



## Bentley Systems Announces OpenUtilities™ Solutions for DER - Planning & Design Assessment Solutions for Grid Modernization

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Bentley Systems announces the availability of *OpenUtilities™ DER Planning & Design Assessment Solutions*, the latest of Bentley's electric utility software offerings that provide decision support and cost-based models and simulations for Distributed Energy Resources (DER) integration. In partnership with Siemens' Digital Grid business unit, OpenUtilities Solutions for DER empowers electric utilities, electricity suppliers, and distribution network operators (DSO) with software applications to analyze, design, and evaluate DER interconnection requests through desktop and cloud-based services, while supporting the reliability and resilience of network operations. OpenUtilities Solutions for DER create automatic network analysis models for Siemens' PSS@SINCAL with the integration of GIS-based network data (including ESRI, GE, and Smallworld).

The solutions generate an electrical digital twin for utilities – a GIS digital twin that enables owner/operators to more efficiently model the grid for decentralized energy without compromising safety and reliability. Some of the major challenges utilities encounter with DER integration are system complexity, increased regulatory requirements, high customer demand, and cost management. Digital twins can provide huge efficiencies in grid operations by streamlining DER interconnection applications with optimized workflows to better assess operational impacts, long-term strategic scenarios and investment decisions.

With the increasing penetration of DER into the grid, utilities need digital applications to handle the increasing demand for DER interconnections and collaborate across work groups. OpenUtilities DER Optioneering offers a cloud-based decision support initial screening and supplemental screening mechanism to evaluate DER interconnection requests using validation checkpoints and hosting capacity analysis. Utilities can benefit from this fast-track interconnection procedure to readily approve DER applications or to defer them to power systems planners to conduct further studies and impact analysis. The application provides a practical and cost-effective method to streamline and automate the DER approval process without always having to involve costly engineering resources and expedite the interconnection request process. It enables non-engineering staff and managers alike to effectively manage DER interconnection applications while adhering to complex regulatory requirements for DER permits.

In cases where more detailed system impact studies are needed before an interconnection request can be approved, OpenUtilities Analysis gives power system engineers a mechanism to reduce the amount of manual work required at each step of an impact analysis study. This means accurate forecasting, state-of-the-art models and the ability to efficiently study many power flow scenarios within the network. It enables power system planners to better forecast and model the grid for decentralized energy without disrupting current operations.

OpenUtilities Design Optioneering advances OpenUtilities Analysis one step further with cost-based decision support for planning and designing complex utility networks with DER. The application provides the ability to analyze both planned and existing infrastructure, optimize equipment sizing, and estimate materials and labor costs for DER projects. This helps utilities minimize design construction costs associated with DER and streamline the DER interconnection process with detailed cost estimation included with the impact analysis studies.

Bentley's OpenUtilities solutions all leverage an open Connected Data Environment (CDE), a source of information used to collect, manage, and share all information about assets. By enabling an open CDE, utilities can better manage and access consistent, trusted, and accurate information. Utilities can share the benefits of an open, integrated, and connected framework to enable collaboration, improve decision making, and optimize the value of high penetrations of DER.

Vonnie Smith, vice president of energy infrastructure for Bentley Systems, said, "We are excited to provide new value to power utilities and industrial power customers with our strategic partnership with Siemens. Through an open Connected Data Environment, these new applications will help utility owners and operators share critical information to realize the potential of their network models for continuous benefit throughout the day-to-day running of their organizations."

According to Michael Schneider, general manager and global head of Siemens Power Technologies International, "Electric utilities today have a growing need for planning and analysis solutions that tackle the fluctuations of decentralized renewable generation. That means good forecasting, state-of-the-art models and the ability to study many scenarios per year. Enabling these outcomes requires a highly dynamic mode of analysis where network models are continuously up-to-date. It also helps utilities and industrial owner-operators address the challenges of planning, designing and operating networks with integrated DER in a highly efficient manner."

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### Images and Captions

[OpenUtilities DER Optioneering provides an initial screening and hosting capacity analysis \(HCA\) to improve customer response time and integrate DER into grid planning, operations and long-term investment decisions.](#)

[The OpenUtilities Analysis framework enables power systems planning engineers to more efficiently perform simulations to study the potential impacts of increased DER penetration.](#)

[OpenUtilities Solutions for DER empowers electric utilities to actively manage the increased demand for distributed energy resources \(DER\) in the evolving energy mix while maintaining grid reliability, resilience, and safety.](#)

### [About Bentley's OpenUtilities](#)

Bentley's OpenUtilities helps electric utilities plan, design, construct, and operate utility infrastructure to meet ever-changing industry requirements, reduce costs, and deliver sustainable, safe, timely, and reliable service. The software provides applications for planning and design including mapping and geospatial analysis, site analysis and design, substation design, network design and management, transmission tower design, and DER solutions for grid modernization.

## About Siemens

Siemens AG (Berlin and Munich) is a global technology powerhouse that has stood for engineering excellence, innovation, quality, reliability and internationality for more than 170 years. The company is active around the globe, focusing on the areas of electrification, automation and digitalization. One of the largest producers of energy-efficient, resource-saving technologies, Siemens is a leading supplier of efficient power generation and power transmission solutions and a pioneer in infrastructure solutions as well as automation, drive and software solutions for industry. With its publicly listed subsidiary Siemens Healthineers AG, the company is also a leading provider of medical imaging equipment – such as computed tomography and magnetic resonance imaging systems – and a leader in laboratory diagnostics as well as clinical IT. In fiscal 2018, which ended on September 30, 2018, Siemens generated revenue of €83.0 billion and net income of €6.1 billion. At the end of September 2018, the company had around 379,000 employees worldwide. Further information is available on at [www.siemens.com](http://www.siemens.com).

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