

# The Electricity Company of Ghana (ECG)



## Automation solutions to improve distribution network efficiency

Lucy Switchgear has successfully implemented the first phase of automating 33kV radial overhead feeders across the regions of Bogoso and Tokuse, in addition to parts of the 11kV underground network in the capital city of Accra for the electricity distribution operator ECG.

The objectives of this automation programme focus on reducing electricity revenue losses, improving overall efficiency, minimizing customer outages and reducing operational and maintenance costs.

Lucy Switchgear has installed a variety of automation products and systems to meet these objectives and these included:

- Standalone GEMINI-SCADA package
- GEMINI-DC (Data Concentrators) to integrate the secondary RTUs into the existing DMS/ SCADA systems
- Automated field devices such as the remotely controlled 33kV air break switch disconnectors (RAPIER RX-RC36) complete with fault passage indicators and retrofit RMU actuators with interfacing GEMINI-RTUs/ communication modems
- High power radio communication links incorporating "store and forward" techniques at repeater locations to enhance the distances covered
- In-house system design, integration and technical training services

The six month project encompassed the design, manufacture and delivery of the equipment to Ghana from the UK. Two representatives from ECG attended an intense training programme in the UK to gain a thorough understanding of the systems employed in this project.

**"We have a successful history of the design, manufacture and delivery of power distribution equipment to ECG and this project was no exception", commented Graham Pryce, International Sales Manager for Lucy Switchgear. "Ensuring that the radio communication system functioned correctly over the undulating terrain, particularly in jungle areas, has proved to be a real challenge. The installation of radio repeaters at strategic locations along the network route provided the ideal solution."**

Lucy Switchgear has since secured a further substantial contract with ECG to extend the benefits of automated distribution networks to other parts of Ghana.



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