



Applied Materials Receives Order for Two Transmission-Class Superconducting Fault Current Limiters

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SANTA CLARA, Calif., April 14, 2015 - Glow Energy Public Company Limited (Glow), a leading independent power producer (IPP) in Thailand, has placed an order with Applied Materials for two superconducting fault current limiters (SCFCL). Glow intends to commission the SCFCLs in its utility grid located in the Map Ta Phut Industrial Estate. Glow anticipates that the fault current protection provided by the SCFCLs will enable Glow to increase generation and supply more power at higher quality to its customers. Representing the first use of SCFCLs in Thailand, these systems support adding capacity to address growing energy demand by offering a robust approach to reducing fault currents while minimizing voltage dips on distribution and transmission utility networks.

A fault current is an unintended, excessive current flowing through an electrical system that can damage power equipment and disrupt electricity supply. Higher fault levels typically increase as power capacity grows and grid meshing increases. SCFCL technology is designed to reduce the first peak of a fault current on a power line to limit the destructive forces on the power system and improve equipment reliability. Glow has ordered two 115KV SCFCL systems for its high-voltage transmission network.

Heikki Pudas, Executive Vice President and Chief Operating Officer of Glow said, "Fault current mitigation is a key area of concern for utilities due to increasing power demand and the need to boost generation. As a leading private power producer in Thailand, we understand that removing fault level constraints will enable Glow to generate and deliver more electricity with higher power quality and greater reliability onto the utility grid. Our decision to use superconducting fault current limiters instead of funding costly network upgrades will allow us to achieve a strong return on our investment by being able to cost-effectively expand generation while improving the resiliency of the overall network."

"We are very pleased Glow has chosen our superconducting fault current limiters to support its power capacity expansion plans," said Om Nalamasu, Senior Vice President and Chief Technology Officer for Applied Materials. "Power networks require high levels of reliability and stability to provide continuous electricity to customers. We expect the Glow installation will demonstrate the economic benefits of SCFCLs for reducing capital costs, limiting damage to the infrastructure and providing increased revenue from generation, making it ideal for the utility world."

In developing its SCFCL technology, Applied utilized its high-voltage engineering experience gained from its ion implant tools used in the semiconductor industry and its expertise in large-equipment systems engineering. More information can be found at www.appliedmaterials.com/technologies/fault-current-limiters.

Today's announcement builds on the momentum of the utility industry's adoption of Applied's SCFCL systems. Currently, an SCFCL installed by Central Hudson Gas and Electric in New York state is performing to expectations, having successfully protected the grid from damage or loss of power due to a number of faults.

Glow is a major energy player in Thailand. Glow's combined installed capacity is 3,188 MW of electricity and 1,206 tons per hour of steam. Glow generates and supplies electricity to the Electricity Generating Authority of Thailand (EGAT) under Thailand's SPP (Small Power Producer) and IPP programs, as well as electricity, steam, industrial water and services to large industrial customers principally located in the Map Ta Phut area and nearby. For more information about Glow please visit www.glow.co.th.

Applied Materials, Inc. (Nasdaq:AMAT) is the global leader in precision materials engineering solutions for the semiconductor, flat panel display and solar photovoltaic industries. Our technologies help make innovations like smartphones, flat screen TVs and solar panels more affordable and accessible to consumers and businesses around the world. Learn more at www.appliedmaterials.com.

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