



Case Study – Manipal University, Jaipur

Manipal University Jaipur is a private university and is the fifth University established under Manipal Group. Manipal Group of Institutions houses above 17,000 students and offers degree in various fields.

The Academic and Administrative buildings at Manipal University Jaipur have been awarded LEED Platinum Certificate & Green rating for Integrated Habitat Assessment (GRIHA) award for water management.

The Client intended to reduce their expenditure on LPG for cooking and is utilizing GPS' BioUrja System to process the waste generated on campus to produce clean gas at a fraction of the price of commercial LPG.



Project Details

Waste Processing Capacity	Max. of 500 kg per day
Total expected gas generation	35 Kgs of LPG equivalent
Water Intake	NIL
Main Reactor Base Area	6 sq m
Total area covered by the system	36 sq m
Annual Waste Processing Capacity	182.5 tons
Annual GHG mitigation	More than 200 tons of carbon dioxide equivalent
Operational since	November 14



Case Study – Manipal University, Jaipur

Performance

The current level of waste addition is 500 kg/day based on the waste generation in the campus. The waste stream includes both food preparation waste (uncut vegetables, etc) and cooked food waste from the cafeteria and the kitchen.

Current Waste Input	500 Kgs
Daily Raw Gas Production	70 m ³
Daily LPG equivalent production	35 Kgs
Gas productivity	140 Ltrs/Kg

Operations & Maintenance

The University engineering 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. Client's engineering 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	Rs 9
Net Present Value of the Project	>Rs 80 lakhs
Rate of Return (IRR)	58%
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**.