

Siemens grid protection software, expertise enable unified digital model of AEP network

- **American Electric Power chooses Siemens' PSS[®]CAPE industry-leading software for highly detailed protection simulation**
- **Software interoperability allows AEP to seamlessly synchronize and exchange model data across planning, operations, and protection**
- **Accelerates energy transition by enabling sustainable integration of decentralized renewable energy resources to the grid**
- **Order underscores Siemens Xcelerator strategy for open, interoperable, flexible software to accelerate energy transition at scale**

Siemens will replace American Electric Power's (AEP) existing protection simulation operation software with PSS[®]CAPE. Ohio-based AEP, the largest transmission grid operator in the U.S., serves 5.5 million customers across 11 states and maintains the largest transmission network in the country with over 40,000 miles of transmission lines. As grid planning and operations becomes more complex, traditional, siloed manual practices for sharing model data across departments are no longer optimal. AEP is creating a unified digital model of its entire transmission network, called T-Nexus, consisting of one common network model that all departments work from to ensure reliable planning, operation, and protection of the power grid.

With Siemens PSS[®]CAPE, the industry-leading software for highly detailed protection simulation, AEP will be able to run more complex protection simulations and optimize day-to-day protection tasks, all with an up-to-date accurate model. This will help accelerate the adoption of changes to the energy grid, including the increase of inverter-based renewable energy resources, and facilitate the capability to rapidly respond to scenarios that threaten the grid's stability.

“We’re proud to partner with AEP as it works to break down data barriers across three traditionally separate utility departments – planning, protection, and operations,” said Sabine Erlinghagen, CEO of Siemens Grid Software. “By leveraging a complete digital model of the physical grid, AEP can quickly adapt to grid changes while increasing renewable capacity efficiently, safely, and reliably. This is the reason we have launched the grid software suite to enable utilities to better manage the increasing complexity of power grids and most importantly, to keep the grids stable.”

In 2017, AEP selected Siemens to implement the core software of its Network Model Management solution. The CIM-based transmission system modeling and analysis software PSS®ODMS is the foundation of the system. Building on this strong partnership, Siemens will now support AEP with its transition to the new protection simulation software from data enrichment to specialized software training and more. The PSS®CAPE software is modular, flexible, and highly interoperable with existing applications within AEP’s T-Nexus project. This enables AEP to scale performance as it creates a single network model for planning, operations, and protection. The PSS®CAPE team will conduct training and facilitate the integration with various AEP systems, including asset management and outage management. The Siemens PTI consulting team will prepare the protection model, using the full network model from the T-Nexus solution. The protection elements will be reviewed, enriched, and validated to ensure the model is accurate and complete.

With PSS®CAPE, AEP will be able to run highly detailed protection simulations and streamline its NERC protection and control compliance evaluation process. Integration with a single source of truth for model data will ensure its protection department can easily use the most up-to-date and accurate base model for protection studies, including the latest relay model settings from Asset Management.

PSS®CAPE, PSS®ODMS and Siemens PTI Consulting are part of the Siemens Xcelerator portfolio, a curated and modular portfolio of software, services and IoT-enabled hardware built on standard APIs. Siemens Xcelerator is a new, open digital business platform featuring a curated portfolio of IoT-enabled hardware and software, a powerful ecosystem of partners, and a marketplace. It is making digital transformation easier, faster and at scale.

This press release and a press picture are available at <https://sie.ag/3Skqd1O>

For more information about Siemens Smart Infrastructure, see www.siemens.com/smartinfrastructure

For further information on Siemens PSS[®]CAPE and Siemens PTI Consulting Services, please see www.siemens.com/pss-cape and www.siemens.com/power-system-consulting.

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Contact for journalists

Eva-Maria Baumann

Phone: +49 9131 17-36620; E-mail: eva-maria.baumann@siemens.com

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Siemens Smart Infrastructure (SI) is shaping the market for intelligent, adaptive infrastructure for today and the future. It addresses the pressing challenges of urbanization and climate change by connecting energy systems, buildings and industries. SI provides customers with a comprehensive end-to-end portfolio from a single source – with products, systems, solutions and services from the point of power generation all the way to consumption. With an increasingly digitalized ecosystem, it helps customers thrive and communities progress while contributing toward protecting the planet. Siemens Smart Infrastructure has its global headquarters in Zug, Switzerland. As of September 30, 2021, the business had around 70,400 employees worldwide.

Siemens AG (Berlin and Munich) is a technology company focused on industry, infrastructure, transport, and healthcare. From more resource-efficient factories, resilient supply chains, and smarter buildings and grids, to cleaner and more comfortable transportation as well as advanced healthcare, the company creates technology with purpose adding real value for customers. By combining the real and the digital worlds, Siemens empowers its customers to transform their industries and markets, helping them to transform the everyday for billions of people. Siemens also owns a majority stake in the publicly listed company Siemens Healthineers, a globally leading medical technology provider shaping the future of healthcare. In addition, Siemens holds a minority stake in Siemens Energy, a global leader in the transmission and generation of electrical power.

In fiscal 2021, which ended on September 30, 2021, the Siemens Group generated revenue of €62.3 billion and net income of €6.7 billion. As of September 30, 2021, the company had around 303,000 employees worldwide. Further information is available on the Internet at www.siemens.com.