SUSTAINABLE WASTEWATER TREATMENT AND BIOGAS GENERATION, COKE (JAMAICA)

A leading manufacturer and distributor of popular beverages partnered with WOG Group to implement a high-efficiency Wastewater Treatment Plant (WWTP) integrated with a Biogas Generation System.

THE PROJECT AIMED TO:

- Treat 350 m^3/day of high-strength wastewater from production processes.
- Minimize environmental impact.
- Reduce operational costs.
- Support broader sustainability goals.

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Challenges

- High organic load: COD 6000 ppm, BOD 2000 ppm.
- Compliance with strict discharge norms.
- Carbon footprint reduction through renewable integration.
- Energy efficiency via biogas utilization.

Solutions

- Anaerobic digestion: Treated high-strength wastewater; generated 27,000 Nm^3/day biogas (70% CH_4), utilized 18,900 Nm^3/day methane.
- Pre-treatment: Clarifiers & flash mixers reduced suspended solids load.
- Tertiary polishing: Discharge compliance achieved.
- Biogas to energy: 1,800 kW/day savings.

Results

- COD ↓ 6000 → <100 ppm;
- BOD ↓ 2000 → <30 ppm;
  SS ↓ 500 → <50 ppm.
- Biogas: 27,000 Nm^3/day (18,900 Nm^3/day CH_4); 1,800 kW/day energy savings.
- Carbon footprint reduction: 1,629 kg/day.
- 72% organic load reduction.

For detailed techno-commercial proposal or site visit coordination,

Drop us an e-mail at: info@woggroup.com

Impact

- Achieved discharge compliance.
- Biogas integration cut carbon footprint.
- Energy efficiency reduced costs.
- Strengthened long-term sustainability.