Couples Laundry Cogeneration

THE PROJECT:

✓ Design efficiency is 90% and will:
  ○ Produce and deliver 65 kW electrical capacity or 77% of the Laundry's peak electrical demand.
  ○ Deliver 492,692 kWh of electrical energy annually.
  ○ 132 kW (450 MBtu/hr) of Hot Water to provide 100% domestic hot water for the Laundry.

✓ Operational efficiency is 86%.

✓ Will reduce Couples Laundry’s energy cost by over 35%.

✓ Project pay back is less than 1.5-years.

✓ Will reduce the annual Greenhouse Gas Emissions by 182 MT CO2e or 23% when compared to energy from conventional sources.

At a Glance
The Couples Resorts Group owns and operates 4-major hotels and 1 central laundry in Jamaica and sought to reduce their energy cost by employing a microturbine cogeneration solution.

Innovative Energy Company Limited (IEC) conducted a comprehensive energy audit and offered the group a gas fired microturbine solution consisting of a Capstone C65 integrated Combined Heat & Power (iCHP) microturbine, producing 65 kW of electricity and 450 MBtu/hr of hot water.

Key local companies involved in the project were:
  ○ IEC SPEI
    Developers and turnkey EPC
  ○ Massy Gas Products
    Fuel Supplier
  ○ HTG Engineering Consultants Limited
    Mechanical & Electrical Engineers.

About IEC
IEC is a vertically integrated energy company that provides comprehensive energy services, ranging from energy audits, feasibility studies, turnkey construction services to operations and maintenance of energy systems. The principals of IEC have over 30 years experience in developing renewable, cogeneration, trigeneration and large-scale energy projects, and have consulted for several of Jamaica’s blue-chip companies.

IEC is the exclusive Authorized Distributor and Service Providers for Capstone Turbine Corporation.

About Capstone Turbine Corporation
Capstone Turbine Corporation is the world’s leading manufacturer of microturbines, with over 85% market share. They have over 10,000 microturbines deployed worldwide with over 121 million operating hours. They are based in Van Nuys California, USA.