



Case Study – Green Park Hotel, Hyderabad

This case study represents how a star Hotel can reduce fuel expenditure by efficient and green processing of food waste while in turn getting BioCNG as the output thereby replacing a significant portion of their fuel needs.

The Green Park and Marigold Hotels is a 4 star hotel located at the Urban Hyderabad City. It is a 200 room hotel with one restaurant and a banquet hall. This elegant and comfortable hotel is nestled in a one of the verdant areas of Hyderabad and the concepts of sensitivity to nature, efficiency and comfort have been integrated into all facilities and services offered by the Hotel.

The system layout was customized due to space constraints at the hotel, which lies in the heart of the city. System components had to be designed and placed at different places in the compound at the back of the hotel and necessary piping had to be carried out to ensure optimal operation.



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Project Details

Waste Processing Capacity	Max. of 400 kg per day
Water Intake	NIL
Main Reactor Base Area	6 sq m
Delivery Time	2 months
Operational since	March 2015

Performance

The maximum level of waste addition is 400 kg/day based on the kitchen's current LPG needs. The waste stream includes both food preparation waste (uncut vegetables, etc) and cooked food waste. The energy generated from the BioUrja fuels 2 large burners, which are utilized for cooking. The performance statistics are summarized below.

Waste Input	400 kg
Daily Raw Gas Production	56 cu m of biogas
Daily LPG equivalent production	~28 kg per day
Annual Waste Processing Capacity	146 tons
Annual GHG mitigation	More than 170 tons of carbon dioxide equivalent



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Operations & Maintenance

The hotel staff has been trained on O&M procedures. The high level of automation ensures that even unskilled personnel can carry out the basic operation procedure of feeding the waste in about 2-3 hours every day. Green Park Hotels Maintenance team carries out regular preventive maintenance tasks and are assisted by GPS Renewables in case of any anomalies or unexpected breakdowns.

GPS Renewables, through our proprietary Remote Monitoring System (RMS) tracks the operational parameters 24x7. Any anomalies or alarms are immediately received by the back end team, which, in coordination with the maintenance team, ensures that any issues identified are immediately addressed and resolved.

RMS is at the very heart of our philosophy of O&M and has ensured that downtimes have been less than 2% for all our installations.

Financial Returns

Operational Cost of generating 1 kg LPG equivalent Gas	~Rs11
Net Present Value of the Project	>Rs60 lakhs
Rate of Return (IRR)	50%
Payback Period	<2 years

About GPS Renewables

GPS Renewables is a Bangalore headquartered company and pioneer in decentralized waste-to-energy solution. BioUrja, our inaugural product, is based on cutting edge technology that delivers twice the amount of energy as compared to any other solution and comes complete with Cloud Based Remote Monitoring System which enables us to offer our Clients system up-times of more than 98%.

GPS Renewables was amongst *top 5 finalists* at **The Tech Awards 2014** from across the world and BioUrja has been hailed as “*one of the top Indian innovations in 2013*” by **MIT Technology Review**.