensure equipment remains in compliance with operating requirements.

Refine Plans and Designs Quickly with On-the-fly Cost Estimation

Get real-time cost feedback on each design decision through dynamic cost estimates. Create detailed cost breakdowns of labor, materials, and equipment at each work location and for the entire design. Compare alternatives to find the least cost-compliant alternative. Eliminate time-consuming cycles in your enterprise work management system (WMS) by ensuring plans and designs are submitted within budget the first time.
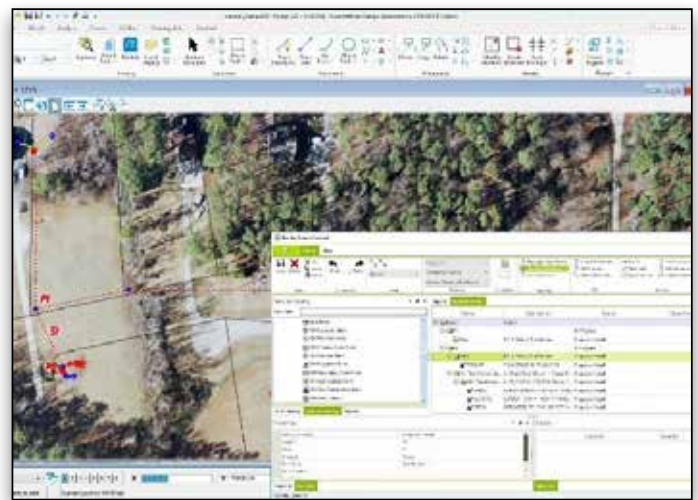
OpenUtilities Design Optioneering Design Assistant enables cost-based planning and design.

Fast Workflows with Integrated Work Management

Avoid project delays with an embedded and configurable workflow engine. Create, assign, manage, and approve work requests and work orders in stand-alone mode or through a two-way standard message-based connection to your WMS. Define dashboards and reports to help managers track project status and progress. Eliminate open-loop processes with status notifications, approval requests, and email integration.

The Siemens/Bentley Advantage for Intelligent T&D within DER

Solving the problem, OpenUtilities Design Optioneering Powered by Siemens' PSS®SINCAL accelerates the digitalization of power utilities and industrial power facilities. A single, unified application combines Bentley's exceptional technology in infrastructure design and engineering with Siemens' expertise for the economical, reliable, and intelligent transmission and distribution of electrical power. The solution will aid utilities to reduce costs, improve reliability, and build in resilience in response to the global energy transition.

OpenUtilities Design Optioneering At-A-Glance

Siemens' PSS®SINCAL Integration
- Off-the-shelf planning, analysis, and design solution
- Configurable to multiple local and company standards
- Fully configurable and customizable via many programming languages, including .NET languages, VBA, python, etc.
- Intuitive user interface

Basic Calculations (balanced and unbalanced)
- Load flow
- Short circuit
- Hosting capacity

Integrated Work Management
- Configurable complex business workflows and integration to WMS
- Ability to track project status, duration, and schedule
- Configurable dashboards and reports

GIS Capabilities
- Wide-range of geospatial coordinate systems
- Map management
- Buffers and overlays
- Spatial and non-spatial joins
- Thematic resymbolization
- Dynamic labeling
- Data browsing and reporting
- Query builder (search by)

Integrations to GIS and Spatial Databases
- Interoperability with various GIS data stores supports network information within a connected data environment
- Supports ESRI, GE Smallworld, and more
- Oracle Spatial/Locator and SQL Server Spatial compliant

Engineering-precision Planning and Design
- MicroStation® (Power Platform) precision graphical editing
- Raster management
- Display priority and transparency
- Smart, fast graphical layout and editing of utility networks
- Catalog-driven layout and editing
- Validates business rules

On-the-fly Cost Estimation
- Automatic compatible unit assignments
- Material and labor costs
- Compare cost alternatives

### Support for 3D Reality Meshes
- Displays reality meshes created by ContextCapture
- Snap, measure, render, and interact with the model to improve design
- Edit with built-in capabilities

Construction-quality Prints
- WYSIWYG plot generation with user-defined templates and legends
- Publish to intelligent PDF, PostScript, and other output formats
- Tabular and graphical views

Interoperability
- Support for Bing Maps
- MapInfo (TAB, MID/MIF), SHP files, Oracle Spatial and Graph, CSV, GML, ESRI File Geodatabase, SQL Server Spatial, and ODBC sources
- Publish digital twin for multiple applications and purposes
- Web feature service client - read (query) access
- Safe software FME integration
- Preconfigure integration with ProjectWise®
- Bentley Map® Mobile publishing
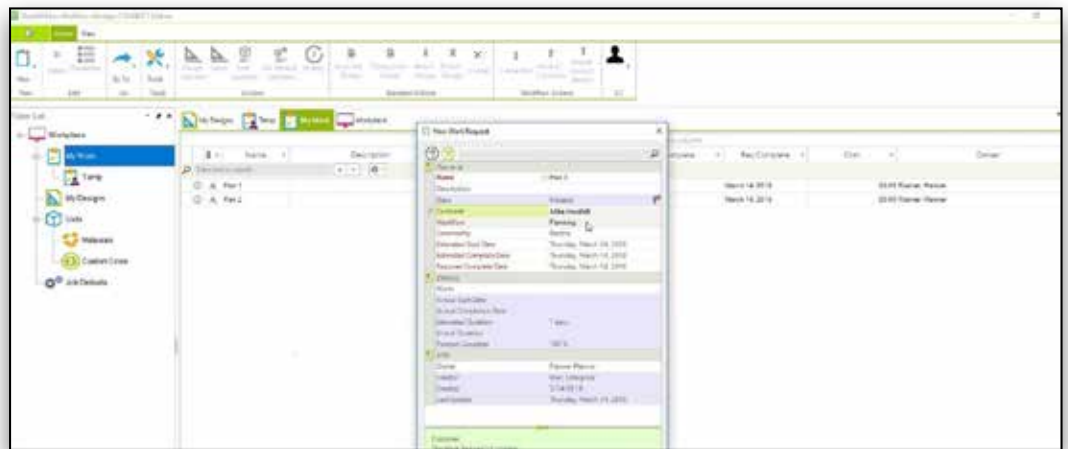
OpenUtilities Design Optioneering Workflow Manager enables cross-collaboration between design and planning teams.

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