

# CASE STUDY

## Improved Reliability, Safety and Financial Performance

### INTERNATIONAL BREWER - BACKGROUND

The second largest brewer in the world has 167 different production facilities in 70 countries, many of which are located in areas with unreliable utility. Specifically, various plants in Africa, the Middle East and Eastern Europe with sporadic electricity availability have created production challenges for the organization.

The company's highest priorities include ensuring the safety of its employees and contractors, delivering the highest level of product quality and protecting its reputation.

### THE CHALLENGE

One of the company's production facilities is located in Freetown, Sierra Leone in the west of Africa. The facility's power source is unreliable, causing micro-outages, large voltage deviations and other electrical disturbances that impacts the performance of the total production process. Each day of downtime costs the brewer thousands of Euro's in operating losses and production quantity was decreasing due to frequent power fluctuations. To combat these power quality issues, the company had UPS equipment in many of its facilities; however, the existing static and rotary systems did not adequately address the required quality expectations. Static battery-based UPS solutions proved unreliable, expensive to maintain, and created a safety hazard for employees. Diesel rotary UPS systems were also hard to maintain and extremely costly. Similarly large voltage deviations were not solved by any of the vendors other than starting the generators multiple times a day. The brewer recognized the need for a rugged critical backup power solution unaffected by ambient temperature changes that could be deployed right on the production floor. They wanted to minimize financial risk through better reliability, lower costs and best voltage correction abilities available.

**"SDM's customer has a large team of highly experienced electrical and mechanical engineers tasked with improving their facilities. In their never-ending quest for continuous improvement, they selected SDM and have deployed the UPD product in various production sites and more to come"**





#### OBJECTIVES MET:

- ✓ Reduced Waste
- ✓ Improved Quality
- ✓ Increased Efficiency
- ✓ Improved Safety



#### REQUIREMENTS MET:

- ✓ Rugged
- ✓ Remote Monitoring
- ✓ Reliable
- ✓ Easy to maintain



#### 1-2 YEAR ROI:

Based on the savings achieved due to increase of production results.

#### THE SOLUTION

Aiming to have the generators to run as little as possible, the input voltage had to be corrected up to +/-40% without the use of any energy storage. The company chose to deploy the SDM-UPD solution to protect its operations in Freetown. The system was installed outside the facility's power section so no space was lost in the production area.

SDM's engineers assisted with the design process, and SDM's technicians installed the unit onsite in the Freetown facility and at all subsequent deployments.

The SDM-UPD provides clean, quality power to the production equipment 24/7, preventing all types of power disturbances. In the event of a utility power outage, the UPD provides a smooth transfer to their generator or, in some operations, supports equipment through a graceful shutdown. Because 98% of the power outages experienced at these facilities do not last longer than five seconds, there is no need to transfer energy to an alternate energy source or shut down the equipment.

#### RESULTS

Since the initial UPD installation, the brewer has deployed more SDM-UPD systems in different countries, with more projects on the horizon. SDM has installed these units into both existing and newly built factories. The systems protect PET moulding lines, bottling lines and washing lines, with an average power load of 250 - 1000 kVA.

The savings they have experienced due to the SDM reliable power sources have resulted in a 12-24 month ROI. Brewery managers have been especially excited about a solution that vastly improves the efficiency of their operations.

**“Brewery managers are very pleased with the results after putting the SDM-UPD in front of their production lines. They have experienced increased production without the risk of equipment breaking down due to voltage dips and other power quality issues.”**