

Resilient Electric Grid (REG) PowerBranch™

Simplified and sophisticated solution for urban load growth

AMSC, April 2015

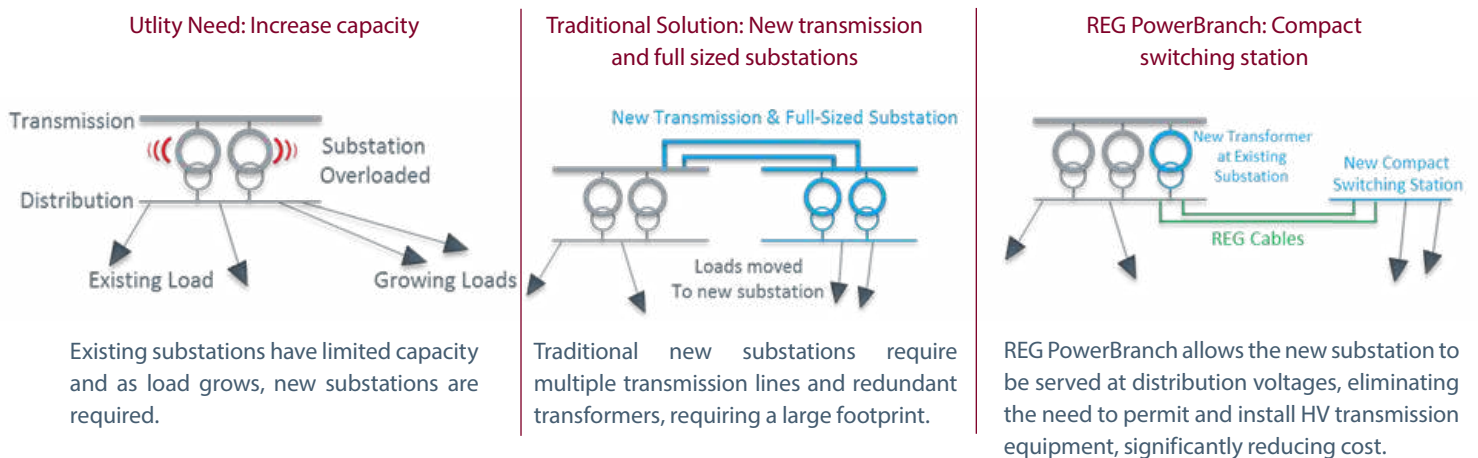
REG PowerBranch™ Application

Utilities are under increasing pressure to improve their ability to serve loads in urban environments. At the same time, costs for acquiring land and performing construction projects in those urban environments is skyrocketing. Additionally, there is a growing demand that utility infrastructure be placed underground for aesthetic and security reasons. AMSC's PowerBranch application of its REG system can provide substantial relief to utilities that are faced with these challenges. REG systems allow utilities to move bulk power into and around urban areas, underground and at distribution voltages in an extraordinarily compact manner. Siting, permitting, and installing transformers and transmission voltage equipment is expensive and difficult within urban areas. REG PowerBranch enables utilities to reduce the need for transmission voltage equipment and allow them to locate this equipment outside of the urban areas, substantially reducing project duration, disruption, and cost by reducing the size of the new substation by about 75%.

REG Cables: High Capacity at Distribution Voltages

AMSC's REG applications feature cable systems that utilize AMSC's Amperium® high temperature superconductor (HTS) wire in place of traditional aluminum or copper conductors. Cables that utilize HTS wire have no resistance to the flow of electricity and can transmit up to 10 times more power than conventional cables, allowing bulk transfer of transmission levels of power in conventional cables, allowing bulk transfer of transmission levels of power at distribution voltages which, in turn, allow for smaller and far less costly substations.

Finally, REG cables are remarkably compact and easy to site compared traditional technologies with similar power transfer capabilities. This makes REG much easier to install and less costly alternative to high voltage transmission infrastructure in dense urban environments.



Chicago's ComEd Developing REG Deployment Plan with AMSC

AMSC and Com Ed, a unit of Chicago-based Excelon Corporation and one of the nation's largest electric utilities, are developing a deployment plan for AMSC's Resilient Electric Grid system to build a more resilient power grid in the downtown Chicago Loop. REG solutions are a series of applications that utilize compact, power dense cables to increase grid reliability and/or increase load serving capacity while managing fault current. The project in Chicago is part of the U.S. Department of Homeland Security (DHS) Science and Technology Directorate's work to secure the nation's electric power grids. The ComEd installation would be the first commercial application of this technology in the United States and the most extensive in the world, at approximately three miles in length.

About AMSC

AMSC (NASDAQ: AMSC) generates the ideas, technologies and solutions that meet the world's demand for smarter, cleaner ... better energy. Through its Windtec Solutions, AMSC enables manufacturers to launch best-in-class wind turbines quickly, effectively and profitably. Through its Gridtec Solutions, AMSC provides the engineering planning services and advanced grid systems that optimize network reliability, efficiency and performance. The company's solutions are now powering gigawatts of renewable energy globally and enhancing the performance and reliability of power networks in more than a dozen countries. Founded in 1987, AMSC is headquartered near Boston, Massachusetts with operations in Asia, Australia, Europe and North America.

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