

# ABB to deliver digital substation for one of India's largest IT parks

Zurich, Switzerland, February 16, 2017 – Substation to improve reliability, efficiency and safety and support India's Smart Grid Mission and Smart City vision

ABB will deliver a 110 kilovolt (kV) digital substation to Technopark, one of the largest Information Technology (IT) parks in India, located in the southern state of Kerala and spanning an area of 930,000 square meters. Due to the nature of the industry, the campus is highly dependent on reliable, round the clock power to serve the 350 companies employing more than 50,000 people.

Technopark is currently in an expansion mode and is envisioned to become a self-contained township with potential to employ a hundred thousand people working in the fields of IT, biotechnology and nanotechnology, increasing the need for reliable power supplies for commercial and residential consumers.

"This will be among the first digital substations in India and supports the country's vision of smarter grids and cities" said Claudio Facchin, president of ABB's Power Grids division. "It highlights the increasing digitalization of the grid, a key focus area of our Next Level strategy and reinforces our digital thrust based on our common ABB Ability offering."

A digital substation is more compact, flexible, reliable, safer, cost effective over the lifecycle and simpler to maintain and extend than a conventional one. It is another example highlighting the integration of information and operational technologies (IT and OT) and will leverage digital communications via fiber optic cables that will replace traditional copper connections using analog signals. This will improve flexibility, availability, reliability and safety, while reducing installation costs and environmental impact. The digital substation will also enable the drive for power management efficiencies by turning real time data into actionable intelligence and bringing cost efficiencies. It will be IEC 61850 compliant, ensuring an open communication architecture.

Using fiber optic cabling instead of copper enables reduced cost through the direct savings on copper, optimized panel design and less civil work required to lay the cables. Thousands of traditional analog copper signaling wires between the High Voltage equipment and the control room are also substituted with a few fiber optic digital communication buses (process bus). All this reduces installation cost.

Digitizing signals at their source reduces the risk of electrical hazards to operators, creating a safer work environment. The substation equipment is also enabled for digital communication, which allows Technopark to monitor and maintain the equipment in an easier manner through real time data.

A key component of the digital substation is ABB's Standalone Merging Unit (SAM600), built to withstand the harshest environments. It fits alongside primary equipment, collecting information close to the source in the field, and converting it into IEC 61850 digital format for control, monitoring and protection applications.

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For more information please contact:

Head of Communications,  
ABB Power Grids  
Harmeet Bawa  
Tel: +41 43317 7111  
[harmeet.bawa@ch.abb.com](mailto:harmeet.bawa@ch.abb.com)

ABB Ltd  
Affolternstrasse 44  
8050 Zurich  
Switzerland

